

# MATERIAL SAFETY DATA SHEET

**Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200**

Date of Prep: 01/02/01

## SECTION 1

SUNNYSIDE CORPORATION  
225 CARPENTER AVENUE  
WHEELING, ILLINOIS 60090  
EMERGENCY TELEPHONE

(847) 541-5700  
(800) 424-9300

FOR INFORMATION:

(847) 541-5700

- SUNNYSIDE CORPORATION  
- CHEM TREC

Product Class: Mixed Solvents  
Trade Name: 451 LACQUER THINNER

Manufacturer's Code:  
NPCA HMIS:

451  
Health: 2  
Flammability: 3  
Reactivity: 1

Product Appearance and Odor: Clear, colorless liquid; mixed solvent 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
Acetone	67-64-1		500 PPM	750 PPM	750 PPM	1000 PPM	213 MM Hg @ 77° F.
Isopropyl Alcohol	67-63-0		400 PPM	500 PPM	400 PPM	500 PPM	30.0 MM Hg @ 68° F.
Methyl Isobutyl Ketone	108-10-1		50 PPM	75 PPM	50 PPM	75 PPM	1.0 MM Hg @ 50° F.
Toluene	108-88-3		50 PPM *(SKIN, A4)		100 PPM	150 PPM	Approx. 54 MM Hg @ 25° C.
2-Butoxyethanol	111-76-2		20 PPM (SKIN)		20 PPM (SKIN)		0.6 MM Hg @ 20° C.

\*Not classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data.

## SECTION 3 -- EMERGENCY AND FIRST AID PROCEDURES

Inhalation:	Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.
Eye Contact:	Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.
Skin Contact:	Flush with large amounts of water; use soap if available. Remove grossly contaminated clothing, including shoes, and launder before reuse.
Ingestion:	If swallowed, do not induce vomiting. Keep at rest. Get prompt medical attention.

## SECTION 4 -- PHYSICAL DATA

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

Boiling Range:	133° F. (I.B.P.)	Vapor Density:	Heavier than air
Evaporation Rate:	Slower than ether	% Volatile by Volume:	100%
Weight Per Gallon:	7.05 lbs.		
Solubility in Water:	25% vol.		

**SECTION 5 -- FIRE AND EXPLOSION DATA**

Flammability Classification:	Flammable liquid - Class IB
Flash Point:	0° F. (Tag Closed Cup)
Lower Explosive Limit:	1.1%
Extinguishing Media:	Either allow fire to burn under controlled conditions or extinguish with alcohol type foam and dry chemical. Try to cover liquid spills with foam.
Unusual Fire and Explosion Hazards	Extremely flammable. Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations.
Special Fire Fighting Procedures:	Use water spray to cool fire exposed surfaces and to protect personnel. Shut off "fuel" to fire. If leak or spill has not ignited, use water spray to disperse the vapors.

**SECTION 6 -- HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE: EFFECTS OF OVEREXPOSURE:	See Section 2.
Eye Contact:	Severely irritating. If not removed promptly, will injure eye tissue, which may result in permanent damage.
Skin Contact:	Harmful if absorbed through the skin. Contact may cause skin irritation including redness, burning, drying and cracking of the skin.
Inhalation:	Breathing high vapor concentrations may result in respiratory tract irritation, central nervous system depression, liver and kidney damage and possibly death. Brain cell damage may result from long-term vapor inhalation.
Ingestion:	Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.
Carcinogenicity:	There is inadequate data available to evaluate the risk of developing cancer from exposure to the Toluene present in this product. None of the solvents in this product are listed as carcinogens or potential carcinogens by the NTP, IARC, or OSHA.
Target Organs:	Toluene is a potential hazard to the central nervous system, kidney, liver and sense of hearing.
Developmental:	Potential hazard to the fetus.
Medical Conditions Aggravated by Exposure:	Skin disorders, respiratory (asthma-like) conditions, kidney and liver disorders.
Chronic:	Studies of 2-Butoxyethanol with experimental animals have produced damage to the red blood cell by inhalation, skin absorption, and ingestion. Toxic liver effects in male rats were also observed.

**SECTION 7 -- REACTIVITY DATA**

Stability:	Stable
Conditions to Avoid:	Heat, sparks and flame. Isopropyl Alcohol possesses moderate risk of peroxide formation on storage and concentration. Inhibitor not been added to mitigate peroxide hazard.
Incompatibility (Materials to Avoid):	Strong oxidizing agents like liquid chlorine or concentrated oxygen.
Hazardous Decomposition Products:	Thermal decomposition may yield 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:	Wear resistant gloves such as nitrile rubber.
Eye Protection:	Chemical safety goggles should be worn.
Other Protective Equipment:	Impermeable apron or smock and boots should be worn to minimize skin contact. Safety shower, eye bath and washing facilities should be available.

**SECTION 10 -- SPECIAL PRECAUTIONS**

Dept. of Labor Storage Category:	Flammable liquid - Class IB
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, Washington, DC 20005), or the National Fire Protection Association (NFPA) for NFPA 77 entitled "Static Electricity" (National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101).
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
Methyl Isobutyl Ketone	108-10-1	14.26%
Toluene	108-88-3	61.69%
Glycol Ethers (Ethylene Glycol Monobutyl Ether)	111-76-2	5.34%

SARA Title III Hazard Categories: Immediate (Acute) Health, Delayed (Chronic) Health, Fire.

Common Names: Lacquer Reducer, Solvent Mixture

California Proposition 65: This product contains Toluene, a chemical known to the State of California to cause birth defects or other reproductive harm, and trace amounts of Benzene, a chemical known to the State of California to cause cancer.

TRANSPORTATION\* (U.S. D.O.T. land transportation in packages of 119 gallons or less)

Proper Shipping Name: Paint Related Material

Hazard Class: 3

Packing Group: II

Identification Number: UN 1263

Hazardous Substance(s): Toluene RQ 1000 lbs.  
Methyl Isobutyl Ketone RQ 5000 lbs.

\*Refer to 49 CFR for additional information. Exceptions or exemptions may exist for smaller quantities.



# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 428.00

Revision Date: February 6, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Lactose

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
Lactose monohydrate	64044-51-5	$C_{12}H_{22}O_{11} \cdot H_2O$	360.31	
Synonym: Milk 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, 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 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**

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Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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Avoid contact with eyes. Wash hands thoroughly after handling.

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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White crystalline powder. Odorless.

Melting point: 203.5 °C (decomposes)

Soluble: Water. Slightly in many organic solvents.

Specific gravity: 1.525

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**SECTION 10 — STABILITY AND REACTIVITY**

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Shelf life: Indefinite, if stored properly.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: N.A.

ORL-RAT LD<sub>50</sub>: N.A.

Chronic effects: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: N.A.

SKN-RBT LD<sub>50</sub>: N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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Not listed.

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**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

30402-1356

9/8/2008

Laguna

## MATERIAL SAFETY DATA SHEET

PRODUCT / MATERIAL: GLAZE  
MANUFACTURER / DISTRIBUTOR: LAGUNA CLAY COMPANY  
ADDRESS: 14400 Lomitas Avenue, City of Industry, CA 91746  
PHONE / FAX / EMAIL: (626) 330-0631 / (626) 333-7694 / MSDS@lagunaclay.com

## SECTION I - PRODUCT INFORMATION

TRADE NAME: EM1002  
SYNONYM: ALABASTER WHITE  
CHEMICAL FAMILY: Ceramic Blend

## SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT NAME	Maximum Percent	CAS NUMBER	OSHA PEL TWA: (mg/m3)	NIOSH REL TWA: (mg/m3)	ACGIH TLV TWA: (mg/m3)
Zinc or Zinc Compounds	3	7440-66-6	5	5	5
Zirconium or Zirconium Compounds	7	7440-67-7	5		5

## SECTION III - PHYSICAL DATA

BOILING POINT (°F) Not Applicable  
VAPOR PRESSURE Not Applicable  
VAPOR DENSITY Not Applicable  
SOLUBILITY IN WATER Insoluble  
SPECIFIC GRAVITY 1.7 - 3.7  
PERCENT VOLATILE BY WEIGHT 0  
EVAPORATION RATE 0  
APPEARANCE AND ODOR Color varies between moist and dry state; no odor.

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT Not Flammable  
EXTINGUISHING MEDIA Water  
UNUSUAL FIRE OR EXPLOSION HAZARDS None  
SPECIAL FIRE FIGHTING PROCEDURES None

## SECTION V - REACTIVITY DATA

STABILITY FACTOR Product is stable.  
INCOMPATIBILITY None  
HAZARDOUS DECOMPOSITION PRODUCTS None. Hazardous polymerization will not occur.  
CONDITIONS TO AVOID Inhalation of dust.

## SECTION VI - HEALTH HAZARD DATA

## ♦ Zinc or Zinc Compounds

May causes skin irritation if in contact for extended periods of time.

## ♦ Zirconium or Zirconium Compounds

Skin, lung granulomas; in animals: irritation skin, mucous membrane; X-ray evidence of retention in lungs.

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**MATERIAL SAFETY DATA SHEET**

PRIMARY ROUTES OF ENTRY:	Inhalation (dry form only), ingestion and dermal.
SUMMARY OF RISKS:	Individuals with a lung disease/condition (e.g.: bronchitis, emphysema, chronic pulmonary disease) can be aggravated by exposure.
EMERGENCY FIRST AID:	No specific first aid is necessary since the adverse health effects associated with this compound results from chronic exposures.
Eye Contact	May be an irritant, flush eyes with generous amounts of water for at least 15 minutes; call a physician if irritation persists.
Skin Contact	May cause local dermatitis, which is relieved when removed.
Ingestion	Toxicity due to ingestion is low.
Inhalation	Remove to fresh air, call a physician if irritation due to inhalation persists.
Physician's Note	None.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

Spills or Release Procedure	Follow normal clean-up procedures. Care should be taken to avoid causing dust to become airborne. Vacuum or use wet clean-up techniques.
Waste Disposal Procedure	Dispose material in accordance with Federal, State, and Local regulations.

**SECTION VIII - CONTROL MEASURES**

Provide adequate ventilation to keep dust or vapor concentrations below acceptable exposure limits. Use gloves as needed for handling material containers. Wear safety glasses when needed. Appropriate respiratory protection may be required to protect from certain dusts. Respirators must be selected and used in accordance with OSHA Subpart 1 of (29 CFR 1910.134).

**SECTION IX - TOXICOLOGICAL INFORMATION**

This product (and all of it's components) is in compliance with the U.S. EPA 15 U.S. C.2604 regulation.

This product is certified as NON-TOXIC, and conforms to ASTM D-4236 and C-1023 under the federal Labeling of Hazardous Art Materials Act (LHAMA). Specific Toxicology information on materials is available upon request.

**SECTION X - REGULATORY**

This product may contain materials that are reportable under Section 313 of the Emergency Planning and Community Right-To-Know Act (Superfund Amendments and Reauthorization Act - SARA), and 40 CFR Part 372.

SARA Title III Data:

Zinc or Zinc Compounds < 3 %

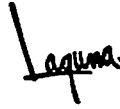
These levels are "typical quantities" and may change slightly with different lots.

THIS PRODUCT CONTAINS SUBSTANCES REGULATED UNDER CALIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65).

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**MATERIAL SAFETY DATA SHEET****SECTION XI - DISCLAIMER**

The information provided in this MSDS document has been provided to Laguna Clay Company by its material suppliers and is represented by those suppliers as accurate and reliable.

Laguna Clay Company is not liable for injury, loss, or damage, direct or consequential, arising out of the use or inability to properly use this product. This product is intended only for use in traditional ceramic applications.

This MSDS conforms to the ASTM D-4236 and C-1023 requirements defined by LHAMA, the Federal Labeling of Hazardous Art Materials Act. LHAMA was developed by the American Society of Testing and Materials (ASTM) to ensure the proper labeling of art materials.



# MATERIAL SAFETY DATA SHEET

Name of Material Airport Grade	
1	HEALTH
1	FLAMMABILITY
0	REACTIVITY
J	PROTECTIVE EQUIPMENT

## Section I – PRODUCT IDENTIFICATION

**PRODUCT NAME:** Latexite® Airport Grade Driveway Sealer  
**MANUFACTURER NAME:** Dalton Enterprises, Inc.  
**ADDRESS:** 131 Willow Street Cheshire, CT 06410  
**EMERGENCY PHONE NUMBER:** (203) 272-3221 (Dalton Enterprises)  
**AFTER 5 PM AND ON WEEKENDS:** (203) 272-3221  
**TRADE NAME:** Pavement Coating  
**EFFECTIVE DATE:** 02/25/2008  
**DATE SUPERSEDED:** 10/02/2007  
**ORIGINATOR:** K.P.

## Section II – HAZARDOUS / NON-HAZARDOUS INGREDIENTS

### Clay/Arcilla:

CAS #1332-58-7  
Listed in SARA Title III, Section 313: No  
OSHA PEL: 5 mg/m<sup>3</sup> (dust)  
ACGIH TLV: 2 mg/m<sup>3</sup> (dust)  
STEL: N/A  
LC50: N/A  
LD50: N/A

### Asphalt/Asfalto:

CAS #8052-42-4  
Listed in SARA Title III, Section 313: NO  
ACGIH TLV: 5 mg/m<sup>3</sup> (volatiles)  
STEL: N/A  
LC50: N/A  
LD50: N/A

### Polyvinyl Resin/ Resina Polivinilica:

CAS # Trade Secret

### Water/Agua:

CAS #7732-18-5

N/A = Not available or applicable

### Silica-Crystalline/ Sílice Cristalino:

CAS #14808-60-7  
Listed in SARA Title III, Section: No  
OSHA PEL: 0.1 mg/m<sup>3</sup> (dust)  
ACGIH TLV: 0.1 mg/m<sup>3</sup> (dust)  
STEL: N/A  
LC50: Human >0.3ppm  
LD50: N/A

Ingredients total weight % are below 100% only if all others unlisted are not considered hazardous by any federal (OSHA, WHMIS, SARA), any state or province, or local Right-To-Know regulations.

### Section III – PHYSICAL DATA

**Boiling Point (degrees F/C):** >212° F/100° C

**Vapor Pressure (mm Hg.):** –25

**Vapor Density (air = 1):** 1

**Solubility in Water:** Miscible

**Appearance and Odor:** Black or brownish black liquid with slight asphalt odor.

**Physical State:** Liquid

**Freeze Point (degrees F/C):** 32° F/0° C

**Specific Gravity:** 1.3 - 1.5

**Percent Volatile (by weight):** 35 - 40%

**Evaporation Rate (water = 1):** 1

**Water/Oil Dist. Coefficient:** 1/1

**Threshold Odor, ppm:** N/A

**pH:** 6.50 - 8.0

**MAX VOC:** Less than 10 g/L

### Section IV – FIRE AND EXPLOSION HAZARD DATA

**Flammability Classification:** N/A

**Flash Point (method used):** N/A

**Flammable Limits: LEL:** N/A                      **UEL:** N/A

**Combustion Products:** Hydrocarbon compounds, CO, and CO<sub>2</sub>.

**Extinguishing Media:** Foam, dry chemical, CO<sub>2</sub>.

**Special Fire Fighting Procedures:** Cool exposed containers to prevent steam pressure buildup. Wear self-contained breathing equipment.

**Unusual Fire and Explosion Hazards:** Containers may rupture due to steam pressure.

**UN/NA/PIN#:** N/A

**NFPA Rating:** **Health 1;**    **Fire 1;**    Reactivity 0

**Impact Sensitive:** No

**Static Sensitive:** No

**Explosive Power:** N/A

**Burning Rate:** N/A

### Section V – HEALTH HAZARD DATA

**Threshold Limit Value:** See Section II

**Routes of Entry:** Skin, eyes, inhalation, ingestion.

**Effects of Overexposure:**

Eyes: May cause eye irritation which in the absence of recommended first aid may result in severe burns.

Inhalation: May cause headache and nausea.

Skin: May cause irritation of skin or more harmful effects.

Ingestion: May cause nausea, cramps, vomiting, diarrhea or acute effects. May be fatal in large amounts.

**Emergency & First Aid Procedures:**

Eyes: Immediately flush with plenty of water for 15 minutes and call a physician.

Inhalation: If affected, remove to fresh air.

Skin: Wash thoroughly with plenty of water and soap.

Ingestion: Seek physician immediately, show MSDS or label, DO NOT induce vomiting.

#### Section VI – REACTIVITY DATA

**Stability:** Stable

**Conditions to Avoid:** Keep from freezing.

**Incompatibility (materials to avoid):** Strong oxidizing agents.

**Hazardous Decomposition Products:** None.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** N/A

#### Section VII – SPILL OR LEAK PROCEDURES

##### **SARA TITLE III:**

#302: No   #304 CERCLA: No   #313: No   RCRA: No

##### **Steps to be taken in case material is released or spilled:**

Ventilate the area. Wear approved respiratory protection. Wear suitable protective clothing, gloves and eye/face protection. Contain and pick up waste materials. Put in a sealed, approved container. Dispose of in accordance with federal, state and local regulations.

**Reportable Quantity (lb.):** N/A

**TPO (lb.):** N/A

**Regulations:** WHMIS, SARA, state and province.

**Hazardous Waste:** Non-Hazardous; water based.

#### Section VIII – SAFE HANDLING AND PROTECTION INFORMATION

**Respiratory Protection:** Use only with adequate ventilation. If ventilation is inadequate, wear approved respiratory equipment.

##### **Ventilation:**

Local Exhaust: Required

Mechanical (general): Required

Special: N/A

Other: N/A

**Protective Gloves:** Rubber gloves

**Eye Protection:** Wear safety glasses, goggles or face shield.

**Other Protective Equipment:** Wear suitable protective clothing.

**Estimated LD50, MG/KG:** N/A

**Estimated LC50, MG/KG:** N/A

**Sensitization:** N/A

#### Section IX – SPECIAL PRECAUTIONS



Keep out of reach of children.  
Always read label plus precautions and follow directions carefully.  
Keep from freezing.  
Do not breathe vapor or spray mist.  
Use only with adequate ventilation.  
Do not take internally.  
Avoid contact with eyes and skin.  
Wash thoroughly after using.  
Additional Technical Data Sheets and/or MSDS are available upon request.

THE INFORMATION AND RECOMMENDATIONS PROVIDED HEREIN ARE BELIEVED TO BE ACCURATE AS OF THE DATE HEREOF. HOWEVER, SUCH INFORMATION AND RECOMMENDATIONS ARE PROVIDED WITHOUT WARRANTY OF ANY KIND AND THIS CORPORATION DISCLAIMS ANY AND ALL LIABILITY OR LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON SAME.

## 1. Identification

**Product identifier** LAUNDRY DETERGENT

**Other means of identification**

**SDS number** 554N-54B

**Product code** HIL00459

**Recommended use** Laundry Warewash

**Recommended restrictions** For Labeled Use Only

**Manufacturer/Importer/Supplier/Distributor information**

**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.

**Response** If swallowed: Call a poison center/doctor if you feel unwell. 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. 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. CONTAINER DISPOSAL: Triple rinse (or equivalent), then offer clean, dry container for recycling or reconditioning.

**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	%
Sodium Alkyl Ether Sulfate		68585-34-2	5 - < 10
Ethanol		64-17-5	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

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	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.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	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.
<b>Methods and materials for containment and cleaning up</b>	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. 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.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid contact with eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	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

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3 1000 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3 1000 ppm

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Appropriate engineering controls

Good general ventilation 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. 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** Avoid contact with eyes. Where splashing of concentrate is a concern, use protective glasses with side shield

#### Skin protection

##### Hand protection

For prolonged or repeated skin contact use suitable protective gloves.

##### Other

Wear suitable protective clothing. None normally required. If unable to avoid prolonged or repeated contact with skin, wear impervious clothing.

#### Respiratory protection

No personal respiratory protective equipment normally required.

#### 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, slightly viscous blue liquid

**Physical state** Liquid.

**Form** Liquid.

**Color** Blue

**Odor** Fresh Linen Odor

**Odor threshold** Not available

**pH** 7 - 8

**Melting point/freezing point** Not applicable / Not available

**Initial boiling point and boiling range** 200 °F (93.33 °C) Corr.

**Flash point** > 201.0 °F (> 93.9 °C)

**Evaporation rate** < 1 (ethyl ether = 1)

**Flammability (solid, gas)** Not applicable.

### Upper/lower flammability or explosive limits

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

<b>Vapor pressure</b>	18 mm Hg
<b>Vapor density</b>	0.65 AIR=1
<b>Relative density</b>	1.04 at 77°F
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	100 % Complete
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Viscosity</b>	Not available
<b>Other information</b>	
<b>Density</b>	8.68 lb/gal
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	78.5 - 79.5 %
<b>VOC</b>	2.03 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Causes eye irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort.
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### Information on toxicological effects

<b>Acute toxicity</b>	Not known.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Causes eye irritation.

### Respiratory or skin sensitization

<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.

<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
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<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
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#### IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

#### US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

<b>Ecotoxicity</b>	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.
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Product	Species		Test Results
LAUNDRY DETERGENT			
Aquatic			
Fish	LC50	Fish	28754.5645 mg/l, 96 hours estimated
Components	Species		Test Results
Ethanol (CAS 64-17-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	7.7 - 11.2 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Sodium Alkyl Ether Sulfate (CAS 68585-34-2)			
Aquatic			
Crustacea	EC50	Water flea (Ceriodaphnia dubia)	2.33 - 4.81 mg/l, 48 hours

\* Estimates for product may be based on additional component data not shown.

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
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### Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)	
Ethanol	-0.31

<b>Mobility in soil</b>	No data available.
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<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
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## 13. Disposal considerations

<b>Disposal instructions</b>	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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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). Waste from normal product use may be sewer to a public owned treatment works (POTW) in compliance with applicable Federal, State, and local pretreatment requirements.
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

## 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
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<b>IATA</b>	Not regulated as dangerous goods.
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## 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.

### 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 regulated.

### 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.

### FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Ethanol (CAS 64-17-5) Low priority

**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.

### 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 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** 03-20-2015  
**Revision date** 04-06-2017  
**Version #** 02  
**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**

This document has undergone significant changes and should be reviewed in its entirety.



# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 431.00

Revision Date: March 27, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Lauric 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 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
Lauric acid	143-07-7	$\text{CH}_3(\text{CH}_2)_{10}\text{COOH}$	200.32	
Synonym: Dodecanoic acid				

### SECTION 4 — FIRST AID MEASURES

Get medical advice or attention if irritation occurs (P313).

**If inhaled:** Call a POISON CENTER or physician if you feel unwell.

**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 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.

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 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**

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Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids.  
Store in a cool, dry place.

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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Wear protective gloves and eye protection (P280). Wash hands thoroughly after handling (P264).

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Colorless, needle like crystals. Slight odor of bay oil.  
Soluble: Ether. Insoluble in water.

Boiling point: 225 °C  
Melting point: 43-45 °C  
Refractive index: 1.4183  
Specific gravity: 0.8679

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with bases, oxidizing agents, and reducing agents.  
Shelf life: Indefinite, if stored properly.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Eye and skin irritation.  
Chronic effects: N.A.  
Target organs: Eyes and skin.

ORL-RAT LD<sub>50</sub>: N.A.  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.  
Flinn Suggested Disposal Method #24a is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (205-582-1).

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**SECTION 16 — OTHER INFORMATION**

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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



**SAFETY DATA SHEET**  
**LEAD ACID BATTERY WET,**  
**FILLED WITH ACID**

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** Lead Acid Battery Wet, Filled With Acid  
**OTHER PRODUCT NAMES:** Electric Storage Battery, UN2794

**MANUFACTURER:** East Penn Manufacturing Company  
**ADDRESS:** Dekaroad  
Lyon Station, PA 19536 USA

**EMERGENCY TELEPHONE NUMBERS:** US/CN: CHEMTREC 1-800-424-9300  
Outside US/CN: CHEMTREC 1-703-527-3887




**NON-EMERGENCY HEALTH/SAFETY INFORMATION:** 610-682-6361

**CHEMICAL FAMILY:** This product is a wet lead acid storage battery. May also include gel/absorbed electrolyte lead acid battery types.

**PRODUCT USE:** Industrial/Commercial electrical storage batteries.

**SECTION 2: HAZARDS IDENTIFICATION**

**GHS Classification:**

Health	Environmental	Physical
Acute Toxicity – Category 4 Skin Corrosion – Category 1A Eye Damage – Category 1 Reproductive – Category 1A Carcinogenicity (lead)– Category 1B Carcinogenicity (arsenic)– Category 1A Carcinogenicity(acid mist)–Category1A Specific Target Organ Toxicity (repeated exposure) –Category 2 GHS Label: 	Aquatic Chronic – 1 Aquatic Acute – 1 	Explosive Chemical, Division 1.3 

**Signal Word: DANGER !**



**SAFETY DATA SHEET**  
**LEAD ACID BATTERY WET,**  
**FILLED WITH ACID**

<u>Hazard Statements</u>	<u>Precautionary Statements</u>
<p><b>Health</b> Harmful if swallowed, inhaled, or in contact with skin. Causes severe skin burns and eye damage. Causes serious eye damage. May damage fertility or the unborn child if ingested or inhaled. May cause cancer if ingested or inhaled. Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure if ingested or inhaled. May cause harm to breast-fed children.</p> <p><b>Environmental</b> Very toxic to aquatic life with long lasting effects.</p> <p><b>Physical</b> May form explosive air/gas mixture during charging. Extremely flammable gas (hydrogen). Explosive; fire, blast or projection hazard. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.</p>	<p><b>Prevention</b> Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing, eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Causes skin irritation, serious eye damage. Contact with internal components may cause irritation or severe burns. Avoid contact with internal acid. Irritating to eyes, respiratory system, and skin. Avoid contact during pregnancy/while nursing.</p> <p><b>Response</b> IF SWALLOWED OR CONSUMED: rinse mouth, Do NOT induce vomiting. Call a poison center/doctor if you feel unwell. IF ON CLOTHING OR SKIN (or hair): Remove/Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. If exposed/concerned, or if you feel unwell seek medical attention/advice.</p> <p><b>Storage and Disposal</b> Store locked up, in a well-ventilated area. In accordance with local and national regulation. Avoid release to the environment. Collect spillage. Dispose of contents/container in accordance with local/regional/national/international regulations. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Use only outdoors or in well ventilated area Keep out of reach of children.</p>

**EMERGENCY OVERVIEW:**

May form explosive air/gas mixture during charging. Contact with internal components may cause irritation or severe burns. Irritating to eyes, respiratory system, and skin. Prolonged inhalation or ingestion may result in serious damage to health. Pregnant women exposed to internal components may experience reproductive/developmental effects.

Additional Information

No health effects are expected related to normal use of this product as sold.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

**INGREDIENTS (Chemical/Common Names):**

Lead and Lead Compounds, inorganic  
Electrolyte (Sulfuric acid and water)  
Antimony

**CAS No.:**

7439-92-1  
7664-93-9  
7440-36-0

**% by Wt:**

43-70 (average: 65)  
20-44 (average: 25)  
0-4 (average: <1)

**EC No.:**

231-100-4  
231-639-5  
231-146-5



# SAFETY DATA SHEET

## LEAD ACID BATTERY WET, FILLED WITH ACID

Polypropylene

9003-07-0

5-10 (average: 8)

NA

NA – Not applicable/ND – Not determined

### Additional Information

These ingredients reflect components of the finished product related to performance of the product as distributed into commerce. Inorganic lead, lead compounds and electrolyte (sulfuric acid) are the primary components. Other metals (ie. Sn, Cu, As) may be present at concentrations below the applicable reporting threshold.

### SECTION 4: FIRST AID MEASURES

- EYE CONTACT:** Sulfuric Acid and Lead: Flush eyes immediately with large amounts of water for at least 15 minutes while lifting lids. Seek immediate medical attention if eyes have been exposed directly to acid.
- SKIN CONTACT:** Sulfuric Acid: Flush affected area(s) with large amounts of water using deluge emergency shower, if available, shower for at least 15 minutes. Remove contaminated clothing, including shoes. If symptoms persist, seek medical attention. Wash contaminated clothing before reuse. Discard contaminated shoes.  
Lead: Wash immediately with soap and water.
- INGESTION:** Sulfuric Acid: Give large amounts of water. Do NOT induce vomiting or aspiration into the lungs may occur and can cause permanent injury or death; consult physician.
- INHALATION:** Sulfuric Acid: Remove to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.  
Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

### SECTION 5: FIRE-FIGHTING MEASURES

**FLASH POINT:** Not Applicable.

**FLAMMABLE LIMITS:** LEL= 4.1% (Hydrogen Gas in air); UEL=74.2%

**EXTINGUISHING MEDIA:** CO<sub>2</sub> ; foam; dry chemical. Do not use carbon dioxide directly on cells. Avoid breathing vapors. Use appropriate media for surrounding fire.

**FIRE-FIGHTING PROCEDURES:** Use positive pressure, self-contained breathing apparatus. Beware of acid splatter during water application and wear acid-resistant clothing, gloves, face and eye protection. If batteries are on charge, shut off power to the charging equipment, but note that strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down.

**HAZARDOUS COMBUSTION PRODUCTS:** Highly flammable hydrogen gas is generated during charging and operation of batteries. If ignited by burning cigarette, naked flame or spark, may cause battery explosion with dispersion of casing fragments and corrosive liquid electrolyte. Carefully follow manufacturer's instructions for installation and service. Keep away all sources of gas ignition and do not allow metallic articles to simultaneously contact the negative and positive terminals of a battery.

### Additional Information

Fire-fighting water runoff and dilution water may be toxic and corrosive and may cause adverse environmental impacts.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

Stop flow of material, contain/absorb small spills with dry sand, earth, and vermiculite. Do not use combustible materials. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of un-neutralized acid to sewer. Acid must be managed in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

### Additional Information

**Lead acid batteries are recyclable.** Contact your East Penn representative for recycling information.

### SECTION 7: HANDLING AND STORAGE

**Handling:** Unless involved in recycling operations, do not breach the casing or empty the contents of the battery. Handle



## SAFETY DATA SHEET

### LEAD ACID BATTERY WET, FILLED WITH ACID

carefully and avoid tipping, which may allow electrolyte leakage. There may be increasing risk of electric shock from strings of connected batteries. Keep containers tightly closed when not in use. If battery case is broken, avoid contact with internal components. Keep vent caps on and cover terminals to prevent short circuits. Place cardboard between layers of stacked automotive batteries to avoid damage and short circuits. Keep away from combustible materials, organic chemicals, reducing substances, metals, strong oxidizers and water. Use banding or stretch wrap to secure items for shipping.

**Storage:** Store batteries under roof in cool, dry, well-ventilated areas separated from incompatible materials and from activities that may create flames, spark or heat. Store on smooth, impervious surfaces provided with measures for liquid containment in the event of electrolyte spills. Keep away from metallic objects that could bridge the terminals on a battery and create a dangerous short-circuit.

**Charging:** There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut-off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged will generate and release flammable hydrogen gas. Charging space should be ventilated. Keep battery vent caps in position. Prohibit smoking and avoid creation of flames and sparks nearby. Wear face and eye protection when near batteries being charged.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

##### Exposure Limits (mg/m<sup>3</sup>)

Ingredients	OSHA PEL	ACGIH	US NIOSH	Quebec PEV	Ontario OEL	EU OEL
Lead, inorganic	0.05	0.05	0.05	0.05	0.05	0.15 (b)
Antimony	0.5	0.5	0.5	0.5	0.5	0.5 (b,d)
Tin	2	2	2			
Copper	1	1	1	1	1 (a)	0.1 (e)
Arsenic	0.01	0.01	0.01			
Sulfuric Acid	1	0.2	1	1	0.2	0.05 (c)
Polypropylene	N.E.	N.E.	N.E.	N.E.	N.E.	N.E.

(a) As dusts/mists (b) As inhalable aerosol (c) Thoracic fraction (d) Based on OEL's of Austria, Belgium, Denmark, France, Netherlands, Switzerland, & U.K. (e) Based on OEL of Netherlands

##### ENGINEERING CONTROLS/SYSTEM DESIGN INFORMATION:

Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid-resistant. Handle batteries cautiously, do not tip to avoid spills. Make certain vent caps are on securely. If battery case is damaged, avoid bodily contact with internal components. Wear protective clothing, eye and face protection, when filling, charging, or handling batteries. Do not allow metallic materials to simultaneously contact both the positive and negative terminals of the batteries. Charge batteries in areas with adequate ventilation. General dilution ventilation is acceptable.

##### RESPIRATORY PROTECTION (NIOSH/MSHA approved):

None required under normal conditions. When concentrations of sulfuric acid mist are known to exceed PEL, use NIOSH or MSHA-approved respiratory protection.

##### EYE PROTECTION:

If battery case is damaged, use chemical goggles or face shield.

##### SKIN PROTECTION:

If battery case is damaged, use rubber or plastic acid-resistant gloves with elbow-length gauntlet, acid-resistant apron, clothing and boots.

**OTHER PROTECTION:** In areas where water and sulfuric acid solutions are handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply. Chemically impervious apron and face shield recommended when adding water or electrolyte to batteries.

**Wash Hands after handling.**



## SAFETY DATA SHEET

### LEAD ACID BATTERY WET, FILLED WITH ACID

#### Additional Information

- Batteries are housed in polypropylene cases which are regulated as total dust or respirable dust only when they are ground up during recycling. The OSHA PEL for dust is 15 mg/m<sup>3</sup> as total dust or 5 mg/m<sup>3</sup> as respirable dust.
- May be required to meet Domestic Requirements for a Specific Destination(s).

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Industrial/commercial lead acid battery
ODOR:	Odorless
ODOR THRESHOLD:	Manufactured article; no apparent odor. Electrolyte is a clear liquid with a sharp, penetrating, pungent odor.
PHYSICAL STATE:	Sulfuric Acid: Liquid; Lead: solid
pH:	~1 to 2
BOILING POINT:	203-240° F (as sulfuric acid)
MELTING POINT:	NA
FREEZING POINT:	NA
VAPOR PRESSURE:	10 mmHg
VAPOR DENSITY (AIR = 1):	> 1
SPECIFIC GRAVITY (H <sub>2</sub> O = 1):	1.215–1.350
EVAPORATION RATE (n-BuAc=1):	< 1
SOLUBILITY IN WATER:	100% (as sulfuric acid)
FLASH POINT:	Below room temperature (as hydrogen gas)
AUTO-IGNITION TEMPERATURE:	NA
LOWER EXPLOSIVE LIMIT (LEL):	4% (as hydrogen gas)
UPPER EXPLOSIVE LIMIT (UEL):	74% (as hydrogen gas)
PARTITION COEFFICIENT:	NA
VISCOSITY (poise @ 25° C):	Not Available
DECOMPOSITION TEMPERATURE:	Not Available

#### SECTION 10: STABILITY AND REACTIVITY

STABILITY:	This product is stable under normal conditions at ambient temperature.
INCOMPATIBILITY (MATERIAL TO AVOID):	<u>Electrolyte</u> : Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers, and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas. <u>Lead compounds</u> : Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen, and reducing agents. <u>Arsenic compounds</u> : strong oxidizers; bromine azide. NOTE: hydrogen gas can react with inorganic arsenic to form the highly toxic gas-arsine
HAZARDOUS DECOMPOSITION BY-PRODUCTS:	<u>Electrolyte</u> : Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen sulfide. <u>Lead compounds</u> : Temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.
HAZARDOUS POLYMERIZATION:	Will not occur
CONDITIONS TO AVOID:	Prolonged overcharge at high current; sources of ignition.

#### SECTION 11: TOXICOLOGICAL INFORMATION

##### ACUTE TOXICITY (Test Results Basis and Comments):

Inhalation LD<sub>50</sub>:

Electrolyte: LC<sub>50</sub> rat 375 mg/m<sup>3</sup>; LC<sub>50</sub> guinea pig: 510 mg/m<sup>3</sup>



## SAFETY DATA SHEET

### LEAD ACID BATTERY WET, FILLED WITH ACID

Elemental Lead: Acute Toxicity Point Estimate =4500 ppm V (based on lead bullion)

Elemental Arsenic: No data

Oral LD<sub>50</sub>:

Electrolyte: rat 2140 mg/kg

Elemental Lead: Acute Toxicity Estimate (ATE) = 500mg/kg body weight (based on lead bullion)

Elemental Arsenic: LD<sub>50</sub> mouse: 145 mg/kg

Elemental Antimony: LD<sub>50</sub> rat: 100 mg/kg

**Routes of Entry:** Sulfuric Acid: Harmful by all routes of entry. Lead Compounds: Hazardous exposure can occur only when product is heated, oxidized or otherwise processed or damaged to create dust, vapor or fume. The presence of nascent hydrogen may generate highly toxic arsine gas.

**Inhalation:** Sulfuric Acid: Breathing of sulfuric acid vapors or mists may cause severe respiratory irritation.

Lead Compounds: Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.

**Ingestion:** Sulfuric Acid: May cause severe irritation of mouth, throat, esophagus and stomach. Lead Compounds: Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea and severe cramping. This may lead rapidly to systemic toxicity and must be treated by a physician.

**Skin Contact:** Sulfuric Acid: Severe irritation, burns and ulceration. Lead Compounds: Not absorbed through the skin.

Arsenic Compounds: Contact may cause dermatitis and skin hyperpigmentation.

**Eye Contact:** Sulfuric Acid: Severe irritation, burns, cornea damage, and blindness.

Lead Compounds: May cause eye irritation.

**Effects of Overexposure Acute:** Sulfuric Acid: Severe skin irritation, damage to cornea, upper respiratory irritation. Lead Compounds: Symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances and irritability.

**Effects of Overexposure – Chronic:** Sulfuric Acid: Possible erosion of tooth enamel, inflammation of nose, throat & bronchial tubes. Lead Compounds: Anemia; neuropathy, particularly of the motor nerves, with wrist drop; kidney damage; reproductive changes in males and females. Repeated exposure to lead and lead compounds in the workplace may result in nervous system toxicity. Some toxicologists report abnormal conduction velocities in persons with blood lead levels of 50µg/100 ml or higher. Heavy lead exposure may result in central nervous system damage, encephalopathy and damage to the blood-forming (hematopoietic) tissues.

**Carcinogenicity:** Sulfuric Acid: The International Agency for Research on Cancer (IARC) has classified “strong inorganic acid mist containing sulfuric acid” as a Category I carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist. Lead Compounds: Lead is listed as a 2B carcinogen, likely in animals at extreme doses. Proof of carcinogenicity in humans is lacking at present. Arsenic: Listed by National Toxicology Program (NTP), International Agency for Research on Cancer (IARC), OSHA and NIOSH as a carcinogen only after prolonged exposure at high levels.

**Medical Conditions Generally Aggravated by Exposure:** Overexposure to sulfuric acid mist may cause lung damage and aggravate pulmonary conditions. Contact of sulfuric acid with skin may aggravate diseases such as eczema and contact dermatitis. Lead and its compounds can aggravate some forms of kidney, liver and neurologic diseases.

#### Additional Health Data:

All heavy metals, including the hazardous ingredients in this product, are taken into the body primarily by inhalation and ingestion. Most inhalation problems can be avoided by adequate precautions such as ventilation and respiratory protection covered in Section 8. Follow good personal hygiene to avoid inhalation and ingestion: wash hands, face, neck and arms thoroughly before eating, smoking or leaving the work site. Keep contaminated clothing out of non-contaminated areas, or wear cover clothing when in such areas. Restrict the use and presence of food, tobacco and cosmetics to non-contaminated areas. Work clothes and work equipment used in contaminated areas must remain in designated areas and never taken home or laundered with personal non-contaminated clothing. This product is intended for industrial use only and should be isolated from children and their environment.

The 19<sup>th</sup> Amendment to EC Directive 67/548/EEC classified lead compounds, but not lead in metal form, as possibly toxic to reproduction. Risk phrase 61: May cause harm to the unborn child, applies to lead compounds, especially soluble forms.





# SAFETY DATA SHEET

## LEAD ACID BATTERY WET, FILLED WITH ACID

### SECTION 12: ECOLOGICAL INFORMATION

**Environmental Fate:** Lead is very persistent in soil and sediments. No data on environmental degradation. Mobility of metallic lead between ecological compartments is slow. Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants but little bioaccumulation occurs through the food chain. Most studies include lead compounds and not elemental lead.

**Environmental Toxicity:**

Sulfuric acid: 24-hr LC<sub>50</sub>, fresh water fish (*Brachydanio rerio*): 82 mg/l  
96-hr LOEC, fresh water fish (*Cyprinus carpio*): 22 mg/l (lowest observable effect concentration)  
Lead : 48-hr LC<sub>50</sub> (modeled for aquatic invertebrates): <1mg/L, based on lead bullion  
Arsenic: 24-hr LC<sub>50</sub>, freshwater fish (*Carrassius auratus*)>5000g/L

Additional Information

- No known effects on stratospheric ozone depletion.
- Volatile organic compounds: 0% (by Volume)
- Water Endangering Class (WGK): NA

### SECTION 13: DISPOSAL CONSIDERATIONS (UNITED STATES)

**WASTE DISPOSAL  
METHOD:**

Spent batteries: Send to secondary lead smelter for recycling. Contact your East Penn Mfg. representative for more information related to lead acid battery recycling. Spent lead acid batteries are not regulated as hazardous waste when the requirements of 40 CFR Section 266.80 are met. If applicable; EPA hazardous waste number D002 (corrosivity) and D008 (lead). Electrolyte: Place neutralized slurry into sealed acid resistant containers and dispose of as hazardous waste, as applicable. Large water diluted spills, after neutralization and testing, should be managed in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA. Follow local, State/Provincial, and Federal/National regulations applicable to as-used, end-of-life characteristics to be determined by end-user.

### SECTION 14: TRANSPORT INFORMATION

DOT rules specified in 49 CFR 173.159 Batteries, wet, regulate the transport of wet spillable batteries. 49 CFR 173.159 (e) specifies that when transported by highway or rail, electric storage batteries containing electrolyte or corrosive battery fluid are not subject to any other requirements of this subchapter, if all of the following are met:

- (1) No other hazardous materials may be transported in the same vehicle;
- (2) The batteries must be loaded or braced so as to prevent damage and short circuits in transit;
- (3) Any other material loaded in the same vehicle must be blocked, braced, or otherwise secured to prevent contact with or damage to the batteries; and
- (4) The transport vehicle may not carry material shipped by any person other than the shipper of the batteries.

If any of these requirements are not met, the batteries must be shipped as fully regulated Class 8 Corrosive hazardous materials.

**GROUND – US-DOT/CAN-TDG/EU-ADR/APEC-ADR:**

Proper Shipping Name Batteries, Wet, Filled with Acid  
Hazard Class 8  
Packing Group NA

ID Number UN2794  
Labels Corrosive

**AIRCRAFT – ICAO-IATA:**

Proper Shipping Name Batteries, Wet, Filled with Acid  
Hazard Class 8  
Packing Group NA

ID Number UN2794  
Labels Corrosive

Reference IATA packing instructions 870

**VESSEL – IMO-IMDG:**

Proper Shipping Name Batteries, Wet, Filled with Acid  
Hazard Class 8  
Packing Group NA

ID Number UN2794  
Labels Corrosive

Reference IMDG packing instructions P801



**SAFETY DATA SHEET**  
**LEAD ACID BATTERY WET,**  
**FILLED WITH ACID**

Additional Information

Transport requires proper packaging and paperwork, including the Nature and Quantity of goods, per applicable origin/destination/customs points as-shipped.

**SECTION 15: REGULATORY INFORMATION**

**INVENTORY STATUS:**

All components are listed on the TSCA; EINECS/ELINCS; and DSL, unless noted otherwise below.

**U.S. FEDERAL REGULATIONS:**

**TSCA Section 8b – Inventory Status:** All chemicals comprising this product are either exempt or listed on the TSCA Inventory.

**TSCA Section 12b –** (40 CFR Part 707.60(b)) No notice of export will be required for articles, except PCB articles, unless the Agency so requires in the context of individual section 5,6, or 7 actions.

**TSCA Section 13 –**(40 CFR Part 707.20): No import certification required (EPA 305-B-99-001, June 1999, Introduction to the Chemical Import Requirements of the Toxic Substances Control Act, Section IV.A)

**RCRA:** Spent Lead Acid Batteries are subject to streamlined handling requirements when managed in compliance with 40 CFR section 266.80 or 40 CFR part 273. If applicable; EPA hazardous waste number D002 (corrosivity) and D008 (lead).

**STATE REGULATIONS (US):** **\*Proposition 65 Warning Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to State of California to cause cancer. Wash hands after handling.**

**EPA SARA Title III:**

**Section 302 EPCRA Extremely Hazardous Substances (EHS):** Sulfuric acid is a listed "Extremely Hazardous Substance" under EPCRA, with a Threshold Planning Quantity (TPQ) of 1,000 lbs. EPCRA Section 302 notification is required if 500 lbs. or more of sulfuric acid is present at one site (40 CFR 370.10). For more information consult 40 CFR Part 355.

**Section 304 CERCLA Hazardous Substances:** Reportable Quantity (RQ) for spilled 100% sulfuric acid under CERCLA (Superfund) and EPCRA (Emergency Planning and Community Right to Know Act) is 1,000 lbs. State and local reportable quantities for spilled sulfuric acid may vary.

**Section 311/312 Hazard Categorization:** EPCRA Section 312 Tier II reporting is required for non-automotive batteries if sulfuric acid is present in quantities of 500 lbs. or more and/or if lead is present in quantities of 10,000 lbs. or more. For more information consult 40 CFR 370.10 and 40 CFR 370.40.

**Section 313 EPCRA Toxic Substances:** 40 CFR Section 372.38(b) states: If toxic chemical is present in an article at a covered facility, a person is not required to consider the quantity of the toxic chemical present in such article when determining whether an applicable threshold has been met under 40 CFR's 372.25,372.27, or 372.28 or determining the amount of release to be reported under 40 CFR 372.30. This exemption applies whether the person received the article from another person or the person produced the article. However, this exemption applies only to the quantity of the toxic chemical present in the article.

The reporting of lead and sulfuric acid (and their releases) in leadacid batteries used in cars, trucks, most cranes, forklifts, locomotive engines, and aircraft for the purposes of EPCRA Section 313 is not required. Lead acid batteries used for these purposes are exempt for Section 313 reporting per the "Motor Vehicle Exemption." See page B-22 of the U.S. EPA Guidance Document for Lead and Lead Compound Reporting under EPCRA Section 313 for additional information of this exemption.

Always check your state/local requirements as they may differ.

**Supplier Notification:** This product contains toxic chemicals that may be reportable under EPCRA Section 313 Toxic Chemical Release Inventory (Form R) requirements. For a manufacturing facility under SIC codes 20 through 39, the following information is provided to enable you to complete the required reports:

<u>Toxic Chemical</u>	<u>CAS Number</u>	<u>Approximate % by Weight</u>
Lead	7439-92-1	65
Electrolyte (Sulfuric Acid/Water Solution)	7664-93-9	25
Antimony	7440-36-0	< 1.0
Arsenic	7440-38-2	<0.1



**SAFETY DATA SHEET**  
**LEAD ACID BATTERY WET,**  
**FILLED WITH ACID**

See 40 CFR Part 370 for more details.

Additional Information

This product may be subject to Restriction of Hazardous Substances (RoHS) regulations in Europe and China, or may be regulated under additional regulations and laws not identified above, such as for uses other than described or as-designed/as-intended by the manufacturer, or for distribution into specific domestic destinations.

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**SECTION 16: OTHER INFORMATION**

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**OTHER INFORMATION:**

NFPA Hazard Rating for Sulfuric acid:  
Flammability (Red) = 0  
Health (Blue) = 3  
Reactivity (Yellow) = 2  
Sulfuric acid is water-reactive if concentrated.

Distribution into Quebec to follow Canadian Controlled Product Regulations (CPR) 24(1) and 24(2).  
Distribution into the EU to follow applicable Directives to the Use, Import/Export of the product as-sold.

**SDS PREPARATION INFORMATION:**

DATE OF ISSUE: 13 May 2015

**DISCLAIMER:**

This Safety Data Sheet is based upon information and sources available at the time of preparation or revision date. Information in the SDS was obtained from sources which we believe are reliable, but are beyond our direct supervision or control. We make no Warranty of Merchantability, Fitness for any particular purpose or any other Warranty, Expressed or Implied, with respect to such information and we assume no liability resulting from its use. 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. It is the obligation of each user of this product to determine the suitability of this product and comply with the requirements of all applicable laws regarding use and disposal of this product. For additional information concerning East Penn Manufacturing Co. products or questions concerning the content of this SDS please contact your East Penn representative.

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 435.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Lead 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: 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 and fumes (P261).

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). Use personal protective equipment as required (P281). Inorganic lead compounds are probable human carcinogens (IARC -2A, NTP reasonably anticipated to be a human carcinogen).

Hazard class: Reproductive toxicity (Category 1A). May damage fertility or the unborn child (H360).

Hazard class: Specific target organ toxicity, repeated exposure (Category 2). May cause damage to organs through prolonged or repeated exposure (H373). 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
Lead chloride	7758-95-4	PbCl <sub>2</sub>	278.12	
Synonym: Lead(II) chloride				

### 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:** 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

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 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**

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Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool, dry place. Store in a Flinn Chem-Saf™ bag. Use only in a hood or in a well-ventilated area.

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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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.

Exposure guidelines: PEL/TLV 0.05 mg/m<sup>3</sup> (OSHA/ACGIH)

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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White powder. Odorless.

Soluble: Slightly in hot water. Insoluble in cold water and alcohol.

Boiling point: 950 °C

Melting point: 498 °C

Specific gravity: 5.88

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with strong oxidizers and strong acids.

Shelf life: Indefinite, if stored properly. See Section 7 for further information.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Convulsions, seizures, weakness, muscle cramps, methemoglobinemia.

ORL-RAT LD<sub>50</sub>: >1947 mg/kg

IHL-RAT LC<sub>50</sub>: N.A.

Chronic effects: Anemia, reproductive hazard, probable carcinogen.

SKN-RBT LD<sub>50</sub>: N.A.

Target organs: Nerves, brain, blood, kidneys, female/male reproductive system

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Very toxic to aquatic life with long lasting effects.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #27f is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Lead compounds, soluble, N.O.S. Hazard class: 6.1, Keep away from food. UN number: UN2291

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (231-845-5), RCRA code D008.

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**SECTION 16 — OTHER INFORMATION**

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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

**MATERIAL SAFETY DATA SHEET**

CODE: M/L 040

This Material Safety Data Sheet complies with  
the U.S. OSHA Hazard Communication  
Standard, 29 CFR 1910.1200

**PRODUCT:  
LENOX® STERLING® LEAD-FREE SOLDER**

NFPA/HMIS HAZARD CODES: HEALTH: 1/1 FIRE: 0/0 REACTIVITY: 0/0 SPECIAL: NA

0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

**SECTION I**

**MANUFACTURER NAME:** LENOX®  
1690 Lowery Street  
Winston-Salem, NC 27101  
**ISSUE DATE:** October, 2007  
**INFORMATION PHONE:** 336-777-8600

**SECTION II HAZARDOUS INGREDIENTS**

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>US-NIOSH RTECS NO.</u>	<u>US OSHA AL</u>	<u>US OSHA PEL</u>	<u>ACGIH TLV</u>	<u>WT. PERCENT</u>
Tin	7440-31-5	XP7320000	NE	2.0mg/m3	2.0mg/m3	Balance
Copper	7440-50-8 (dust) (fume)	GL5325000	NE	1.0mg/m3 0.1mg/m3	1.0mg/m3 0.2mg/m3	4.0 – 5.0
Selenium	7782-49-2	VS7700000	NE	0.2mg/m3	0.2mg/m3	.04 - .2

NE = NONE ESTABLISHED AL = ACTION LEVEL PEL = PERMISSIBLE EXPOSURE LIMIT TLV = THRESHOLD LIMIT VALUE

**SECTION III PHYSICAL DATA**

**APPEARANCE & ODOR (AT NORMAL CONDITIONS):** Solid - silver to silver-gray metallic metal - no odor  
**SPECIFIC GRAVITY:** 7.38  
**MELTING POINT RANGE (DEGREES F):** 410-418  
**BOILING POINT (DEGREES C):** Information not available  
**SOLUBILITY IN WATER:** Insoluble  
**PH:** Not applicable

**SECTION IV FIRE & EXPLOSION HAZARD DATA**

**FLASH POINT:** Non-flammable  
**FLAMMABLE LIMITS:** Not applicable  
**EXTINGUISHING MEDIA:** No specific agents recommended  
**SPECIAL FIRE FIGHTING PROCEDURES:** If involved in fire, use full protective clothing and NIOSH/MSHA approved self-contained breathing apparatus operated in a positive-pressure mode.  
**UNUSUAL FIRE & EXPLOSION HAZARDS:** The solid metal form is not a fire hazard. However, it is possible that dust generated from processing operations may present a moderate fire or explosion hazard.

**SECTION V REACTIVITY DATA**

**STABILITY:** Stable  
**CONDITIONS TO AVOID:** Not applicable  
**INCOMPATIBILITY:** Chlorine, Turpentine, Magnesium, and Acetylene Gas  
**HAZARDOUS DECOMPOSITION PRODUCTS:** At temperatures above the melting point metal oxide fumes may be evolved.  
**HAZARDOUS POLYMERIZATION:** Will not occur.

## SECTION VI HEALTH HAZARD DATA

**NOTE:** Exposure to the solid form of this product presents few health hazards in itself. However, normal handling or processing of this material may result in exposure to product components and/or decomposition products, which may present a health hazard.

### ROUTES OF ENTRY:

Dust/fume inhalation; dust ingestion.

### SYMPTOMS & EFFECTS OF OVEREXPOSURE:

**Chronic (prolonged)** overexposure to **Tin** can result in benign pneumoconiosis (stannous). This form of pneumoconiosis produces progressive x-ray changes of the lungs as long as exposure exists, but there is no distinctive fibrosis, no evidence of disability and no special complicating factors.

**Acute (severe short-term)** overexposure to **Tin** can cause irritation of the eyes, skin, mucous membranes and respiratory system. Acute overexposure to **Copper** dust/fume can cause irritation of the eyes, nose, throat and skin, and under severe fume overexposure can cause metal fume fever with flu-like symptoms such as sweet metal taste, dry throat, coughing, fever and chills, tight chest, dyspnea, headache, blurred vision, back pain, nausea, vomiting, fatigue. Symptoms usually disappear within 24 hours. **Copper** may cause skin and hair discoloration. Inhalation of copper dusts may cause changes in the gums and mucous lining of the mouth which is generally attributable to localized tissue effect rather than general toxicity.

### MEDICAL CONDITIONS POSSIBLY

#### AGGRAVATED BY EXPOSURE:

#### CARCINOGENITY:

#### EMERGENCY & FIRST AID PROCEDURES:

Pre-existing conditions of the lungs, Wilson's Disease (genetic trait)

Not listed as a carcinogen by NTP, IARC, OSHA, ACGIH.

#### SKIN:

Normal hygiene and first aid procedures - wash with soap and water. If irritation develops or persists obtain medical attention get medical attention. Flush well with running water to remove particulate. If irritation persists obtain medical attention.

#### EYES:

#### ACUTE INHALATION:

Remove from exposure. Obtain immediate medical attention. If breathing has stopped, initiate artificial resuscitation.

#### INGESTION:

Give water; induce vomiting only in a conscious non-convulsing individual; Obtain immediate medical attention.

## SECTION VII PROTECTION MEASURES

### RESPIRATORY PROTECTION:

Respiratory protection is required where airborne exposures exceed U.S. OSHA/ACGIH permissible air concentrations. Respirator selection shall be made in accordance with the U.S. OSHA Respiratory Protection Standard, 29 CFR 1910.134.

### VENTILATION:

Ventilation, as described in "Industrial Ventilation, A Manual of Recommended Practice," by the American Conference of Governmental Industrial Hygienists, is recommended to maintain exposure levels below the Permissible Exposure Limits (PEL's) or Threshold Limit Values (TLV's) specified by U.S. OSHA or other local or state regulations.

### PROTECTIVE GLOVES:

Recommended for prolonged contact/heat.

### EYE PROTECTION:

Safety glasses or goggles are recommended where the possibility exists of getting dust particles in the eyes. Safety glasses or goggles with face shield are recommended around molten metal.

### OTHER PROTECTIVE EQUIPMENT:

Safety equipment should be worn as appropriate for the work environment.

### WORK/HYGIENIC PRACTICES:

Do not permit eating, drinking, or the use of cosmetics or tobacco products while handling or processing material or in product work areas. Practice good personal hygiene procedures. Wash hands and face thoroughly before eating, drinking, applying cosmetics or using tobacco products. Avoid inhalation and ingestion of product, and activities, which generate dust or fume. Keep melting/soldering temperatures as low as possible to minimize the generation of fume.



## SECTION VIII PRECAUTIONS FOR SAFE HANDLING & USE

### PRECAUTIONS TO BE TAKEN IN HANDLING & STORING:

Practice good housekeeping procedures to prevent dust accumulations. Keep material dry. Avoid storage near incompatible materials (See Section V). Keep product away from children and their environment and domestic animals.

### OTHER PRECAUTIONS:

Special attention is drawn to the requirements of the U.S. OSHA Respirator 1910.134 should airborne exposures exceed the U.S. OSHA PEL. Inadvertent contaminants to product such as moisture, ice, snow, grease or oil can cause an explosion when charged to a molten metal bath or melting furnace (preheating metal will remove moisture from the product).

## SECTION IX SPILL OR LEAK PROCEDURES

### SPILL OR LEAK PROCEDURES:

1. Material in dust form-minimize exposure. Clean up using dustless methods (i.e. HEPA Vacuum). Do not use compressed air.
2. Place in closed labeled containers for recycling or disposal.
3. Keep out of waterways.

**NOTE:** Cleanup personnel should wear protective clothing and respiratory protection where significant dust/fume exposure exists.

**OTHER PROCEDURES:** For large product users or involving large product quantities, we recommend that the purchaser establish a spill prevention, control and counter measure plan. This plan should include procedures for proper storage as well as clean up of spills or leaks. The procedures should conform to safe practices and provide for proper recovery and/or disposal. Depending on the quantity spilled, notification to the U.S. National Response Center (800-424-8802) may be required in case of hazardous substances. (See USEPA and USDOT regulations: also various state and local regulations.)

**WASTE DISPOSAL METHODS:** May have value on a recycled basis. If disposed of, dispose of in a permitted disposal site in accordance with all federal, state and local disposal or discharge regulations.

## SECTION X UNITED STATES SARA TITLE III INFORMATION

This product/mixture contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the U.S. Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372. The percent by weight of each toxic chemical and its associated chemical abstract system (CAS) number are to be found in Section II of this Material Safety Data Sheet.

<u>CHEMICAL NAME</u>	<u>EHS RQ (LBS)</u> <u>(*1)</u>	<u>EHS TPQ (LBS)</u> <u>(*2)</u>	<u>SEC.313</u> <u>(*3)</u>	<u>313 CATEGORY</u> <u>(*4)</u>	<u>311-312 CATEGORIES</u> <u>(*5)</u>
Copper	Not Applicable	Not Applicable	YES	Copper	H-1

### -FOOTNOTES-

\*1 = Reportable quantity of extremely hazardous substance, Section 302.

\*2 = Threshold planning quantity, extremely hazardous substance, Section 302.

\*3 = Toxic chemical list, Section 313

\*4 = Chemical category as required by Section 313 (40 CFR 372.42). Subject to annual release reporting requirements.

\*5 = Hazard category for SARA Section 311/312 reporting:

Health H-1 = Immediate (ACUTE) Health Hazard

H-2 = Delayed (CHRONIC) Health Hazard

Physical

P-3 = Fire Hazard

P-4 = Sudden Release of Pressure Hazard

P-5 = Reactive Hazard



## SECTION XI UNITED STATES CERCLA SECTION 103 INFORMATION

This product/mixture contains the following chemicals subject to the release reporting of Section 302.

<u>CHEMICAL NAME</u>	<u>RQ (LBS)</u>
----------------------	-----------------

Copper	5000 (*1)
--------	-----------

**-FOOTNOTES-**

\*1 = Reportable quantity (RQ) under CERCLA Section 302. Spills to the environment exceeding the reportable quantity in any 24-hour period must be reported to the U.S. National Response Center (800-424-8802). No reporting of releases of the hazardous substance(s) is required if the diameter of the pieces of the solid metal(s) released is equal to or exceeds 100 micrometers (0.004 inches).

## SECTION XII TRANSPORTATION INFORMATION

<b>PROPER SHIPPING NAME:</b>	Non-regulated as shipped
<b>TECHNICAL NAME:</b>	N/A
<b>HAZARD CLASS:</b>	N/A
<b>UN NO.:</b>	N/A
<b>PACKING GROUP:</b>	N/A
<b>EMERGENCY RESPONSE GUIDE NUMBER:</b>	N/A
<b>OTHER:</b>	N/A

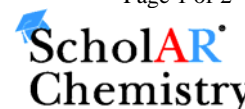
## SECTION XIII ADDITIONAL INFORMATION

**VOC CONTENT:** None

This Material Safety Data Sheet is offered solely for your information, consideration and investigation. LENOX® provides no warranties, either express or implied, and assumes no responsibilities for the accuracy or completeness of the data contained in this document. The data in this Material Safety Data Sheet relates only to this product and does not relate to use in combination with any other material or in any process.

MSDS # 403.00

# Lead (II) Nitrate



## Section 1: Product and Company Identification

### Lead (II) Nitrate

**Synonyms/General Names:** Lead (II) Nitrate**Product Use:** For educational use only**Manufacturer:** Columbus Chemical Industries, Inc., Columbus, WI 53925.

### 24 Hour Emergency Information Telephone Numbers

**CHEMTREC (USA): 800-424-9300****CANUTEC (Canada): 613-424-6666**

Scholar Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

## Section 2: Hazards Identification

*White crystals, no odor.***HMIS (0 to 4)**

<b>Health</b>	<b>2</b>
<b>Fire Hazard</b>	<b>0</b>
<b>Reactivity</b>	<b>2</b>

**WARNING!** Strong oxidizing agent, body tissue irritant and possible carcinogen.

Target organs: Blood, heart, kidneys, endocrine, immune and central nervous systems.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## Section 3: Composition / Information on Ingredients

Lead (II) Nitrate (10099-74-8), 100%

## Section 4: First Aid Measures

*Always seek professional medical attention after first aid measures are provided.***Eyes:** Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.**Skin:** Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.**Ingestion:** Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration.

## Section 5: Fire Fighting Measures

Strong Oxidizer. When heated to decomposition, emits acrid fumes of lead oxides and NO<sub>x</sub>.**Protective equipment and precautions for firefighters:** Use foam or dry chemical to extinguish fire.

Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.



## Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Sweep up spill and place in sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

## Section 7: Handling and Storage

**Yellow****Handling:** Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.**Storage:** Store in Oxidizer Storage Area [Yellow Storage] with other oxidizers and away from any combustible materials. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

## Section 8: Exposure Controls / Personal Protection

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with a dust cartridge. Exposure guidelines: Lead Nitrate: OSHA PEL: 0.05 mg/m<sup>3</sup>, ACGIH: TLV: 0.05 mg/m<sup>3</sup>, STEL: Not Available.

## Section 9: Physical and Chemical Properties

<b>Molecular formula</b>	Pb(NO <sub>3</sub> ) <sub>2</sub> .	<b>Appearance</b>	White crystals.
<b>Molecular weight</b>	331.20.	<b>Odor</b>	No odor.
<b>Specific Gravity</b>	4.53 g/mL @ 20°C.	<b>Odor Threshold</b>	N/A.
<b>Vapor Density (air=1)</b>	N/A.	<b>Solubility</b>	Soluble in water and alcohol.
<b>Melting Point</b>	470°C.	<b>Evaporation rate</b>	N/A. ( <i>Butyl acetate = 1</i> ).
<b>Boiling Point/Range</b>	N/A.	<b>Partition Coefficient</b>	N/A. ( <i>log P<sub>ow</sub></i> ).
<b>Vapor Pressure (20°C)</b>	N/A.	<b>pH</b>	N/A.
<b>Flash Point:</b>	N/A.	<b>LEL</b>	N/A.
<b>Autoignition Temp.:</b>	N/A.	<b>UEL</b>	N/A.

N/A = Not available or applicable

## Section 10: Stability and Reactivity

Avoid heat and ignition sources.

**Stability:** Stable under normal conditions of use and storage.

**Incompatibility:** Reducing agents, organic materials.

**Shelf life:** Indefinite if stored properly.

## Section 11: Toxicology Information

**Acute Symptoms/Signs of exposure:** *Eyes:* Redness, tearing, itching, burning, conjunctivitis. *Skin:* Redness, itching.

**Ingestion:** Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. **Inhalation:** Irritation of mucous membranes, coughing, wheezing, shortness of breath,

**Chronic Effects:** No information found.

**Sensitization:** none expected

*Lead Nitrate: LD50 [oral, rat]; N/A; LC50 [rat]; N/A; LD50 Dermal [rabbit]; N/A*

*Material has been found to be a carcinogen and produce genetic, reproductive, or developmental effects.*

## Section 12: Ecological Information

**Ecotoxicity (aquatic and terrestrial):** Contains a heavy metal toxic to beneficial microorganisms (e.g. soil and sewage treatment microorganisms). Do not release to environment.

## Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Use a licensed chemical waste disposal firm for proper disposal.

## Section 14: Transport Information

<b>DOT Shipping Name:</b>	Lead Nitrate.	<b>Canada TDG:</b>	Lead Nitrate.
<b>DOT Hazard Class:</b>	5.1(6.1), pg II, Marine Pollutant .	<b>Hazard Class:</b>	5.1(6.1), pg II, Marine Pollutant.
<b>Identification Number:</b>	UN1469.	<b>UN Number:</b>	UN1469.

## Section 15: Regulatory Information

**EINECS:** Listed (233-245-9).

**WHMIS Canada:** Not WHMIS controlled.

**TSCA:** All components are listed or are exempt.

**California Proposition 65:** Listed.

*The 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.*

## Section 16: Other Information

**Current Issue Date:** January 23, 2009

*Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.*




# MATERIAL SAFETY DATA SHEET

5100 W. Henrietta Rd.  
West Henrietta, NY 14586  
TEL: (866) 260-0501

9416004 9416006  
9416306 9416406 9416106  
9416408 9416206 9604804  
MSDS No. 9604806 9604906 9604908  
Effective Date: September 13, 2002

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	Lead metal	<b>416-984-3000</b>  <b>NFPA</b>   <b>HAZARD RATING</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4  <b>WHMIS</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4	<b>Health</b> 3
Chemical Synonyms	N/A		<b>Flammability</b> 0
Formula	Pb		<b>Reactivity</b> 0
CAS No.	7439-92-1		

## SECTION II DANGEROUS INGREDIENTS

Name	%	TLV Units
Lead	100%	TWA: 0.05 mg/m <sup>3</sup> (Pb)
<b>CAUTION!</b>		

## SECTION III PHYSICAL DATA

Melting Point (°C)	~ 327.4°C	Specific Gravity (H <sub>2</sub> O = 1)	11.34 @ 20/4°C
Boiling Point (°C)	1753°C	Percent Volatile by Volume (%)	0% @ 20°C
Vapor Pressure (mm Hg)	N/A	Evaporation Rate (=1)	N/A
Vapor Density (Air=1)	N/A		
Solubility in Water	Insoluble.		
Appearance & Odor	Bluish, silvery-gray soft metal, granular, shot, sheet, foil; no odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash point	Non-flammable.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
Firefighting Procedures					

Use dry chemical, CO<sub>2</sub>, water spray or foam. In fire conditions, fire-fighters should wear an appropriate mask or a self-containing breathing apparatus.

Flammability and Explosion Hazards

When heated, emits toxic fumes of lead.

**TDG** Not controlled under TDG.

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

LL0070

Chemical Stability	Yes	X	If no, under what conditions?
	No		
Incompatible with Other products	Yes	X	Oxidizing materials.
	No		

Hazardous Decomposition Products	Lead fumes.
Reactive under what conditions	No specific information is available.

## SECTION VI TOXICOLOGICAL PROPERTIES

Route of Entry	Ingestion.
TLV	TWA: 0.05 mg/m <sup>3</sup> Lead and inorganic compounds as Pb.
Toxicity for animals	N/A
Chronic effects on humans	There is no known effect from chronic exposure to this product. Target organs: Lungs, kidneys.
Acute effects on humans	May be harmful if swallowed or inhaled as dust or fumes.

## 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.
Precautions	Avoid contact with skin and eyes. 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. Wash spill area with soap and water.
Protective Clothing	Safety glasses, lab coat, dust 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. Seek immediate medical attention.
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
## SECTION IX PREPARATION OF THE MSDS

Rev. No.	2	Date	September 13, 2002	Approved	Michael Raszeja
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## SECTION I Identification

Produit	Métal de plomb
Synonymes	Non-disponible.
Formule	Pb
# CAS	7439-92-1

## Telephone D'urgence

416-984-3000	
NFPA	
Niveau de risque	WHMIS
Minime 0	Légère 1
Modéré 2	Sérieux 3
	Extrême 4

## SECTION II Ingrédients Dangereux

Nom	%	TWA
Métal de plomb	100%	TWA: 0,05 mg/m <sup>3</sup> comme Pb
ATTENTION!		

## SECTION III Caractéristiques Physiques

Point de fusion (°C)	~ 327,4°C	Gravité spécifique (Eau = 1)	11,34 @ 20/4°C
Point d'ébullition (°C)	1753°C	Volatilité % par volume	0% @ 20°C
Tension de vapeur (mm Hg)	Non-disponible.	Taux d'évaporation (=1)	Non-disponible.
Densité de la vapeur (Air=1)	Non-disponible.		
Solubilité	Insoluble.		
Odeur et apparence	Bleuâtre, d'argent-gris métal tendre-granulaire, plombs, feuilles ou lame de métal; inodore.		

## SECTION IV Risques D'incendie ou D'explosion

Point d'éclair	Ininflammable.	Limites d'inflammabilité % par volume	Non-disponible.	Seuil minimal	Seuil maximal
Moyens d'extinction					

Utiliser des poudres chimiques SÈCHES, du CO<sub>2</sub>, de l'eau pulvérisée ou une mousse. En cas de feu, sapeur-pompier devra porter en masque adéquate ou un respirateur autonome.

Inflammabilité et risques d'explosion

Émet les fumeées de plomb une fois de chauffage.

TMD Substance non réglementée par le TMD (Canada).

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 a trait à l'exactitude ou à l'état complet de l'information contenue dans ce document. La détermination finale de la convenance de tout matériel 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

LL0070

Chimique Stabilité	oui	X	<u>Si non, dans quelles condition?</u>
	non		
Incompatibilité avec d'autres produits	oui	X	Les matières comburante.
	non		
Produits de decomposition dangereux	Fumées de plomb.		
Conditions de Réactivité	Aucune information spécifique n'est disponible.		

## SECTION VI Propriétés Toxicologiques

Voies d'absorption	Ingestion.
LMP	TWA: 0,05 mg/m <sup>3</sup> Plomb et composés inorganiques comme Pb
Toxicité pour les animaux	Non-disponible.
Effets chroniques sur les humains	Il n'y a aucun effet connu dû à une exposition chronique à ce produit. Le poumons et les reins sont des organes de cible.
Effets aiguë sur les humains	Peut être nocif en cas d'ingestion ou en cas d'inhalation.

## 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. Conserver le récipient bien fermé.
Précautions	Éviter tout contact avec la peau et les yeux. NE PAS inhaler les poussières. NE PAS ingérer. Si ingéré, consulter immédiatement un médecin.
Déversement ou fuite	Utiliser les instruments nécessaires pour mettre le solide répandu 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 de sécurité, blouse de laboratoire, respirateur anti-poussières, 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: Vérifier si la victime porte des verres de contact et dans ce cas lui les enlever. Rincer les yeux immédiatement à l'eau courante pendant au moins 15 minutes en gardant les paupières ouvertes. Obtenir de l'aide médicale. Contact cutané: 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. Obtenir immédiatement de l'aide médicale.
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## SECTION IX Renseignements sur la Préparation de la FS

# Rev.	2	Date	13 septembre, 2002	Véifié par	Michael Raszeja
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# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 437.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Lead 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 liquids; 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 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 and fumes (P261).

Hazard class: Serious eye damage or irritation (Category 1). Causes serious eye damage (H318).

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). Use personal protective equipment as required (P281). Inorganic lead compounds are probable human carcinogens (IARC -2A, NTP reasonably anticipated to be a human carcinogen).

Hazard class: Reproductive toxicity (Category 1A). May damage fertility or the unborn child (H360).

Hazard class: Specific target organ toxicity, repeated exposure (Category 2). May cause damage to organs through prolonged or repeated exposure (H373).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Lead nitrate	10099-74-8	Pb(NO <sub>3</sub> ) <sub>2</sub>	331.20	
Synonyms: Lead(II) nitrate; Lead dinitrate				

### 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). Immediately call a POISON CENTER or physician (P310).

**If on skin:** Rinse with plenty of water.

**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, dangerous fire risk 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. Take any precautions to avoid mixing with combustibles (P221+P370+P378).

**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**

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Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides. Store in a cool, dry place. Store in a Flinn Chem-Saf™ bag. Keep and store away from clothing and combustible materials (P220). Take any precautions to avoid mixing with combustibles (P221). Use only in a hood or well-ventilated area (P271).

---

**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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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/TLV 0.05 mg/m<sup>3</sup> (OSHA/ACGIH)

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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White crystals. Odorless.

Melting point: 470 °C (decomposes)

Soluble: Water and alcohol

Specific gravity: 4.53

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with strong reducers and finely powdered metals.

Shelf life: Indefinite, if stored properly.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Convulsions, seizures, weakness, muscle cramps, methemoglobinemia.

ORL-GPIG LD<sub>0</sub>: 500 mg/kg

Chronic effects: Anemia, reproductive hazard, probable carcinogen.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: Nerves, brain, blood, kidneys, female/male reproductive system

SKN-RBT LD<sub>50</sub>: N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Acute and chronic aquatic toxicity (category 1). Very toxic to aquatic life with long lasting effects (H410)

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #27f is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Lead nitrate; Hazard class: 5.1, Oxidizer, poison; UN number: UN1469

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (233-245-9), RCRA code D001, D008.

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**SECTION 16 — OTHER INFORMATION**

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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

**MATERIAL SAFETY DATA SHEET**

EPA Reg. No. 47371-36-1658

EPA Est. No. 1658-MO-1

**NFPA RATING:** Health = 2 Flammability = 0 Reactivity = 0  
**HMIS RATING:** Health = 2 Flammability = 0 Reactivity = 0

**SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION (1118A)**

**Manufacturer's Name:** HILLYARD INDUSTRIES **Product Name:** HILLYARD LEMON DISINFECTANT  
**Address:** 302 North Fourth Street **Date Prepared:** July 6, 2010 (version 2)  
 St. Joseph, MO 64501 **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	%
Didecyl dimethyl ammonium chloride	7173-51-5	N/E	N/A	N/A	0.94
n-Alkyl (C <sub>14</sub> 50%; C <sub>12</sub> 40%; C <sub>16</sub> 10%)	8001-54-5	N/E	N/A	N/A	0.62
dimethyl benzyl ammonium chloride					
Deionized water	7732-18-5	none	N/A	N/A	---

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.

N/E = Not Established

N/A = Not Applicable

**SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS**

**Boiling Point:** 212°F **Specific Gravity (H<sub>2</sub>O = 1):** 25°C = 1.00 \*Density = 8.34 lb/gl  
**Vapor Pressure (mm Hg.):** 17.5 **\* Percent Volatile by Weight (%):** 97.5 – 98.5%  
**Vapor Density (AIR = 1):** less than 1 **Evaporation Rate (ethyl ether = 1):** slower than 1  
**Solubility in Water:** complete **Appearance and Odor:** clear liquid; lemon odor  
**pH (concentrate) =** 10 – 11.5

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

**Flash point:** None to boiling (Tag Closed Cup) **Flammable Limits:** LEL = N/A UEL = N/A  
**Extinguishing Media:** N/A  
**Special Fire Fighting Procedures:** None  
**Unusual Fire and Explosion Hazards:** None

**SECTION V – PHYSICAL HAZARDS**

**Stability:** Stable **Conditions to Avoid:** N/A  
**Incompatibility (Materials to Avoid):** Acids  
**Hazardous Decomposition Products or Byproducts:** Carbon derivatives  
**Hazardous Polymerization:** Will not occur **Conditions to Avoid:** N/A

**SECTION VI – HEALTH HAZARD DATA**

**Routes of entry:** Inhalation? No Skin? No Ingestion? Yes  
**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Causes eye and skin irritation. Avoid contact with eyes, skin and clothing.
2. None known to 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:** Should not cause respiratory irritation. Causes eye irritation. Causes skin irritation. Harmful if swallowed.

**Medical Conditions Generally Aggravated by Exposure:** Skin problems such as dermatitis.

**Emergency and First Aid Procedures:** **Inhalation:** Move to fresh air. **Eyes:** Flush with plenty of water for at least 15 minutes. Call a physician immediately. **Skin:** Flush with plenty of water. Remove contaminated clothing. Call a physician. Wash clothing before reuse. **Ingestion:** Promptly drink a large quantity of water. Call a physician 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.

## SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps To Be Taken In Case Material Is Released Or Spilled:** Contain spill. Do not contaminate food, feed or water.

**Waste Disposal Method:** Open dumping is prohibited. Dispose of in accordance with local, state and federal regulations. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency.

**Precautions To Be Taken In Handling And Storing:** Product must be kept under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.

**Other Precautions:** Product is cationic; mixing with soap or anionics will decrease its activity. Triple rinse containers before disposal. Do not reuse empty containers.

## SECTION VIII – CONTROL MEASURES

**Respiratory Protection (Specify Type):** None required

**Ventilation:**

**Local Exhaust =** N/A      **Mechanical (General) =** Recommended      **Special =** N/A      **Other =** N/A

**Protective Gloves:** Rubber or neoprene with concentrate      **Eye Protection:** Chemical splash goggles

**Other Protective Clothing or Equipment:** Face Shield

**Work / Hygienic Practices:** Wash hands 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.**

# Safety Data Sheet: LEMON DROP, MM

Supersedes Date 09/29/2011

Issuing Date 11/22/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** LEMON DROP, MM  
**Recommended use** Fragrance  
**Information on Manufacturer**  
CHEMSEARCH DIV. OF NCH CORP.  
BOX 152170  
IRVING, TX 75015

**Product Code** 5940  
**Chemical nature** Petroleum distillates and fragrances  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300  
**Telephone inquiry**  
972-579-2477

## 2. HAZARD IDENTIFICATION

**Color** Colorless - Light yellow

**Physical State** Liquid

**Odor** Citrus

### GHS

#### Classification

##### Physical Hazards

Flammable liquids

Category 4

##### Health Hazard

Aspiration Toxicity

Category 1

Acute Inhalation Toxicity - Vapors

Category 3

Serious Eye Damage/Eye Irritation

Category 2B

Respiratory Sensitization

Category 1

Skin Sensitization

Category 1

Specific target organ systemic toxicity (single exposure)

Category 3

Specific target organ systemic toxicity (repeated exposure)

Category 2

##### Other hazards

None

### Labeling

#### Signal Word

**DANGER**



#### Hazard Statements

H227 - Combustible liquid

H317 - May cause an allergic skin reaction

H320 - Causes eye irritation

H331 - Toxic if inhaled

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H336 - May cause drowsiness or dizziness

H304 - May be fatal if swallowed and enters airways

H373 - May cause damage to organs through prolonged or repeated exposure in contact with skin

#### Precautionary Statements

P210 - Keep away from heat, sparks, open flames or hot surfaces.

P280 - Wear protective gloves, protective clothing and eye protection.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P260 - Do not breathe mist or vapor

P271 - Use in a well-ventilated area.

P285 - In case of inadequate ventilation wear respiratory protection

P270 - Do not eat, drink or smoke when using this product

P272 - Contaminated work clothing should not be allowed out of the workplace

P302+ P352 - IF ON SKIN: Wash with plenty of soap and water

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.

P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 - If experiencing respiratory symptoms, call a physician

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

P235 - Keep cool

P501 - Dispose of contents and container in accordance with applicable regulations.

16 % of the mixture consists of ingredient(s) of unknown toxicity

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Petroleum distillates, hydrotreated light	64742-47-8	60-100
Orange Terpenes	68647-72-3	1-5
Linalool	78-70-6	1-5
Citral	5392-40-5	1-5
D-Limonene	5989-27-5	1-5
Lemon oil	8008-56-8	1-5

## 4. FIRST AID MEASURES

<b>General advice</b>	Avoid contact with skin, eyes and clothing.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists. Remove contaminated clothing and shoes. Wash contaminated clothing before re-use.
<b>Inhalation</b>	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
<b>Ingestion</b>	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
<b>Notes to physician</b>	Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways. May cause sensitization of susceptible persons.

## 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	164 °F / 73 °C	<b>Method</b>	Seta closed cup
<b>Flammability Limits in Air %</b>	Petroleum distillates.	<b>Upper</b>	4.9
<b>Suitable Extinguishing Media</b>	Foam. Water spray. Carbon dioxide (CO <sub>2</sub> ). Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.	<b>Lower</b>	0.5
<b>Specific hazards arising from the chemical</b>	Combustible Liquid. Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions.		
<b>Protective Equipment and Precautions for Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.		
<b>NFPA</b>	<b>Health</b> 1	<b>Flammability</b> 2	<b>Instability</b> 0
<b>HMIS</b>	<b>Health</b> 1	<b>Flammability</b> 2	<b>Instability</b> 0

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
<b>Methods for Containment</b>	Do not flush into surface water or sanitary sewer system.
	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).
<b>Methods for Cleaning Up</b>	Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.
<b>Neutralizing Agent</b>	Not applicable.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes and clothing.			
<b>Storage</b>	Keep away from heat and sources of ignition. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.			
<b>Storage Temperature</b>	<b>Minimum</b>	35 °F / 2 °C	<b>Maximum</b>	120 °F / 49 °C
<b>Storage Conditions</b>	<b>Indoor</b>	X	<b>Outdoor</b>	<b>Heated</b>
				<b>Refrigerated</b>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Petroleum distillates, hydrotreated light	5 mg/m <sup>3</sup> as oil mist	10 mg/m <sup>3</sup> as oil mist	No data available
Orange Terpenes	No data available	No data available	No data available

Linalool	No data available	No data available	No data available
Citral	TWA: 5 ppm Skin	No data available	No data available
D-Limonene	No data available	No data available	No data available
Lemon oil	No data available	No data available	No data available

**Engineering Measures**  
**Personal Protective Equipment**
**Eye/Face Protection****Skin Protection****Respiratory Protection****General Hygiene Considerations**

Ensure adequate ventilation, especially in confined areas.

Safety glasses with side-shields.

Wear suitable protective clothing, Impervious gloves.

In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

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

<b>Physical State</b>	Liquid	<b>Viscosity</b>	Non viscous
<b>Color</b>	Colorless - Light yellow	<b>Odor</b>	Citrus
<b>Odor Threshold</b>	Not applicable	<b>Appearance</b>	Transparent
<b>pH</b>	Not applicable	<b>Specific Gravity</b>	0.80
<b>Evaporation Rate</b>	0.02 (Butyl acetate=1)	<b>Percent Volatile (Volume)</b>	100
<b>VOC Content (%)</b>	92	<b>VOC Content (g/L)</b>	736
<b>Vapor Pressure</b>	0.37 mmHg @ 70°F	<b>Vapor Density</b>	4.9 (Air = 1.0)
<b>Solubility</b>	Negligible	<b>n-Octanol/Water Partition</b>	No data available
<b>Melting Point/Range</b>	No data available	<b>Decomposition Temperature</b>	No data available
<b>Boiling Point/Range</b>	390 °F / 199 °C	<b>Flammability (solid, gas)</b>	No data available
<b>Flash Point</b>	164 °F / 73 °C	<b>Method</b>	Seta closed cup
<b>Autoignition Temperature</b>	No information available.		
<b>Flammability Limits in Air %</b>	Petroleum distillates.	<b>Upper 4.9 Lower 0.5</b>	

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable. Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	Heat, flames, and sparks
<b>Incompatible Products</b>	Strong oxidizing agents, Strong acids, Strong bases.
<b>Hazardous Decomposition Products</b>	Carbon oxides
<b>Possibility of Hazardous Reactions</b>	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):

<b>Oral LD50</b>	4,910.15
<b>Dermal LD50</b>	2,207.77
<b>Inhalation LC50</b>	
<b>Gas</b>	No information available
<b>Mist</b>	No information available
<b>Vapor</b>	5.21

**Principle Route of Exposure** Skin contact, Eye contact, Inhalation.

**Primary Routes of Entry** Inhalation, Skin Absorption.

**Acute Effects****Eyes**

Causes eye irritation.

**Skin**

May cause skin irritation. May cause allergic skin reaction.

**Inhalation**

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. May cause allergic respiratory reaction. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.

**Ingestion****Chronic Toxicity**

Liver and kidney injuries may occur. May cause sensitization by skin contact. May cause sensitization by inhalation.

**Target Organ Effects**

Respiratory system, Ears, Central nervous system, Liver, Kidney, Immune system.

**Aggravated Medical Conditions**

Respiratory disorders, Skin disorders, Neurological disorders, Liver disorders, Kidney disorders.

**Component Information****Acute Toxicity**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Petroleum distillates, hydrotreated light	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 5.2 mg/L ( Rat ) 4 h	no data available	no data available

Orange Terpenes	no data available	no data available	no data available	no data available	no data available
Linalool	no data available	no data available	no data available	no data available	no data available
Citral	= 4950 mg/kg ( Rat )	= 2250 mg/kg ( Rabbit )	no data available	no data available	no data available
D-Limonene	no data available	> 5 g/kg ( Rabbit )	no data available	no data available	no data available
Lemon oil	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
Petroleum distillates, hydrotreated light	no data available	no data available	no data available	no data available	respiratory system, liver, kidney, CNS
Orange Terpenes	no data available	no data available	no data available	no data available	no data available
Linalool	no data available	no data available	no data available	no data available	no data available
Citral	no data available	no data available	no data available	no data available	no data available
D-Limonene	no data available	Skin sensitization, Respiratory sensitization	no data available	no data available	CNS, immune system, lungs, liver, kidneys
Lemon oil	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
Petroleum distillates, hydrotreated light	not applicable	not applicable	not applicable	not applicable	not applicable
Orange Terpenes	not applicable	not applicable	not applicable	not applicable	not applicable
Linalool	not applicable	not applicable	not applicable	not applicable	not applicable
Citral	not applicable	not applicable	not applicable	not applicable	not applicable
D-Limonene	not applicable	not applicable	not applicable	not applicable	not applicable
Lemon oil	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
Petroleum distillates, hydrotreated light	no data available	LC50 = 45 mg/L Pimephales promelas 96 h LC50 = 2.2 mg/L Lepomis macrochirus 96 h LC50 = 2.4 mg/L Oncorhynchus mykiss 96 h	no data available	LC50= 4720 mg/L 96 h	N/A
Orange Terpenes	no data available	no data available	no data available	no data available	N/A
Linalool	EC50 = 88.3 mg/L Desmodesmus subspicatus 96 h	LC50 22 - 46 mg/L Leuciscus idus 96 h	EC50 = 1000 mg/L 30 min	EC50= 20 mg/L 48 h	2.84 - 3.1
Citral	EC50 = 16 mg/L Desmodesmus subspicatus 72 h EC50 = 19 mg/L Desmodesmus subspicatus 96 h	LC50 4.6 - 10 mg/L Leuciscus idus 96 h	EC50 = 2100 mg/L 30 min	EC50= 7 mg/L 48 h	2.76
D-Limonene	no data available	LC50 0.619 - 0.796 mg/L Pimephales promelas 96 h LC50 = 35 mg/L Oncorhynchus mykiss 96 h	no data available	no data available	N/A
Lemon oil	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**

**Proper Shipping Name**  
**Hazard Class**

**DOT**

>119 Gals = Combustible liquid, n.o.s.  
Combustible liquid

UN-No NA1993  
 Packing Group III  
 Description NA1993, Combustible liquid, n.o.s.(Petroleum Distillates), Combustible liquid, PG III

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 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	Yes	Yes	No	No

#### CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Petroleum distillates, hydrotreated light	Not applicable	Not applicable
Orange Terpenes	Not applicable	Not applicable
Linalool	Not applicable	Not applicable
Citral	Not applicable	Not applicable
D-Limonene	Not applicable	Not applicable
Lemon oil	Not applicable	Not applicable

### 16. OTHER INFORMATION

Prepared By Rachael Mohochi

Supersedes Date 09/29/2011

Issuing Date 11/22/2013

Reason for Revision No information available.

Glossary No information available.

List of References. No information available.

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FLOOR COATING AND FINISHING MATERIAL  
AS TO SLIP RESISTANCE ONLY  
17SU

Maintenance Solutions

# Lemon Hi-Con 64

Neutral Disinfectant & Detergent



**DILUTION: 1:64**  
**2 OUNCES PER GALLON OF WATER (660 ppm quat)**

A multi-purpose, neutral pH, germicidal detergent and deodorant effective in hard water up to 400 ppm (calculated as CaCO<sub>3</sub>) in the presence of a moderate amount of soil (5% organic serum) according to the AOAC Use-dilution Test. Disinfects, cleans and deodorizes in one labor-saving step.

Recommended for use in hospitals, nursing homes, schools, colleges, commercial and industrial institutions, office buildings, veterinary clinics, animal life science laboratories, zoos, pet shops, airports, kennels, hotels, motels, breeding establishments, grooming establishments and households.

Disinfects, cleans, and deodorizes the following hard, nonporous, inanimate surfaces: floors, walls, (non-medical) metal surfaces, (non-medical) stainless steel surfaces, glazed porcelain, plastic surfaces (such as polypropylene, polystyrene, etc.).

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This product is not for use on medical device surfaces.

**DISINFECTION / CLEANING / DEODORIZING DIRECTIONS:** Remove heavy soil deposits from surface, then thoroughly wet surface with a use-solution of 2 ounces of the concentrate per gallon of water. The use-solution can be applied with a cloth, mop, sponge, or coarse spray or by soaking. For sprayer applications, use a coarse spray device. Spray 6-8 inches from the surface, rub with a brush, cloth or sponge. Do not breathe spray. Let solution remain on surface for a minimum of 10 minutes. Rinse or allow to air dry. Rinsing of floors is not necessary unless they are to be waxed or polished.

Food contact surfaces must be thoroughly rinsed with potable water. This product must not be used to clean the following food contact surfaces: utensils, glassware and dishes.

**BACTERICIDAL STABILITY OF USE-DILUTION:** Tests confirm that this product, when diluted in 400 ppm hard water, remains effective against *Pseudomonas aeruginosa*, *Staphylococcus aureus* and *Salmonella choleraesuis* for up to 3 months when stored in a sealed container such as a spray bottle. If product becomes visibly dirty or contaminated, the use-dilution must be discarded and fresh product prepared. Always use clean, properly labeled containers when diluting this product. Bactericidal stability of the use-dilution does not apply to open containers such as buckets or pails.

**TOILET BOWLS:** Swab bowl with brush to remove heavy soil prior to cleaning or disinfecting. Clean by applying diluted solution around the bowl and up under the rim. Stubborn stains may require brushing. To disinfect, first pre-clean to remove heavy soil, then remove or expel over the inner trap the residual bowl water. Pour in three ounces of the diluted solution. Swab the bowl completely using a scrub brush or mop, making sure to get under rim. Let stand for 10 minutes or overnight, then flush.

## FUNGICIDAL DIRECTIONS:

For use in areas such as locker rooms, dressing rooms, shower and bath areas and exercise facilities follow disinfection directions.

**MILDEWSTATIC INSTRUCTIONS:** Will effectively control the growth of mold and mildew, plus the odors caused by them when applied to hard, nonporous surfaces such as walls, floors and table tops. Apply use-solution of 2 ounces per gallon of water with a cloth, mop, sponge or coarse spray. Make sure to wet all surfaces completely. Let air dry. Repeat application weekly or when growth reappears.

**\*KILLS HIV-1 (AIDS VIRUS) AND HBV (HEPATITIS B VIRUS) AND HCV (HEPATITIS C VIRUS) ON PRECLEANED, ENVIRONMENTAL SURFACES / OBJECTS PREVIOUSLY SOILED WITH BLOOD / BODY FLUIDS** in health care settings or other settings in which there is an expected likelihood of soiling of inanimate surfaces/objects with blood / body fluids, and in which the surfaces / objects likely to be soiled with blood / body fluids can be associated with the potential for transmission of Human Immunodeficiency Virus Type I (HIV-1) (associated with AIDS) or Hepatitis B Virus (HBV) or Hepatitis C Virus (HCV).

## PRODUCT SPECIFICATIONS

<b>Color:</b>	Pink	<b>Dilution:</b>	2 oz./gal. (1:64)
<b>Odor:</b>	Lemon	<b>Detergency:</b>	Excellent
<b>pH:</b>	7.2 - 8.2	<b>Rinsability:</b>	Excellent
<b>Base:</b>	Quaternary ammonium chloride	<b>Flash Point:</b>	None (waterbased)
<b>Viscosity:</b>	Water thin	<b>Hard Water Tolerance:</b>	400 ppm
<b>Foam:</b>	Moderate	<b>Biodegradability:</b>	Complete
<b>Abrasives:</b>	None	<b>Storage/Stability:</b>	2 years
<b>Solubility:</b>	Complete with water	<b>Weight per Gallon:</b>	8.25 lbs./gal.
		<b>Freeze / Thaw Stability:</b>	Keep from freezing

Disinfectant Cleaners

## SECTION 1-PRODUCT IDENTIFICATION AND SUPPLIER INFORMATION

<b>Manufacturer's Name:</b> Misco Products Corporation	<b>Product Name:</b> Lemon Hi-Con 64	<b>Supplier's Name:</b>
<b>Manufacturer's Address:</b> 1048 Stinson Drive Reading, PA 19605	<b>Generic Name:</b> Neutral Disinfectant & Detergent	<b>Supplier's Address:</b>
<b>Manufacturer's Phone #:</b> (610) 926-4106	<b>Chemical Family:</b> Quaternary Detergent Blend	<b>Supplier's Phone #:</b>
	<b>Formula:</b> Proprietary	
	<b>EPA Reg. No.</b> 47371-131-8325	

## SECTION 2-INGREDIENT INFORMATION

CHEMICAL NAME	CAS NO.	WT. %	PEL	TWA-TLV	STEL-TLV
Water	7732-18-5	to 100			
Dimethyl Benzyl Ammonium Chloride	8001-54-5	1.69			
Didecyl Dimethyl Ammonium Chloride	7173-51-5	2.54			
Octyl Dimethyl Amine Oxide	2605-78-9	0 to 5			
Trisodium Salt of EDTA	150-38-9	0 to 5			
Perfume Oil	N/A	0 to 5			
Dye	N/A	0 to 5			

## SECTION 3-PHYSICAL DATA

<b>Boiling Point (°F):</b> 210 F.	<b>Specific Gravity:</b> 1.00
<b>Vapor Pressure:</b> 20mm Hg @ 68 F.	<b>Vapor Density (Air=1):</b> >1
<b>% Volatile:</b> 85+	<b>pH:</b> 7.2-8.2
<b>Solubility in Water:</b> Complete	<b>Evaporation Rate (Water=1):</b> <1
<b>Physical Description:</b> Thin pink liquid with pleasant lemon odor.	

## SECTION 4-FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used):</b> N/A	<b>Lower Explosion Limit:</b> N/A
<b>Upper Explosion Limit:</b> N/A	<b>Extinguishing Media:</b> N/A
<b>Special Firefighting Procedures:</b> Non Flammable	
<b>Unusual Fire and Explosion Hazards:</b> N/A	

## SECTION 5-REACTIVITY DATA

<b>Stability:</b> Stable	<b>Hazardous Polymerization:</b> None
<b>Hazards Decomposition Products:</b> Thermal decomposition may produce toxic vapors/fumes of hydrogen chloride, amines, and oxides of carbon and nitrogen.	<b>Incompatibility (Materials to Avoid):</b> Strong oxidizing or reducing agents

## SECTION 6-STORAGE AND HANDLING INFORMATION

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. Wear protective gloves and eyewear when handling concentrate. EPA registered product, follow direction exactly. Use in well ventilated area.

## SECTION 7-HEALTH HAZARDS AND FIRST AID

**Effects of Overexposure:**  
**Skin:** Skin irritant. Prolonged or repeated contact may cause dermatitis.  
**Eyes:** Severe eye irritant. Liquid and mists may injure the eyes, causing corneal damage.  
**Inhalation:** Inhalation of mists will cause respiratory irritation marked by coughing, sneezing, burning sensation of nose and throat.  
**Ingestion:** May be irritating to the mouth, throat, and gastrointestinal system. Burning, pain, and diarrhea expected with large doses.  
**First Aid Procedures:**  
**Skin:** Remove contaminated clothing. Flush affected areas with large quantities of water. Seek medical attention if irritation persists.  
**Eyes:** Flush with large quantities of water, holding eyelids open. Seek medical attention.  
**Inhalation:** Remove victim to fresh air. Seek medical attention if irritation persists  
**Ingestion:** Give large quantities of milk and water. Do not induce vomiting. Seek medical attention immediately.  
 Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. Supplemental oxygen and other measures to support breathing may be needed to combat circulatory shock.

## SECTION 8-SPECIAL PROTECTION INFORMATION

**Respiratory Protection:** No special requirements.  
**Ventilation Requirements:** General ventilation acceptable.  
**Protective Gloves:** Chemical resistant rubber or neoprene.  
**Eye Protection:** Safety glasses or chemical splash goggles.  
**Other Protective Equipment:** Eyewash station should be provided nearby. Wear protective rubber footwear when using on floors.

## 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:** EPA registered pesticide. Any method in accordance with local, state and federal laws governing such. 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. Triple 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  
 Non Hazardous  
 FOR 1 GALLON CONTAINERS : Cleaning Compound  
 Non Hazardous  
 FOR CONTAINERS < 1 GALLON : Cleaning Compound  
 Non Hazardous

## HMIS Hazardous Materials Identification System

<b>Health</b>	<b>3</b>
<b>Flammability</b>	<b>0</b>
<b>Reactivity</b>	<b>0</b>
<b>Personal Protection</b>	<b>D</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



## 1. Identification

<b>Product identifier</b>	<b>LEMON ODOR COUNTERACTANT</b>
<b>Other means of identification</b>	
<b>SDS number</b>	545N-25A
<b>Product code</b>	HIL00186
<b>Recommended use</b>	General Cleaner
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Manufacturer</b>	
<b>Company name</b>	HILLYARD INDUSTRIES
<b>Address</b>	302 North Fourth St. St. Joseph, MO 64501
<b>Contact person</b>	Regulatory Affairs
<b>Telephone number</b>	(816) 233-1321 (Ext. 8285)
<b>Fax</b>	(816) 383-8485
<b>E-mail</b>	regulatoryaffairs@hillyard.com
<b>Emergency telephone #</b>	(800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable liquids	Category 3
<b>Health hazards</b>	Not classified.	
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	Warning
<b>Hazard statement</b>	Flammable liquid and vapor.
<b>Precautionary statement</b>	
<b>Prevention</b>	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/eye protection/face protection.
<b>Response</b>	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. In case of fire: Use appropriate media to extinguish.
<b>Storage</b>	Store in a well-ventilated place. Keep cool.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Isopropyl Alcohol		67-63-0	5 - < 10
Alcohols (C12-15 In, Saturated) Ethoxylate		68131-39-5	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

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	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.
<b>General information</b>	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.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Flammable liquid and vapor.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. 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: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Clean surface thoroughly to remove residual contamination.
<b>Environmental precautions</b>	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid prolonged exposure. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

### Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. 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
		980 mg/m3
	TWA	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.

### Appropriate engineering controls

Explosion-proof general and local exhaust ventilation. 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

When using do not smoke. 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

<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Light Amber
<b>Odor</b>	Lemon odor
<b>Odor threshold</b>	Not available
<b>pH</b>	6 - 7
<b>Melting point/freezing point</b>	Not applicable / Not available
<b>Initial boiling point and boiling range</b>	211 °F (99.44 °C)
<b>Flash point</b>	122.0 °F (50.0 °C) Tag Closed Cup
<b>Evaporation rate</b>	< 1 Ethyl ether = 1
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	17.9 mm Hg
<b>Vapor density</b>	0.7 Air =1
<b>Relative density</b>	0.987 g/cm3 at 77°F
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Complete
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Viscosity</b>	Not available
<b>Other information</b>	
<b>Density</b>	8.22 lb/gal
<b>Percent volatile</b>	97.5 - 98.5 %
<b>VOC (Weight %)</b>	5 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Acids. Strong oxidizing agents. Isocyanates. Chlorine.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	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
LEMON ODOR COUNTERACTANT		
<b>Acute</b>		
<i>Oral</i>		
LD50	Mouse	72000 mg/kg estimated
	Rabbit	100.6 g/kg estimated
	Rat	94 g/kg estimated
Components	Species	Test Results
Isopropyl Alcohol (CAS 67-63-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	12800 mg/kg
<i>Oral</i>		
LD50	Mouse	3600 mg/kg
	Rabbit	5.03 g/kg
	Rat	4.7 g/kg
<i>Other</i>		
LD50	Mouse	1509 mg/kg
	Rat	1099 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** 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** 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.

<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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

<b>UN number</b>	UN1993
<b>UN proper shipping name</b>	Flammable liquid, n.o.s. (Isopropyl Alcohol)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	Flammable
<b>Packing group</b>	III
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	128
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

### IMDG

<b>UN number</b>	UN1993
<b>UN proper shipping name</b>	FLAMMABLE LIQUID, N.O.S. (Isopropyl Alcohol)
<b>Transport hazard class(es)</b>	
<b>Class</b>	3
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	Flammable
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-E, S-E
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### IATA; IMDG



## 15. Regulatory information

<b>US federal regulations</b>	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.
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	Not regulated.
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	Not listed.
<b>SARA 304 Emergency release notification</b>	Not regulated.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

<b>Hazard categories</b>	Immediate Hazard - No Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
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**SARA 302 Extremely hazardous substance**

Not listed.

<b>SARA 311/312 Hazardous chemical</b>	No
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**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

<b>Safe Drinking Water Act (SDWA)</b>	Not regulated.
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**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**

Isopropyl Alcohol (CAS 67-63-0)

**US. New Jersey Worker and Community Right-to-Know Act**

Isopropyl Alcohol (CAS 67-63-0)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Isopropyl Alcohol (CAS 67-63-0)

**US. Rhode Island RTK**

Isopropyl Alcohol (CAS 67-63-0)

**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**

<b>Issue date</b>	11-26-2014
<b>Version #</b>	01
<b>HMIS® ratings</b>	Health: 0 Flammability: 2 Physical hazard: 0

<b>Disclaimer</b>	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.
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# LEMON SHINE-UP (READY-TO-USE)

<div>National Fire Protection Association (NFPA)</div>	<div><div>Fire Hazard</div><div>Health0Reactivity0</div><div>Specific Hazard</div></div>	<div>Hazardous Material Information System (HMIS)</div>	<div><div>Health0</div><div>Fire Hazard0</div><div>Reactivity0</div></div>
<div>Protective Clothing</div>	<div>None required.</div>	<div>Emergency Overview</div>	<div>White. Liquid. See Section 9.</div>

## Section 1. Chemical Product and Company Identification

Product Name	LEMON SHINE-UP (READY-TO-USE)	Code	4415
Product Use	Industrial/Institutional: Furniture care.	PMS#	3131719
MSDS#	114416002	Validation Date	5/6/2003
U.S. Headquarters JohnsonDiversey, Inc. 8310 16th Street Sturtevant, Wisconsin 53177-0902 Phone: (800) 725-6737 MSDS Internet Address: www.johnsondiversey.com	Canadian Headquarters JohnsonDiversey - Canada, Inc. 2401 Bristol Circle Oakville, Ontario L6H 6P1 Phone: 1-888-746-5971	Print Date	5/6/2003
		Supersedes	No Previous Validation
		In Case of Emergency	(800) 851-7145

## Section 2. Composition and Information on Ingredients

Ingredients	CAS #	% by Weight	Exposure Limits	LC50/LD50
Isoparaffinic Hydrocarbon Solvent White Mineral Oil Silicones	64742-48-9 8042-47-5 63148-62-9	0.1-1 1-5 1-5	Not available. Not available. Not available.	Not available. Not available. DERMAL (LD50): Acute: 19400 mg/kg [Rabbit]. Not available.
Water	7732-18-5	60-100	Not available.	

## Section 3. Hazards Identification

Routes of Entry	Inhalation. Skin contact. Eye contact.
Potential Acute Health Effects	
Eyes	None known.
Skin	None known.
Inhalation	None known.
Ingestion	None known.
Medical Conditions Aggravated by Overexposure:	None known.
See Toxicological Information (section 11)	

## Section 4. First Aid Measures

Eye Contact	Rinse with plenty of running water.
Skin Contact	Rinse with plenty of running water.
Inhalation	No specific first aid measures are required.
Ingestion	No specific first aid measures are required.



### Section 5. Fire Fighting Measures

Flammability of the Product	None known.
Flash Points	Not available.
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	Use appropriate hygiene measures when handling product. Do not use or spray on floors. Do not let product overspray on to the floor as the product's ingredients could make the floor slippery. FOR COMMERCIAL AND 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	
<i>Eyes</i>	No special requirements under normal use conditions.
<i>Hands</i>	No special requirements under normal use conditions.
<i>Respiratory</i>	No special requirements under normal use conditions.
<i>Feet</i>	No special requirements under normal use conditions.
<i>Body</i>	No special protective clothing is required.

### Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.
Odor	Lemon like.
Color	White.
pH	5.5 to 7 [Acidic.]
Specific Gravity	1
Boiling/Condensation Point	100°C (212°F)
Solubility in water	Appreciable.

### Section 10. Stability and Reactivity

Stability and Reactivity	The product is stable.
Conditions of Instability	None known.
Incompatibility with Various Substances	Not available.
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 Not available.

## 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

DOT Proper Shipping Name Please refer to the Bill of Lading/receiving documents for up to date shipping information.

### TDG Classification

TDG Proper Shipping Name Please refer to the Bill of Lading/receiving documents for up to date shipping information.

## Section 15. Regulatory Information

### Reporting in this section is based on ingredients disclosed in Section 2

#### US Regulations

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

Registered Product Information Not applicable.

#### Canadian Regulations

WHMIS Classification Not controlled under WHMIS (Canada).

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

## Section 16. Other Information

Other Special Considerations Not available.

Version 2

### 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.*

# MATERIAL SAFETY DATA SHEET

24 HOUR EMERGENCY NUMBER: INFOTRAC @ (800) 535-5053  
(Code: MLO4MSDS)

MOTSENBOCKER'S LIFT OFF  
P.O. BOX 90947  
SAN DIEGO, CA 92169  
DATE: January 1, 2003

Product Information:  
Toll Free: (800) 346-1633  
Phone: (858) 581-0222  
Fax: (858) 483-6965

## 1.0 PRODUCT IDENTIFICATION

1.1 Product Name: MOTSENBOCKER'S LIFT OFF #4  
1.2 Product Type: Spray Paint Graffiti Remover, Water- based  
1.3 Hazard Rating: Health 1 Fire 0 Reactivity 0

++ SARA 313 TOXIC CHEMICALS, If Present, Are Preceded by "#" ++

## 2.0 HAZARDOUS COMPONENTS

(mg/m3)  
% PEL TWA

2.1 Acetone 67-64-1 \* ACGIH STEL = 2380 mg/m3 < 10 2400 1780\*  
2.2 This product also contains trade secret ingredients. NJTSRN #411-01,412-01

PEL = OSHA 8 Hour Average in Air

TWA = ACGIH 8 Average in Air

## 3.0 PHYSICAL DATA

3.1 Appearance: Clear liquid, mild odor  
3.2 Solubility in Water: Mixes with water in all proportions.  
3.3 pH: 6.08  
3.4 Initial Boiling Point: 190 deg F (88 deg C)  
3.5 Specific Gravity: 1.0 Vapor Density: Heavier than air

## 4.0 FIRE AND EXPLOSION DATA

4.1 Special Fire Hazards: None  
4.2 Fire Fighting Methods: This water-based product has been tested by DOT methods and shown not to support combustion.

## 5.0 REACTIVITY DATA

5.1 Stability: Stable under normal conditions of handling.  
5.2 Conditions to Avoid: Store in a cool, dry place. Do not use on hot surfaces or in closed areas without adequate ventilation.



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**6.0 SPILL OR LEAK PROCEDURES (USE PROPER PROTECTIVE EQUIPMENT)**

- 6.1 Cleanup: Ventilate. Mop up. Smaller amounts may be flushed safely to the sewer.  
6.2 Waste Disposal: Consult state/ local authorities for limits on disposal of chemical waste.
- 

**7.0 HEALTH HAZARD DATA**

**CAUTION**

- 7.1 Effects of Overexposure to Concentrate:  
Skin: Contact with product can dry and defat skin, causing irritation or dermatitis.  
Eyes: Causes eye irritation.  
IF SWALLOWED: May cause stomach distress.  
If Inhaled: Prolonged exposure to vapors may cause dizziness
- 

**8.0 FIRST AID**

- 8.1 Eyes: Flush immediately with plenty of cool running water. Remove contact lenses. Continue flushing for 15 minutes.  
8.2 Skin: Flush skin with plenty of cool running water. Wash thoroughly with soap and water. Wash contaminated clothing well before re-use.  
8.3 If SWALLOWED: Rinse mouth, then drink 1 or 2 large glasses of water. DO NOT induce vomiting. Never give anything by mouth to an unconscious person.

IF IRRITATION OR DISCOMFORT PERSISTS, CALL A PHYSICIAN.

---

**9.0 PROTECTIVE MEASURES**

- 9.1 Respiratory: Ventilate to maintain exposure below limits.  
9.2 When using the product, wear rubber gloves and eye protection such as splash proof glasses.
- 

**10.0 ADDITIONAL INFORMATION / PRECAUTIONS**

- 10.1 DOT Class: Not regulated.  
10.2 Purposes of 09/17/98 issue: Change phone and fax area codes.  
10.3 Replaces previously dated February 25, 2000.

**KEEP OUT OF REACH OF CHILDREN**

The above information is believed to be correct with respect to the formula used to manufacture the product. 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.

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**I. Product and Supplier Information**

Product Name: Lighting-X-Erase

MSDS Number: Lighting-X-Erase

Publication Date: #####

Product Synonyms: Graffiti Remover

Chemical Family or Formula:

Supplier: Tribology, Inc./Tech-Lube  
35 Old Dock Road  
Yaphank, New York 11980-9702 USA

Phone: 631-345-3000

Fax: 631-345-3001

Email: [info@tribology.com](mailto:info@tribology.com)Website: [www.tribology.com](http://www.tribology.com)

Product Information: 631-345-3000

Transportation Emergency: 631-345-3000

Note: The purpose of this MSDS is to provide safe handling, shipping and disposal information for users of the product. It is not intended to, nor does it, provide complete or extensive toxicological data on the product or its components. Users who require this information are referred to primary suppliers of the ingredients of interest.

**II. Composition and Information on Ingredients**

Component	CAS #	Concentration
2-butoxyethanol	111-76-2	<20%
Water	7732-18-5	>60%
Isopropyl Alcohol	67-63-0	<10%
Proprietary Additives		<25%

This product is hazardous as defined in 29CFR1910.1200.

**III. Hazards Identification****OSHA Hazard Classification:**

Caution. Eye, nose, throat and lung irritant.

**Routes of Entry:**

Inhalation, eye and skin contact, ingestion.

**Chemical Interactions:**

Avoid contact with all oxidizing agents

**Unusual Fire Hazards:** Combustible**IV. First Aid****Inhalation:**

Remove individual to fresh air. If not breathing, assist ventilation with a mechanical device or use mouth to mouth resuscitation. Keep patient warm. Seek immediate medical advice.

**Skin Contact:**

Flush skin thoroughly with soap and water. Rinse thoroughly. Remove contaminated clothing.

**Eyes:**

Immediately flush eyes with plenty of water while holding eyelids apart. Seek immediate medical advice.

Take special care to flush eyes completely as permanent damage could be done otherwise.

**Ingestion:**

Seek immediate medical attention. Do not induce vomiting

If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

**V. Fire Fighting Measures****Flammability Summary:****Fire/Explosion Hazards:**

Combustible

**Extinguishing Media:**Foam, dry chemical or CO<sub>2</sub>, water stream

Inappropriate Extinguishing Media: none known

**Fire Fighting Instructions:**

In case of fire, use normal fire fighting equipment including a NIOSH approved self-contained breathing apparatus (SCBA). Use water to cool containers.

**Hazardous Combustion Products:**

Oxides of carbon, Smoke, Fume

**VI. Accidental Release Measures****Personal Protection for Emergency Situations:**

Evacuate the area of all unnecessary personnel. Eliminate any ignition sources until the area is determined to be free from explosion and fire hazards. Contain the release and eliminate its source if this can be done safely. Wear protective clothing. Keep unprotected persons away from spill.

**Spill Mitigation Procedures****Air Release:**

Provide adequate ventilation. Keep away from ignition sources.

**Water Release:**

Contain all liquid for treatment and/or disposal as a potential hazardous waste.

Notify all downstream users of possible contamination.

Do not flush to sewer! US regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of stipulated quantities. US Coast Guard National Response Center is 800-424-8802.

**Land Release:**

Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Decontaminate all clothing and the spill area using a detergent and flush with large amounts of water. Contain all contaminated water for disposal and/or treatment.

**Additional Spill Information:**

Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section XIII, Disposal Considerations.

**VII. Handling and Storage****Handling:**

Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash with soap and water. Avoid breathing vapor or mist. Material can accumulate static charges which may cause an electrical spark (ignition source).

**Storage**

Keep container closed. Handle container with care. Open slowly in order to control possible pressure release.

Store in a cool ventilated area. Storage containers should be grounded and bonded.

Product Transfer Keep container closed when not in use. Do not use compressed air for filling, discharge or handling.

**VIII. Exposure Controls and Personal Protection****Ventilation:**

Local exhaust ventilation or other engineering controls are recommended when handling or using this product. General exhaust ventilation is usually sufficient for general worker safety and comfort. Explosion proof motors and fans are not required for unheated handling.

**Respirator Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Half Face filter respirator

For high airborne concentration use an approved supplied air respirator, operated in positive pressure mode.

Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Skin:** Wear impervious gloves (butyl rubber, Viton, e.g.) to avoid skin contact. Follow good industrial hygiene practices.

**Eyes:** Use chemical safety glasses with side shields, safety goggles and/or a full face shield where splashing is possible.

**Protective Clothing Type:** Impervious

**IX. Physical and Chemical Data**

**Physical State:** Liquid

**Color:** Clear, colorless

**Odor:** Characteristic

**Flash Point:** None

**Specific Gravity:** 7.7 lbs per gallon

**Molecular Weight:** Not applicable to mixtures

**Vapor Density (Air = 1)** 4.9

**pH (@ 25 Deg. C):** Not applicable

**Vapor Pressure:** 0.023kPa (0.17mm Hg)

**Octanol/Water Coeff:** No data

**Evaporation Rate:**

(Butyl acetate = 1) 0.1 pH: NA

**Solubility in Water:** Excellent

**Volatiles % by vol.:**

**Bulk Density:** Not applicable

**Boiling Point:** 212°F

**X. Stability and Reactivity****Stability and Reactivity Summary:**

Stable under normal conditions.

**Reactive Properties:**

Sensitivity to mechanical shock: None  
Hazardous Polymerization: Will not occur  
Conditions to Avoid: Avoid heat, sparks, open flames and other ignition sources  
Chemical Incompatibility: Oxidizers.  
Incompatible materials:  
Hazardous Decomposition Products: Carbon Dioxide and Monoxide  
Decomposition Temperature: No data  
Product May Be Unstable At Temperatures Above: No data

**XI. Toxicological Information**

## Skin Irritation:

Toxicity: LD 50&gt;1300 mg/kg

## Eye Irritation:

This material is expected to be moderately irritating.

Acute Oral Toxicity: Expected to be low toxicity: LD50>1300mg/kg. Rat aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal

## Component Data:

All data refer to finished product

## Mutagenicity:

Not known or reported to be mutagenic.

## Chronic/Other Effects

Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis.  
Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema

**XII. Ecological Information**

## Ecological Toxicity Values:

Do not allow this material to be released to the environment without appropriate governmental permits.

ECOTOXICITY: Material not expected to be harmful to aquatic organisms.

Material not expected to demonstrate chronic toxicity to aquatic organisms.

**XIII. Disposal Considerations**

Consult current local, state and national regulations to ensure proper disposal.

## Waste Disposal Summary:

Product as made does not qualify as an "Unlisted Hazardous Waste" for disposal situations.

## Disposal Methods:

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

**XIV. Transportation Information**

Proper Shipping Name, Hazard Class, UN/NA Number Packing Group, Emergency Response Guide Number	
Consumer Commodity, pressurized Aerosol can	ORM-D
Hazard Class& Division: Combustible liquid	
Labels required per 49 CFR 172.101:	None
Size for "Limited quantity" per 49 CFR 173.150-.155:	Not applicable
Reportable Quantity ("RQ") per 49 CFR172.101:	None
Air (IATA/ICAO): Passenger & Cargo:	Not applicable
Eff. Jan 1, 2001 Cargo only:	Not applicable
Special Provisions:	Not applicable
Emergency response Group Code:	Not applicable

**XV. Regulatory Information**

## UNITED STATES:

## Toxic Substances Control Act (TSCA):

The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

EPCRA: This material contains no extremely hazardous substances

CERCLA: This material is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

SARA (311/312) Reportable Hazard Categories: Fire

## Safety Phrases:

Keep away from heat, sparks, open or direct flame. Do not puncture or incinerate container.  
Do not breathe gas, fumes, vapor or spray from this product.  
Do not empty into drains.

## State Right-to-Know Regulations Status of Ingredients

Pennsylvania: No information

New Jersey: No information

Massachusetts: No information

California Prop. 65: Does not contain products listed on Prop. 65.

## Hazard Category Classifications and Ratings

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference 49 CFR 171.8, OSHA 29 CFR 1910.1200 and SARA 302/311/312/313.
Immediate	2	1	No	No	
Delayed	No	No	No	No	
HMIS Hazard Ratings: Health 1 Flammability 2 Reactivity 0 Other B (Goggles, gloves)					
NFPA 704 Hazard Ratings: Health 1 Flammability 2 Reactivity 0 Special NA					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					

## XVI. Additional Information

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. WE BELIEVE THIS INFORMATION TO BE RELIABLE AND UP TO DATE AS OF ITS PUBLICATION DATE, BUT MAKE NO WARRANTY THAT IT IS. IF THIS MSDS IS MORE THAN THREE YEARS OLD YOU SHOULD CONTACT THE SUPPLIER TO MAKE CERTAIN THAT THE INFORMATION IS CURRENT.



**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : LIME-A-WAY

Other means of identification : not applicable

Recommended use : Delimer

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : 0.8 % - 2.3 %

Company : Ecolab Inc.  
370 N. Wabasha Street  
St. Paul, Minnesota USA 55102  
1-800-352-5326

Emergency telephone : 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)

Issuing date : 08/06/2014

**SECTION 2. HAZARDS IDENTIFICATION**
**GHS Classification**
**Product AS SOLD**

Skin corrosion : Category 1A  
Serious eye damage : Category 1

**Product AT USE DILUTION**

Skin corrosion : Category 1A  
Serious eye damage : Category 1

**GHS Label element**
**Product AS SOLD**

Hazard pictograms :



Signal Word : Danger

Hazard Statements : Causes severe skin burns and eye damage.

Precautionary Statements : **Prevention:**  
Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. 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. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Wash contaminated clothing before reuse.  
**Storage:**

# SAFETY DATA SHEET

## LIME-A-WAY

Store locked up.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

### Product AT USE DILUTION

Hazard pictograms

:



Signal Word

: Danger

Hazard Statements

: Causes severe skin burns and eye damage.

Precautionary Statements

: **Prevention:**

Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. 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. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Wash contaminated clothing before reuse.

**Storage:**

Store locked up.

**Disposal:**

Dispose of contents/ container to an approved waste disposal plant.

Other hazards

: None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Product AS SOLD

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration (%)
---------------	---------	-------------------

uronium hydrogen sulphate	21351-39-3	10 - 30
---------------------------	------------	---------

Urea	57-13-6	1 - 5
------	---------	-------

oxirane, methyl-, polymer with oxirane	9003-11-6	0.1 - 1
--	-----------	---------

### Product AT USE DILUTION

No hazardous ingredients

## SECTION 4. FIRST AID MEASURES

### Product AS SOLD

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

## SAFETY DATA SHEET

### LIME-A-WAY

If swallowed	: Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	: Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.
Protection of first-aiders	: If potential for exposure exists refer to Section 8 for specific personal protective equipment.
Notes to physician	: Treat symptomatically.

#### Product AT USE DILUTION

In case of eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
In case of skin contact	: Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
If swallowed	: Rinse mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.
If inhaled	: Remove to fresh air. Treat symptomatically. Get medical attention if symptoms occur.

See toxicological information (Section 11)

### SECTION 5. FIRE-FIGHTING MEASURES

#### Product AS SOLD

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: None known.
Specific hazards during fire fighting	: Not flammable or combustible.
Hazardous combustion products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus
Special protective equipment for fire-fighters	: Use personal protective equipment.
Specific extinguishing methods	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

#### Product AS SOLD

Personal precautions,	: Ensure adequate ventilation. Keep people away from and upwind of
-----------------------	--

## SAFETY DATA SHEET

### LIME-A-WAY

protective equipment and emergency procedures	spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
---	---

Environmental precautions	: Do not allow contact with soil, surface or ground water.
---------------------------	--

Methods and materials for containment and cleaning up	: Stop leak if safe to do so. Contain spillage, and then collect 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). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.
---	---

#### Product AT USE DILUTION

Personal precautions, protective equipment and emergency procedures	: Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
---	--

Environmental precautions	: Do not allow contact with soil, surface or ground water.
---------------------------	--

Methods and materials for containment and cleaning up	: Stop leak if safe to do so. Contain spillage, and then collect 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). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.
---	---

### SECTION 7. HANDLING AND STORAGE

#### Product AS SOLD

Advice on safe handling	: Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling.
-------------------------	--

Conditions for safe storage	: Keep away from strong bases. Keep out of reach of children. Store in suitable labeled containers.
-----------------------------	---

Storage temperature	: 0 °C to 50 °C
---------------------	-----------------

#### Product AT USE DILUTION

Advice on safe handling	: Do not ingest. Do not get in eyes, on skin, or on clothing. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Use only with adequate ventilation. Wash hands thoroughly after handling.
-------------------------	--

Conditions for safe storage	: Keep away from strong bases. Keep out of reach of children. Store in suitable labeled containers.
-----------------------------	---

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Product AS SOLD

##### Ingredients with workplace control parameters

## SAFETY DATA SHEET

### LIME-A-WAY

Ingredients	CAS-No.	Form of exposure	Permissible concentration	Basis
Urea	57-13-6	TWA	10 mg/m <sup>3</sup>	WEEL

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

#### Product AT USE DILUTION

Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : Safety goggles  
Face-shield

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

	Product AS SOLD	Product AT USE DILUTION
Appearance	: liquid	liquid
Color	: clear, dark green	light blue
Odor	: odorless	odorless
pH	: 0.1 - 0.2, 100 %	0.9 - 1.8

## SAFETY DATA SHEET

### LIME-A-WAY

Flash point	: not applicable
Odor Threshold	: no data available
Melting point/freezing point	: no data available
Initial boiling point and boiling range	: 100 °C
Evaporation rate	: no data available
Flammability (solid, gas)	: no data available
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapor pressure	: no data available
Relative vapor density	: no data available
Relative density	: 1.132 - 1.162
Water solubility	: soluble
Solubility in other solvents	: no data available
Partition coefficient: n-octanol/water	: no data available
Autoignition temperature	: no data available
Thermal decomposition	: no data available
Viscosity, kinematic	: no data available
Explosive properties	: no data available
Oxidizing properties	: no data available
Molecular weight	: no data available
VOC	: no data available

### SECTION 10. STABILITY AND REACTIVITY

#### Product AS SOLD

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: None known.
Incompatible materials	: Bases Metals
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx) Sulfur oxides Oxides of phosphorus

### SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

#### Potential Health Effects

## SAFETY DATA SHEET

### LIME-A-WAY

#### Product AS SOLD

Eyes	: Causes serious eye damage.
Skin	: Causes severe skin burns.
Ingestion	: Causes digestive tract burns.
Inhalation	: May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.

#### Product AT USE DILUTION

Eyes	: Causes serious eye damage.
Skin	: Causes severe skin burns.
Ingestion	: Causes digestive tract burns.
Inhalation	: May cause nose, throat, and lung irritation.
Chronic Exposure	: Health injuries are not known or expected under normal use.

#### Experience with human exposure

##### Product AS SOLD

Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough

##### Product AT USE DILUTION

Eye contact	: Redness, Pain, Corrosion
Skin contact	: Redness, Pain, Corrosion
Ingestion	: Corrosion, Abdominal pain
Inhalation	: Respiratory irritation, Cough

#### Toxicity

##### Product AS SOLD

Acute oral toxicity	: no data available
Acute inhalation toxicity	: no data available
Acute dermal toxicity	: no data available
Skin corrosion/irritation	: no data available
Serious eye damage/eye irritation	: no data available
Respiratory or skin sensitization	: no data available
Carcinogenicity	: no data available
Reproductive effects	: no data available

## SAFETY DATA SHEET

### LIME-A-WAY

Germ cell mutagenicity : no data available

Teratogenicity : no data available

STOT-single exposure : no data available

STOT-repeated exposure : no data available

Aspiration toxicity : no data available

#### Ingredients

Acute oral toxicity : uronium hydrogen sulphate  
LD50 rat: > 2,000 mg/kg

Urea  
LD50 rat: 8,471 mg/kg

#### Ingredients

Acute inhalation toxicity : Urea  
4 h LC50 rat: > 2.71 mg/l

oxirane, methyl-, polymer with oxirane  
4 h LC50 rat: 0.147 mg/l

#### Ingredients

Acute dermal toxicity : uronium hydrogen sulphate  
LD50 rabbit: > 2,000 mg/kg

Urea  
LD50 rat: 8,200 mg/kg

## SECTION 12. ECOLOGICAL INFORMATION

#### Product AS SOLD

##### Ecotoxicity

Environmental Effects : This product has no known ecotoxicological effects.

#### Product

Toxicity to fish : no data available

Toxicity to daphnia and other aquatic invertebrates : no data available

Toxicity to algae : no data available

#### Ingredients

Toxicity to fish : uronium hydrogen sulphate  
96 h LC50 Fish: > 6,810 mg/l

Urea  
96 h LC50 Fish: 127.9 mg/l

oxirane, methyl-, polymer with oxirane  
96 h LC50 Fish: > 100 mg/l

#### Persistence and degradability

no data available

#### Bioaccumulative potential



## SAFETY DATA SHEET

### LIME-A-WAY

no data available

#### Mobility in soil

no data available

#### Other adverse effects

no data available

### SECTION 13. DISPOSAL CONSIDERATIONS

#### Product AS SOLD

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

RCRA - Resource Conservation and Recovery Authorization Act Hazardous waste : D002 (Corrosive)

#### Product AT USE DILUTION

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

### SECTION 14. TRANSPORT INFORMATION

#### Product AS SOLD

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

#### Land transport (DOT)

UN number : 3265  
Description of the goods : Corrosive liquid, acidic, organic, n.o.s.  
(uronium hydrogen sulphate)  
Class : 8  
Packing group : II  
Environmentally hazardous : no

#### Sea transport (IMDG/IMO)

UN number : 3265  
Description of the goods : CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.  
(uronium hydrogen sulphate)  
Class : 8  
Packing group : II  
Marine pollutant : no

#### Product AT USE DILUTION

# SAFETY DATA SHEET

## LIME-A-WAY

Not intended for transport.

### SECTION 15. REGULATORY INFORMATION

#### Product AS SOLD

#### 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** : Acute Health 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 the State of California to cause cancer, birth, or any other reproductive defects.

#### The ingredients of this product are reported in the following inventories:

**1907/2006 (EU) :**  
not determined

**United States TSCA Inventory :**  
On TSCA Inventory

**Canadian Domestic Substances List (DSL) :**  
All components of this product are on the Canadian DSL.

**Australia Inventory of Chemical Substances (AICS) :**  
not determined

**New Zealand. Inventory of Chemical Substances :**  
On the inventory, or in compliance with the inventory

**Japan. ENCS - Existing and New Chemical Substances Inventory :**  
not determined

**Japan. ISHL - Inventory of Chemical Substances (METI) :**  
not determined

**Korea. Korean Existing Chemicals Inventory (KECI) :**  
not determined

**Philippines Inventory of Chemicals and Chemical Substances (PICCS) :**  
not determined

**China. Inventory of Existing Chemical Substances in China (IECSC) :**  
not determined

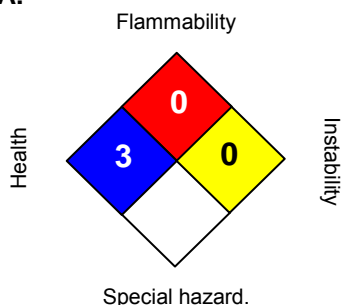
# SAFETY DATA SHEET

## LIME-A-WAY

### SECTION 16. OTHER INFORMATION

#### Product AS SOLD

##### NFPA:



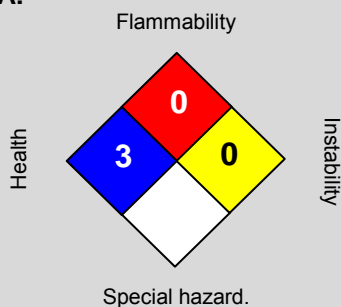
##### HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

#### Product AT USE DILUTION

##### NFPA:



##### HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Issuing date : 08/06/2014  
Version : 1.0  
Prepared by : Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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.

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 448.00

Revision Date: March 27, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Limewater 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/irritation (Category 3). Causes mild skin irritation (H316).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Calcium hydroxide	1305-62-0	Ca(OH) <sub>2</sub>	74.10	<0.2%
Water	7732-18-5	H <sub>2</sub> O	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 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 the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.  
Absorbs carbon dioxide from air. Store in 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**

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Clear colorless liquid that turns cloudy on absorbing carbon dioxide.  
Odorless.  
Ingredients: Calcium hydroxide and water.

---

**SECTION 10 — STABILITY AND REACTIVITY**

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Shelf life: Fair to poor. Absorbs carbon dioxide from air. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Mild irritant.	ORL-RAT LD <sub>50</sub> : N.A.
Chronic effects: N.A.	IHL-RAT LC <sub>50</sub> : N.A.
Target organs: N.A.	SKN-RBT LD <sub>50</sub> : N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.  
Flinn Suggested Disposal Method #10 is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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Not listed.

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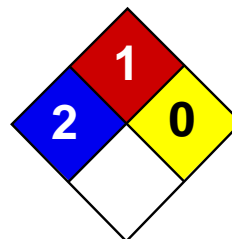
**SECTION 16 — OTHER INFORMATION**

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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



Health	2
Fire	1
Reactivity	0
Personal Protection	E

## Material Safety Data Sheet

### Lipase MSDS

#### Section 1: Chemical Product and Company Identification

**Product Name:** Lipase

**Catalog Codes:** SLL1003

**CAS#:** 9001-62-1

**RTECS:** OJ0400700

**TSCA:** TSCA 8(b) inventory: Lipase

**Cl#:** Not available.

**Synonym:**

**Chemical Name:** Not available.

**Chemical Formula:** Not available.

**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](http://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
Lipase	9001-62-1	100

**Toxicological Data on Ingredients:** Lipase LD50: Not available. LC50: Not available.

#### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Hazardous in case of eye contact (irritant), of ingestion. Slightly hazardous in case of skin contact (irritant), of inhalation.

**Potential Chronic Health Effects:**

Hazardous in case of eye contact (irritant), of ingestion. Slightly hazardous in case of skin contact (irritant), of inhalation.

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

#### Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

**Skin Contact:**

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

**Serious Skin Contact:** Not available.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:** Not available.

**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:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not available.

**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:**

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

**Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

**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.

## Section 7: Handling and Storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. If you feel unwell, seek medical attention and show the label when possible.

**Storage:**

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible materials should be stored away from extreme heat and away from strong oxidizing agents.

## Section 8: 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 user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:**

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Dust 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:** Not available.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Powdered solid.)

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** Not available.

**Color:** Not available.

**pH (1% soln/water):** Not available.

**Boiling Point:** Not available.

**Melting Point:** Decomposes.

**Critical Temperature:** Not available.

**Specific Gravity:** Not available.

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** Not available.

**Solubility:** Not available.

## 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:** Non-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. Ingestion.

**Toxicity to Animals:**

LD50: Not available. LC50: Not available.

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on Humans:**

Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), 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 products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

### Section 14: Transport Information

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not applicable.

**Special Provisions for Transport:** Not applicable.

### Section 15: Other Regulatory Information

**Federal and State Regulations:** TSCA 8(b) inventory: Lipase

**Other Regulations:** Not available..

**Other Classifications:**

**WHMIS (Canada):** Not controlled under WHMIS (Canada).

**DSCL (EEC):** R36- Irritating to eyes.

**HMIS (U.S.A.):****Health Hazard:** 2**Fire Hazard:** 1**Reactivity:** 0**Personal Protection:** E**National Fire Protection Association (U.S.A.):****Health:** 2**Flammability:** 1**Reactivity:** 0**Specific hazard:****Protective Equipment:**

Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Splash goggles.

**Section 16: Other Information****References:** Not available.**Other Special Considerations:** Not available.**Created:** 10/09/2005 05:58 PM**Last Updated:** 05/21/2013 12:00 PM

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 ScienceLab.com 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 ScienceLab.com has been advised of the possibility of such damages.*

# Material Safety Data Sheet: LIQUID CERTI-ZYME 5 PLUS

Supersedes Date 05/17/2007

Issuing Date 05/20/2010

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** LIQUID CERTI-ZYME 5 PLUS  
**Recommended Use** Flow improver Use in drains  
**Information on Manufacturer**  
 CERTIFIED LABS, DIV. OF NCH CORP.  
 BOX 152170  
 IRVING, TEXAS 75015

**Product Code** 0092  
**Chemical Nature** Bacteria suspension  
**Imported by:** NCH INDIA PVT LTD  
**114, SIDCO Industrial estate, Ambattur, Chennai - 98.**  
**Emergency Telephone Number**  
**+91-44-26350176 / 42077898**

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

WARNING  
 May cause skin irritation  
 Causes eye irritation  
 May cause respiratory tract irritation  
 May be harmful if swallowed

**Color** Light brown

**Physical State** Liquid

**Odor** Citrus

**Potential Health Effects**

**Principle Route of Exposure**

Skin contact, Eye contact, Inhalation.

**Primary Routes of Entry**

Inhalation

**Acute Effects**

**Eyes**

Causes eye irritation.

**Skin**

May cause skin irritation. Contains. bacteria.

**Inhalation**

May cause irritation of respiratory tract. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

**Ingestion**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Toxicity**

None known

**Target Organ Effects**

Central nervous system, Liver, Kidney.

**Aggravated Medical Conditions**

Respiratory disorders, Skin disorders, Liver disorders, Kidney disorders.

**Potential Environmental Effects**

See Section 12 for additional Ecological information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Cocamidopropyl betaine	61789-40-0
Isopropyl alcohol	67-63-0
Sodium chloride	7647-14-5
Bacillus species	NOT APPLICABLE

## 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 with soap and plenty of water. Get medical attention if irritation develops and persists.

**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 % Mixture.**

**Upper** 12.7

**Lower** 2.0

**Suitable Extinguishing Media**

Water spray. Foam. Alcohol-resistant foam. Dry chemical. Carbon dioxide (CO2). Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Specific hazards arising from the chemical**

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** 1

**Flammability** 1

**Instability** 0

**HMIS**

**Health** 1

**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

<b>Environmental Precautions</b>	conditions.
<b>Methods for Containment</b>	No special environmental precautions required. Do not flush into surface water or sanitary sewer system. 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).
<b>Methods for Cleaning Up</b>	Pick up and transfer to properly labeled containers.
<b>Neutralizing Agent</b>	Not applicable.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin, eyes and clothing. Avoid breathing vapors or mists.			
<b>Storage</b>	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not freeze.			
<b>Storage Temperature</b>	<b>Minimum</b>	35°F/2°C	<b>Maximum</b>	120°F/49°C
<b>Storage Conditions</b>	<b>Indoor</b>	X	<b>Outdoor</b>	
			<b>Heated</b>	<b>Refrigerated</b>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Cocamidopropyl betaine	No data available	No data available	No data available
Isopropyl alcohol	400 ppm STEL : 200 ppm TWA	400 ppm STEL : 200 ppm TWA	400 ppm STEL : 200 ppm TWA
Sodium chloride	No data available	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Bacillus species	No data available	No data available	No data available

<b>Engineering Measures</b>	Ensure adequate ventilation, especially in confined areas.
<b>Personal Protective Equipment</b>	
<b>Eye/Face Protection</b>	Safety glasses with side-shields.
<b>Skin Protection</b>	For prolonged or repeated contact, use protective gloves
<b>Respiratory Protection</b>	In case of insufficient ventilation wear suitable respiratory equipment. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
<b>General Hygiene Considerations</b>	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

<b>Physical State</b>	Liquid	<b>Viscosity</b>	Slight Viscous
<b>Color</b>	Light brown	<b>Odor</b>	Citrus
<b>Appearance</b>	Opaque	<b>pH</b>	9
<b>Specific Gravity</b>	1.04	<b>Evaporation Rate</b>	0.6 (Butyl acetate=1)
<b>Percent Volatile (Volume)</b>	93.3	<b>VOC Content (%)</b>	1.4
<b>VOC Content (g/l)</b>	14.6	<b>Vapor Pressure</b>	16.7 mmHg @ 70 °F
<b>Vapor Density</b>	0.6 (Air = 1.0)	<b>Solubility</b>	Moderately soluble
<b>Boiling Point/Range</b>	210°F/99°C		

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable. Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	Extremes of temperature and direct sunlight. Do not freeze.
<b>Incompatible Products</b>	Strong oxidizing agents, Reducing agents, Biocides, Chlorine-based bleaching agents.
<b>Hazardous Decomposition Products</b>	Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Ammonia.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.

## 11. TOXICOLOGICAL INFORMATION

<b>Product Information</b>	No information available.
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## Component Information

## Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Cocamidopropyl betaine	4900 mg/kg ( Rat )	no data available	no data available	no data available	no data available
Isopropyl alcohol	4396 mg/kg ( Rat )	12870 mg/kg ( Rabbit ) 12800 mg/kg ( Rat )	72.6 mg/L ( Rat ) 4 h	no data available	no data available
Sodium chloride	3 g/kg ( Rat )	10 g/kg ( Rabbit )	42 g/m <sup>3</sup> ( Rat ) 1 h	no data available	no data available
Bacillus species	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
Cocamidopropyl betaine	no data available	no data available	no data available	no data available	no data available
Isopropyl alcohol	no data available	no data available	no data available	no data available	eyes, respiratory system, skin, kidneys
Sodium chloride	no data available	no data available	no data available	no data available	no data available

Bacillus species	no data available	no data available	no data available	no data available	no data available
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**Carcinogenicity**

There are no known carcinogenic chemicals in this product.

Component	ACGIH	IARC	NTP	OSHA	Other
Cocamidopropyl betaine	not applicable	not applicable	not applicable	not applicable	not applicable
Isopropyl alcohol	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium chloride	not applicable	not applicable	not applicable	not applicable	not applicable
Bacillus species	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
Cocamidopropyl betaine	EC50 1.0 - 10.0 mg/L Desmodesmus subspicatus 72 h EC50= 0.55 mg/L Desmodesmus subspicatus 96 h	LC50= 2 mg/L Brachydanio rerio 96 h LC50 1.0-10.0 mg/L Brachydanio rerio 96 h	no data available	EC50 = 6.5 mg/L 48 h	N/A
Isopropyl alcohol	EC50> 1000 mg/L Desmodesmus subspicatus 72 h EC50> 1000 mg/L Desmodesmus subspicatus 96 h	LC50= 11130 mg/L Pimephales promelas 96 h LC50= 9640 mg/L Pimephales promelas 96 h LC50> 1400000 µg/L Lepomis macrochirus 96 h	EC50 = 35390 mg/L 5 min	EC50 = 13299 mg/L 48 h	0.05 at 25 °C
Sodium chloride	no data available	LC50 5560-6080 mg/L Lepomis macrochirus 96 h LC50= 12946 mg/L Lepomis macrochirus 96 h LC50 4747-7824 mg/L Oncorhynchus mykiss 96 h LC50= 7050 mg/L Pimephales promelas 96 h LC50 6020-7070 mg/L Pimephales promelas 96 h LC50 6420-6700 mg/L Pimephales promelas 96 h	no data available	EC50 340.7 - 469.2 mg/L 48 h EC50 = 1000 mg/L 48 h	N/A
Bacillus species	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 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
Isopropyl alcohol	67-63-0	1-5	1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)

**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
Cocamidopropyl betaine	Not applicable	Not applicable
Isopropyl alcohol	Not applicable	Not applicable
Sodium chloride	Not applicable	Not applicable
Bacillus species	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 Dan Hollas  
Supercedes Date 05/17/2007  
Issuing Date 05/20/2010  
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.

## 1. Identification

<b>Product identifier</b>	<b>LIQUID ENZYME II</b>
<b>Other means of identification</b>	
<b>SDS number</b>	559N-46A
<b>Product code</b>	HIL00470
<b>Recommended use</b>	Multipurpose Drain Maintenance
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Manufacturer</b>	
<b>Company name</b>	HILLYARD INDUSTRIES
<b>Address</b>	302 North Fourth St. St. Joseph, MO 64501
<b>Contact person</b>	Regulatory Affairs
<b>Telephone number</b>	(816) 233-1321 (Ext. 8285)
<b>Fax</b>	(816) 383-8485
<b>E-mail</b>	regulatoryaffairs@hillyard.com
<b>Emergency telephone #</b>	(800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure, or accident involving chemicals.)

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.
<b>Health hazards</b>	Not classified.
<b>Environmental hazards</b>	Not classified.
<b>OSHA defined hazards</b>	Not classified.
<b>Label elements</b>	
<b>Hazard symbol</b>	None.
<b>Signal word</b>	None.
<b>Hazard statement</b>	The mixture does not meet the criteria for classification.
<b>Precautionary statement</b>	
<b>Prevention</b>	Observe good industrial hygiene practices.
<b>Response</b>	Wash hands after handling.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	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.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	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

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.

<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Move container from fire area if it can be done without risk.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>Extinguish all flames in the vicinity. This product is miscible in water.</p> <p>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.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.</p> <p>Avoid discharge into drains, water courses or onto the ground.</p>
<b>Environmental precautions</b>	

## 7. Handling and storage

<b>Precautions for safe handling</b>	Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	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.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	If contact is likely, safety glasses with side shields are recommended.
<b>Skin protection</b>	
<b>Hand protection</b>	Not normally needed.
<b>Other</b>	Not normally needed.
<b>Respiratory protection</b>	Not normally needed.



<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<b>General hygiene considerations</b>	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

<b>Appearance</b>	Opaque, white liquid
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	White
<b>Odor</b>	Floral odor
<b>Odor threshold</b>	Not available
<b>pH</b>	7 - 8
<b>Melting point/freezing point</b>	Not available
<b>Initial boiling point and boiling range</b>	212 °F (100 °C)
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Tag Closed Cup
<b>Evaporation rate</b>	< 1 (ethyl ether = 1)
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	17.5 mm Hg
<b>Vapor density</b>	0.6 AIR=1
<b>Relative density</b>	0.99 at 77°F
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	100 complete
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Viscosity</b>	Not available
<b>Other information</b>	
<b>Density</b>	8.32 lb/gal
<b>Percent volatile</b>	99 - 100 %
<b>VOC (Weight %)</b>	0 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	Product concentrate is not an irritant; prolonged exposure may produce slight irritation in sensitive individuals
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.

<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Direct contact with eyes may cause temporary irritation.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	Not available.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
	Not listed.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Further information</b>	This product has no known adverse effect on human health.

## 12. Ecological information

<b>Ecotoxicity</b>	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.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	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

<b>Disposal instructions</b>	Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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

<b>DOT</b>	Not regulated as dangerous goods.
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## 15. Regulatory information

<b>US federal regulations</b>	
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	
	Not regulated.
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	
	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)**

<b>Hazard categories</b>	Immediate Hazard - No
	Delayed Hazard - No
	Fire Hazard - No
	Pressure Hazard - No
	Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

<b>SARA 311/312 Hazardous chemical</b>	No
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**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

<b>Safe Drinking Water Act (SDWA)</b>	Not regulated.
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**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**

<b>Issue date</b>	01-22-2015
<b>Version #</b>	01
<b>HMIS® ratings</b>	Health: 0 Flammability: 0 Physical hazard: 0

<b>Disclaimer</b>	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.
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## 1. Identification

**Product identifier** LIQUID GUM-GO

**Other means of identification**

**SDS number** 477N-56A

**Product code** HIL00912

**Recommended use** Chewing Gum, Adhesive, And Tar Remover

**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** Flammable liquids Category 3

**Health hazards** Skin corrosion/irritation Category 2  
Sensitization, skin Category 1B  
Germ cell mutagenicity Category 2

**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 3  
Hazardous to the aquatic environment, long-term hazard Category 3

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Warning

**Hazard statement** Flammable liquid and vapor. Causes skin irritation. May cause an allergic skin reaction. Suspected of causing genetic defects. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. 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. Avoid breathing mist or vapor. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

**Response** If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If exposed or concerned: Get medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. In case of fire: Use appropriate media to extinguish.

<b>Storage</b>	Store in a well-ventilated place. Keep cool. Store locked up.
<b>Disposal</b>	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.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvent with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Naphtha (petroleum), Heavy Alkylate		64741-65-7	80 - < 90
D-Limonene		5989-27-5	10 - < 20

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	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. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Call a physician or poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
<b>Indication of immediate medical attention and special treatment needed</b>	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.
<b>General information</b>	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. 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. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	Flammable liquid and vapor.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). 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. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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<b>Methods and materials for containment and cleaning up</b>	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water.
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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. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. 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.

<b>Environmental precautions</b>	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.
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## 7. Handling and storage

<b>Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. When using do not smoke. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
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<b>Conditions for safe storage, including any incompatibilities</b>	Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).
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## 8. Exposure controls/personal protection

<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
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<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
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<b>Appropriate engineering controls</b>	Explosion-proof general and local exhaust ventilation. 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.
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### Individual protection measures, such as personal protective equipment

<b>Eye/face protection</b>	Chemical splash goggles where there is a potential for eye contact.
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#### Skin protection

<b>Hand protection</b>	Wear appropriate chemical resistant gloves.
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<b>Other</b>	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
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<b>Respiratory protection</b>	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. Chemical respirator with organic vapor cartridge.
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<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
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<b>General hygiene considerations</b>	When using do not smoke. 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.
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## 9. Physical and chemical properties

<b>Appearance</b>	Clear to slightly translucent, orange liquid
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<b>Physical state</b>	Liquid.
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<b>Form</b>	Liquid.
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<b>Color</b>	Translucent
<b>Odor</b>	Orange odor
<b>Odor threshold</b>	Not available
<b>pH</b>	Not available
<b>Melting point/freezing point</b>	Not applicable / Not available
<b>Initial boiling point and boiling range</b>	> 300 °F (> 148.89 °C)
<b>Flash point</b>	130.0 °F (54.4 °C) Tag Closed Cup
<b>Evaporation rate</b>	< 1 (ethyl ether = 1)
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	1 %
<b>Flammability limit - upper (%)</b>	Not available
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	1.2 mm Hg
<b>Vapor density</b>	5.1 Air =1
<b>Relative density</b>	0.8 at 77°F
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Negligible
<b>Partition coefficient (n-octanol/water)</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	Not available
<b>Viscosity</b>	Not available
<b>Other information</b>	
<b>Density</b>	6.37 lb/gal
<b>Explosive limit</b>	> 1 %
<b>Percent volatile</b>	> 99 %
<b>VOC (Weight %)</b>	Not available

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	No adverse effects due to inhalation are expected.
<b>Skin contact</b>	Causes skin irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.

**Information on toxicological effects****Acute toxicity** May cause an allergic skin reaction.

Product	Species	Test Results
LIQUID GUM-GO		
<b>Acute</b>		
<i>Oral</i>		
LD50	Mouse	37333.332 mg/kg estimated

Components	Species	Test Results
D-Limonene (CAS 5989-27-5)		
<b>Acute</b>		
<i>Oral</i>		
LD50	Mouse	5600 - 6600 mg/kg

\* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation** Causes skin 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** Suspected of causing genetic defects.**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.**IARC Monographs. Overall Evaluation of Carcinogenicity**

D-Limonene (CAS 5989-27-5) 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.**12. Ecological information****Ecotoxicity** Harmful to aquatic life with long lasting effects.

Product	Species	Test Results
LIQUID GUM-GO		
<b>Aquatic</b>		
Crustacea	EC50 Daphnia	464 mg/l, 48 hours estimated
Fish	LC50 Fish	4.1267 mg/l, 96 hours estimated
Components	Species	Test Results
D-Limonene (CAS 5989-27-5)		
<b>Aquatic</b>		
Crustacea	EC50 Water flea (Daphnia pulex)	69.6 mg/l, 48 hours
Fish	LC50 Fathead minnow (Pimephales promelas)	0.619 - 0.796 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)**

D-Limonene 4.232

**Mobility in soil** No data available.



<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
<b>13. Disposal considerations</b>	
<b>Disposal instructions</b>	Collect and reclaim or 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. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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

<b>DOT</b>	Not regulated as dangerous goods.
<b>General information</b>	This material is regulated under IATA and IMDG regulations contact manufacturer for shipping instructions.

## 15. Regulatory information

<b>US federal regulations</b>	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.
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### **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)**

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
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### **SARA 302 Extremely hazardous substance**

Not listed.

<b>SARA 311/312 Hazardous chemical</b>	No
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### **SARA 313 (TRI reporting)**

Not regulated.

### **Other federal regulations**

<b>Safe Drinking Water Act (SDWA)</b>	Not regulated.
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### **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** 01-26-2015

**Version #** 01

**HMIS® ratings** Health: 2\*  
Flammability: 3  
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.

**MSDS for: LN-704****Revised: 21-Jun-2010****SECTION 1:**

PRODUCT IDENTIFIER: LN-704 INTERIOR PROJECTS CONSTRUCTION  
ADHESIVE  
DATE OF PREPARATION: JUNE 21, 2010  
PRODUCT USE: ADHESIVE  
MANUFACTURED BY: AKZO NOBEL  
15885 WEST SPRAGUE ROAD  
STRONGSVILLE, OHIO 44136, U.S.A.  
AKZO NOBEL (CANADA)  
8200 KEELE STREET  
CONCORD, ONTARIO L4K 2A5, CANADA  
EMERGENCY AND MSDS TELEPHONE NUMBER: 1-800-545-2643  
MSDS PREPARED BY: PRODUCT SAFETY AND COMPLIANCE DEPARTMENT  
AKZO NOBEL NORTH AMERICA

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENT	WT. %
CHEMICAL NAME: ACRYLIC RESI COMMON NAME: ACRYLIC RESIN CAS NUMBER: CONFIDENTIAL	10-20
CHEMICAL NAME: 1,2-ETHANEDIOL COMMON NAME: ETHYLENE GLYCOL CAS NUMBER: 107-21-1	0.1-1.0
CHEMICAL NAME: LIMESTONE COMMON NAME: LIMESTONE CAS NUMBER: 1317-65-3	30-40
CHEMICAL NAME: KAOLIN COMMON NAME: CLAY CAS NUMBER: 1332-58-7	10-20
CHEMICAL NAME: TITANIUM OXIDE COMMON NAME: TITANIUM DIOXIDE CAS NUMBER: 13463-67-7	0.1-1.0
CHEMICAL NAME: CRISTOBALITE COMMON NAME: CRYSTALLINE SILICA, CRISTOBALITE CAS NUMBER: 14464-46-1	0.1-1.0
CHEMICAL NAME: QUARTZ COMMON NAME: QUARTZ CAS NUMBER: 14808-60-7	1-5

CHEMICAL NAME:	PROPANOL, OXYBIS-, DIBENZOATE	1-5
COMMON NAME:	DIPROPYLENE GLYCOL DIBENZOATE	
CAS NUMBER:	27138-31-4	
CHEMICAL NAME:	WATER	30-40
COMMON NAME:	WATER	
CAS NUMBER:	7732-18-5	

### SECTION 3: HAZARDS IDENTIFICATION

PRIMARY ROUTE(S) OF EXPOSURE: INHALATION, SKIN CONTACT, EYE CONTACT, INGESTION

#### EFFECTS OF OVEREXPOSURE

INHALATION:	IRRITATION OF RESPIRATORY TRACT. PROLONGED INHALATION MAY LEAD TO HEADACHE, NAUSEA, DIFFICULTY OF BREATHING, PNEUMOCONIOSIS.
SKIN CONTACT:	IRRITATION OF SKIN. PROLONGED OR REPEATED CONTACT CAN CAUSE DEFATTING.
EYE CONTACT:	IRRITATION OF EYES. PROLONGED OR REPEATED CONTACT CAN CAUSE TEARING OF EYES, REDNESS OF EYES.
INGESTION:	INGESTION MAY CAUSE MOUTH AND THROAT IRRITATION, NAUSEA, GASTRO-INTESTINAL DISTURBANCES, ABDOMINAL PAIN.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

EYE, SKIN, RESPIRATORY DISORDERS, LUNG DISORDERS

### SECTION 4: FIRST-AID MEASURES

INHALATION:	REMOVE TO FRESH AIR. RESTORE AND SUPPORT CONTINUED BREATHING. GET EMERGENCY MEDICAL ATTENTION. HAVE TRAINED PERSON GIVE OXYGEN IF NECESSARY. GET MEDICAL HELP FOR ANY BREATHING DIFFICULTY.
SKIN CONTACT:	WASH THOROUGHLY WITH SOAP AND WATER. IF ANY PRODUCT REMAINS, GENTLY RUB PETROLEUM JELLY, VEGETABLE OR MINERAL/BABY OIL ONTO SKIN. REPEATED APPLICATIONS MAY BE NEEDED. REMOVE CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE RE-USE.
EYE CONTACT:	FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER, ESPECIALLY UNDER LIDS FOR AT LEAST 15 MINUTES. IF IRRITATION OR OTHER EFFECTS PERSIST, OBTAIN MEDICAL TREATMENT.
INGESTION:	IF SWALLOWED, OBTAIN MEDICAL TREATMENT IMMEDIATELY.

## **SECTION 5: FIRE-FIGHTING MEASURES**

FLASH POINT (SETA): ABOVE 200F/93C

LOWER EXPLOSIVE LIMIT: NOT AVAILABLE

UPPER EXPLOSIVE LIMIT: NOT AVAILABLE

FIRE EXTINGUISHING MEDIA: DRY CHEMICAL OR FOAM, WATER FOG, CARBON DIOXIDE

UNUSUAL FIRE AND EXPLOSION HAZARDS

CLOSED CONTAINERS MAY BURST IF EXPOSED TO EXTREME HEAT OR FIRE.

FIRE FIGHTING PROCEDURES

WATER MAY BE USED TO COOL AND PROTECT EXPOSED CONTAINERS. FIREFIGHTERS SHOULD USE FULL PROTECTIVE CLOTHING, EYE PROTECTION, AND SELF-CONTAINED BREATHING APPARATUS.

HAZARDOUS DECOMPOSITION OR COMBUSTION PRODUCTS

CARBON MONOXIDE, CARBON DIOXIDE, ACRYLIC MONOMERS,  
OXIDES OF CALCIUM

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

COMPLY WITH ALL APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS. VENTILATE AREA. PLACE COLLECTED MATERIAL IN PROPER CONTAINER. SPILLED MATERIAL IS EXTREMELY SLIPPERY.

LARGE SPILLS: SHUT OFF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN SPILL. PUMP TO STORAGE OR SALVAGE VESSELS. USE ABSORBENT TO PICK UP EXCESS RESIDUE. KEEP SALVAGEABLE MATERIAL AND RINSE WATER OUT OF SEWERS AND WATER COURSES.

SMALL SPILLS: USE ABSORBENT TO PICK UP RESIDUE AND DISPOSE OF PROPERLY.

## **SECTION 7: HANDLING AND STORAGE**

STORE BELOW 100F (38C). KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. KEEP FROM FREEZING.

OTHER PRECAUTIONS

USE ONLY WITH ADEQUATE VENTILATION. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN AND EYES, AND BREATHING OF VAPORS. WASH HANDS THOROUGHLY AFTER HANDLING, ESPECIALLY BEFORE EATING OR SMOKING. KEEP CONTAINERS TIGHTLY CLOSED AND UPRIGHT WHEN NOT IN USE. AVOID CONDITIONS WHICH RESULT IN FORMATION OF INHALABLE PARTICLES SUCH AS SPRAYING OR ABRADING (SANDING) PAINTED SURFACES. IF SUCH CONDITIONS CANNOT BE AVOIDED, USE APPROPRIATE RESPIRATORY PROTECTION AS DIRECTED UNDER EXPOSURE CONTROLS/PERSONAL PROTECTION.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

COMMON NAME:	LIMESTONE		
CAS NUMBER:	1317-65-3		
ACGIH(TWA):	10 MG/M3	OSHA(TWA):	5 MG/M3
COMMON NAME:	CLAY		
CAS NUMBER:	1332-58-7		
ACGIH(TWA):	2 MG/M3	OSHA(TWA):	5 MG/M3
COMMON NAME:	TITANIUM DIOXIDE		
CAS NUMBER:	13463-67-7		
ACGIH(TWA):	10 MG/M3	OSHA(TWA):	10 MG/M3
COMMON NAME:	CRYSTALLINE SILICA, CRISTOBALITE		
CAS NUMBER:	14464-46-1		
ACGIH(TWA):	0.025 MG/M3	OSHA(TWA):	0.05 MG/M3
COMMON NAME:	QUARTZ		
CAS NUMBER:	14808-60-7		
ACGIH(TWA):	0.025 MG/M3	OSHA(TWA):	0.1 MG/M3

### RESPIRATORY PROTECTION

CONTROL ENVIRONMENTAL CONCENTRATIONS BELOW APPLICABLE EXPOSURE STANDARDS WHEN USING THIS MATERIAL. WHEN RESPIRATORY PROTECTION IS DETERMINED TO BE NECESSARY, USE A NIOSH/MSHA (CANADIAN Z94.4) APPROVED ELASTOMERIC SEALING-SURFACE FACEPIECE RESPIRATOR OUTFITTED WITH ORGANIC VAPOR CARTRIDGES AND PAINT SPRAY (DUST/MIST) PREFILTERS. DETERMINE THE PROPER LEVEL OF PROTECTION BY CONDUCTING APPROPRIATE AIR MONITORING. CONSULT 29CFR1910.134 FOR SELECTION OF RESPIRATORS (CANADIAN Z94.4).

### VENTILATION

PROVIDE DILUTION VENTILATION OR LOCAL EXHAUST TO PREVENT BUILD-UP OF VAPORS.

### PERSONAL PROTECTIVE EQUIPMENT:

EYE WASH, SAFETY SHOWER, SAFETY GLASSES OR GOGGLES,  
IMPERVIOUS GLOVES, IMPERVIOUS CLOTHING

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE:	NOT AVAILABLE	SPECIFIC GRAVITY:	1.492
BOILING RANGE (F/C):	212-212/100-100	WEIGHT PER GALLON:	12.43/14.93 IMP
APPEARANCE:	WHITE	%VOLATILE BY VOLUME:	53.23
PHYSICAL STATE:	PASTE	SOLUBLE IN WATER:	YES
PH:	NOT AVAILABLE		

## SECTION 10: STABILITY AND REACTIVITY

UNDER NORMAL CONDITIONS: STABLE (SEE SECTION 5 FIRE FIGHTING MEASURES)

MATERIALS TO AVOID: OXIDIZERS, ACIDS, BASES, AMMONIUM SALTS, STYRENE MONOMER

CONDITIONS TO AVOID: FREEZING

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

#### SECTION 11: TOXICOLOGICAL INFORMATION

COMMON NAME: LIMESTONE  
CAS NUMBER: 1317-65-3  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 6450.00 MG/KG ORL RAT

COMMON NAME: CLAY  
CAS NUMBER: 1332-58-7  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO

COMMON NAME: TITANIUM DIOXIDE  
CAS NUMBER: 13463-67-7  
CARCINOGENICITY LISTED BY: NTP YES 2B IARC YES 2B OSHA NO ACGIH NO  
LD50: 24.00 GM/KG ORL RAT  
LC50: 6820.00 MG/M3/4HR IHL RAT

COMMON NAME: CRYSTALLINE SILICA, CRISTOBALITE  
CAS NUMBER: 14464-46-1  
CARCINOGENICITY LISTED BY: NTP YES IARC YES 1 OSHA NO ACGIH YES A2

COMMON NAME: QUARTZ  
CAS NUMBER: 14808-60-7  
CARCINOGENICITY LISTED BY: NTP YES IARC YES 1 OSHA NO ACGIH YES A2

COMMON NAME: DIPROPYLENE GLYCOL DIBENZOATE  
CAS NUMBER: 27138-31-4  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: > 2000.00 MG/KG SKN RBT  
LD50: 4673.00 MG/KG ORL RAT  
LC50: > 200.00 GM/M3/4HR IHL RAT

#### SUPPLEMENTAL HEALTH INFORMATION

THE MANUFACTURER OF DIPROPYLENE GLYCOL DIBENZOATE CONDUCTED TOXICITY TESTS AND FOUND DECREASED BODY WEIGHT GAIN, AND BLOOD, LIVER AND CAECUM EFFECTS IN RATS GIVEN UP TO 2500 MG/KG/DAY IN THE DIET FOR 13 WEEKS. ALL TREATMENT RELATED CHANGES SHOWED EVIDENCE OF, OR COMPLETE, RECOVERY AFTER 4 WEEKS WITHOUT TREATMENT. RELEVANCE TO HUMANS IS UNKNOWN.

CARCINOGENICITY: CONTAINS CRYSTALLINE SILICA WHICH IS CONSIDERED A HAZARD BY INHALATION. IARC HAS CLASSIFIED CRYSTALLINE SILICA AS CARCINOGENIC TO HUMANS (GROUP 1). CRYSTALLINE SILICA IS ALSO A KNOWN CAUSE OF SILICOSIS, A NONCANCEROUS LUNG DISEASE. THE NATIONAL TOXICOLOGY PROGRAM (NTP) HAS CLASSIFIED

CRYSTALLINE SILICA AS A KNOWN HUMAN CARCINOGEN. IN A LIFETIME INHALATION STUDY, EXPOSURE TO 250 MG/M3 TITANIUM DIOXIDE RESULTED IN THE DEVELOPMENT OF LUNG TUMORS IN RATS. THESE TUMORS OCCURRED ONLY AT DUST LEVELS THAT OVERWHELMED THE ANIMALS' LUNG CLEARANCE MECHANISMS AND WERE DIFFERENT FROM COMMON HUMAN LUNG TUMORS IN BOTH TYPE AND LOCATION. THE RELEVANCE OF THESE FINDINGS TO HUMANS IS UNKNOWN BUT QUESTIONABLE. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED TITANIUM DIOXIDE AS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) BASED ON INADEQUATE EVIDENCE OF CARCINOGENICITY IN HUMANS AND SUFFICIENT EVIDENCE OF CARCINOGENICITY IN EXPERIMENTAL ANIMALS.

REPRODUCTIVE EFFECTS: NO REPRODUCTIVE EFFECTS ARE ANTICIPATED

MUTAGENICITY: NO MUTAGENIC EFFECTS ARE ANTICIPATED

TERATOGENICITY: NO TERATOGENIC EFFECTS ARE ANTICIPATED

## **SECTION 12: ECOLOGICAL INFORMATION**

NO ECOLOGICAL TESTING HAS BEEN DONE BY AKZO NOBEL PAINTS LLC ON THIS PRODUCT AS A WHOLE.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

## **SECTION 14: TRANSPORT INFORMATION**

DOT: ADHESIVE  
IMDG: NOT AVAILABLE  
IATA: NOT AVAILABLE  
TDG: NOT AVAILABLE

## **SECTION 15: REGULATORY INFORMATION**

SARA	SARA	CERCLA	HAZ AIR	MARINE
302	313	302.4	POLLUTANT	POLTNT

THIS PRODUCT CONTAINS NO SARA 302, CERCLA 302.4 OR HAZARDOUS AIR POLLUTANT CHEMICALS. IT ALSO CONTAINS NO CHEMICALS WHICH ARE SUBJECT TO THE REPORTING REQUIREMENTS UNDER SARA 313. AS OF THE DATE OF THIS MSDS, ALL OF THE COMPONENTS IN THIS PRODUCT ARE LISTED (OR ARE OTHERWISE EXEMPT FROM LISTING) ON THE TSCA INVENTORY. THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR (CONTROLLED PRODUCTS REGULATIONS) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.



**SECTION 16: OTHER INFORMATION**

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE AT THE TIME OF PREPARATION OF THIS DATA SHEET AND WHICH AKZO NOBEL PAINTS LLC BELIEVES TO BE RELIABLE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA. AKZO NOBEL PAINTS LLC SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS INFORMATION, OR OF ANY PRODUCT, METHOD OR APPARATUS MENTIONED AND YOU MUST MAKE YOUR OWN DETERMINATION OF ITS SUITABILITY AND COMPLETENESS FOR YOUR OWN USE, FOR THE PROTECTION OF THE ENVIRONMENT, AND THE HEALTH AND SAFETY OF YOUR EMPLOYEES AND USERS OF THIS MATERIAL. COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD 29CFR1910.1200.

**MSDS for: LN-601**

**Revised: 9-Feb-2009**

**SECTION 1:**

PRODUCT IDENTIFIER: LN-601 PROJECT & CONSTRUCTION ADHESIVE  
DATE OF PREPARATION: JANUARY 9, 2008  
PRODUCT USE: ADHESIVE  
MANUFACTURED BY: AKZO NOBEL  
15885 WEST SPRAGUE ROAD  
STRONGSVILLE, OHIO 44136, U.S.A.

AKZO NOBEL (CANADA)  
8200 KEELE STREET  
CONCORD, ONTARIO L4K 2A5, CANADA

EMERGENCY AND MSDS TELEPHONE NUMBER: 1-800-545-2643

MSDS PREPARED BY: PRODUCT SAFETY AND COMPLIANCE DEPARTMENT  
AKZO NOBEL NORTH AMERICA

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENT		WT %
CHEMICAL NAME:	CYCLOHEXANE	1-5
COMMON NAME:	CYCLOHEXANE	
CAS NUMBER:	110-82-7	
CHEMICAL NAME:	LIMESTONE	10-20
COMMON NAME:	LIMESTONE	
CAS NUMBER:	1317-65-3	
CHEMICAL NAME:	KAOLIN	30-40
COMMON NAME:	CLAY	
CAS NUMBER:	1332-58-7	
CHEMICAL NAME:	TITANIUM OXIDE	0.1-1.0
COMMON NAME:	TITANIUM DIOXIDE	
CAS NUMBER:	13463-67-7	
CHEMICAL NAME:	HEPTANE	5-10
COMMON NAME:	HEPTANE	
CAS NUMBER:	142-82-5	
CHEMICAL NAME:	CRISTOBALITE	0.1-1.0
COMMON NAME:	CRYSTALLINE SILICA, CRISTOBALITE	
CAS NUMBER:	14464-46-1	
CHEMICAL NAME:	QUARTZ	1-5
COMMON NAME:	QUARTZ	
CAS NUMBER:	14808-60-7	
CHEMICAL NAME:	BENZENE, 1,3-DIETHENYL-, POLYMER WITH 1,3-BUTADIENE AND ETHENYLBENZENE	1-5
COMMON NAME:	STYRENE-BUTADIENE POLYMER	
CAS NUMBER:	26471-45-4	

CHEMICAL NAME:	HEPTANE, BRANCHED, CYCLIC AND LINEAR	1-5
COMMON NAME:	HEPTANE, BRANCHED, CYCLIC AND LINEAR	
CAS NUMBER:	426260-76-6	
CHEMICAL NAME:	PETROLEUM RESINS	10-20
COMMON NAME:	PETROLEUM HYDROCARBON RESIN	
CAS NUMBER:	64742-16-1	
CHEMICAL NAME:	SOLVENT NAPHTHA (PETROLEUM), LIGHT ALIPHATIC	10-20
COMMON NAME:	LIGHT ALIPHATIC SOLVENT NAPHTHA (PETROLEUM)	
CAS NUMBER:	64742-89-8	
CHEMICAL NAME:	DISTILLATES, PETROLEUM, LIGHT DISTILLATE	5-10
COMMON NAME:	HYDROTREAT PROCESS, LOW-BOILING	
CAS NUMBER:	HYDROTREATED LIGHT DISTILLATE	
	68410-97-9	
CHEMICAL NAME:	BENZENE, ETHENYL-, POLYMER WITH 1,3-BUTADIENE	1-5
COMMON NAME:	STYRENE-BUTADIENE POLYMER	
CAS NUMBER:	9003-55-8	

### SECTION 3: HAZARDS IDENTIFICATION

PRIMARY ROUTE(S) OF EXPOSURE: INHALATION, SKIN CONTACT, EYE CONTACT, INGESTION

#### EFFECTS OF OVEREXPOSURE

INHALATION:	IRRITATION OF RESPIRATORY TRACT. PROLONGED INHALATION MAY LEAD TO LOSS OF APPETITE, FATIGUE, DROWSINESS, DIZZINESS AND/OR LIGHTHEADEDNESS, HEADACHE, UNCOORDINATION, NAUSEA, VOMITING, DIARRHEA, COUGHING, CENTRAL NERVOUS SYSTEM DEPRESSION, INTOXICATION, ANESTHETIC EFFECT OR NARCOSIS, DIFFICULTY OF BREATHING, CONVULSIONS, PNEUMOCONIOSIS, LOSS OF CONSCIOUSNESS, ASPHYXIATION.
SKIN CONTACT:	IRRITATION OF SKIN. MAY CAUSE SKIN IRRITATION. PROLONGED OR REPEATED CONTACT CAN CAUSE DERMATITIS, DEFATTING, SEVERE SKIN IRRITATION OR BURNS.
EYE CONTACT:	IRRITATION OF EYES. PROLONGED OR REPEATED CONTACT CAN CAUSE CONJUNCTIVITIS, BLURRED VISION, TEARING OF EYES, REDNESS OF EYES, SEVERE EYE IRRITATION, SEVERE EYE IRRITATION OR BURNS.
INGESTION:	INGESTION MAY CAUSE LUNG INFLAMMATION AND DAMAGE DUE TO ASPIRATION OF MATERIAL INTO LUNGS, FATIGUE, DROWSINESS, DIZZINESS AND/OR LIGHTHEADEDNESS, HEADACHE, UNCOORDINATION, NAUSEA, VOMITING, DIARRHEA, GASTRO-INTESTINAL DISTURBANCES, ABDOMINAL PAIN, CENTRAL NERVOUS SYSTEM DEPRESSION, RESPIRATORY PROBLEMS, INTOXICATION, DIFFICULTY OF BREATHING, PULMONARY EDEMA, CONVULSIONS, LOSS OF CONSCIOUSNESS.

## MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

EYE, SKIN, RESPIRATORY DISORDERS, LUNG DISORDERS, CARDIAC  
ABNORMALITIES, RESPIRATORY DISORDERS, SKIN DISORDERS

## SECTION 4: FIRST-AID MEASURES

**INHALATION:** REMOVE TO FRESH AIR. RESTORE AND SUPPORT CONTINUED BREATHING. GET EMERGENCY MEDICAL ATTENTION. HAVE TRAINED PERSON GIVE OXYGEN IF NECESSARY. GET MEDICAL HELP FOR ANY BREATHING DIFFICULTY.

**SKIN CONTACT:** WASH THOROUGHLY WITH SOAP AND WATER. IF ANY PRODUCT REMAINS, GENTLY RUB PETROLEUM JELLY, VEGETABLE OR MINERAL/BABY OIL ONTO SKIN. REPEATED APPLICATIONS MAY BE NEEDED. REMOVE CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE RE-USE.

**EYE CONTACT:** FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER, ESPECIALLY UNDER LIDS FOR AT LEAST 15 MINUTES. IF IRRITATION OR OTHER EFFECTS PERSIST, OBTAIN MEDICAL TREATMENT.

**INGESTION: IF SWALLOWED, OBTAIN MEDICAL TREATMENT IMMEDIATELY.**

## SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT (SETA):	4 F./ -16 C.	LOWER EXPLOSIVE LIMIT:	1.2 (%)
		UPPER EXPLOSIVE LIMIT:	6.7 (%)

**FIRE EXTINGUISHING MEDIA: DRY CHEMICAL OR FOAM , WATER FOG..CARBON DIOXIDE**

## UNUSUAL FIRE AND EXPLOSION HAZARDS

CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT OR FIRE. VAPORS MAY IGNITE EXPLOSIVELY AT AMBIENT TEMPERATURES. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL LONG DISTANCES TO A SOURCE OF IGNITION AND FLASH BACK. VAPORS CAN FORM EXPLOSIVE MIXTURES IN AIR AT ELEVATED TEMPERATURES. CLOSED CONTAINERS MAY BURST IF EXPOSED TO EXTREME HEAT OR FIRE MAY DECOMPOSE UNDER FIRE CONDITIONS EMITTING IRRITANT AND/OR TOXIC GASES.

## FIRE FIGHTING PROCEDURES

WATER MAY BE USED TO COOL AND PROTECT EXPOSED CONTAINERS. FIREFIGHTERS SHOULD USE FULL PROTECTIVE CLOTHING, EYE PROTECTION, AND SELF-CONTAINED BREATHING APPARATUS.

HAZARDOUS DECOMPOSITION OR COMBUSTION PRODUCTS:

CARBON MONOXIDE, CARBON DIOXIDE, ACROLEIN, METHANE, ALDEHYDES, TOXIC GASES. OXIDES OF CALCIUM, KETONES

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

COMPLY WITH ALL APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS. ELIMINATE ALL SOURCES OF IGNITION. VENTILATE AREA WITH EXPLOSION-PROOF EQUIPMENT. SPILLS MAY BE COLLECTED WITH ABSORBENT MATERIALS. USE NON-SPARKING TOOLS. EVACUATE ALL UNNECESSARY PERSONNEL. PLACE COLLECTED MATERIAL IN PROPER CONTAINER. WET DOWN SPILLED MATERIAL WITH WATER. COMPLETE PERSONAL PROTECTIVE EQUIPMENT MUST BE USED DURING CLEANUP.

LARGE SPILLS: SHUT OFF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN SPILL. PUMP TO STORAGE OR SALVAGE VESSELS. USE ABSORBENT TO PICK UP EXCESS RESIDUE. KEEP SALVAGEABLE MATERIAL AND RINSE WATER OUT OF SEWERS AND WATER COURSES.

SMALL SPILLS: USE ABSORBENT TO PICK UP RESIDUE AND DISPOSE OF PROPERLY.

## **SECTION 7: HANDLING AND STORAGE**

STORE BELOW 80°F. KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME.

### **OTHER PRECAUTIONS**

USE ONLY WITH ADEQUATE VENTILATION. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN AND EYES, AND BREATHING OF VAPORS. WASH HANDS THOROUGHLY AFTER HANDLING, ESPECIALLY BEFORE EATING OR SMOKING. KEEP CONTAINERS TIGHTLY CLOSED AND UPRIGHT WHEN NOT IN USE. AVOID CONDITIONS WHICH RESULT IN FORMATION OF INHALABLE PARTICLES SUCH AS SPRAYING OR ABRADING (SANDING) PAINTED SURFACES. IF SUCH CONDITIONS CANNOT BE AVOIDED, USE APPROPRIATE RESPIRATORY PROTECTION AS DIRECTED UNDER EXPOSURE CONTROLS/PERSONAL PROTECTION. EMPTY CONTAINERS MAY CONTAIN HAZARDOUS RESIDUES. GROUND EQUIPMENT WHEN TRANSFERRING TO PREVENT ACCUMULATION OF STATIC CHARGE.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

COMMON NAME:	CYCLOHEXANE		
CAS NUMBER:	110-82-7		
ACGIH(TWA):	100 PPM	OSHA(TWA):	300 PPM
COMMON NAME:	LIMESTONE		
CAS NUMBER:	1317-65-3		
ACGIH(TWA):	10 MG/M3	OSHA(TWA):	5 MG/M3
COMMON NAME:	CLAY		
CAS NUMBER:	1332-58-7		
ACGIH(TWA):	2 MG/M3	OSHA(TWA):	5 MG/M3
COMMON NAME:	TITANIUM DIOXIDE		
CAS NUMBER:	13463-67-7		
ACGIH(TWA):	10 MG/M3	OSHA(TWA):	10 MG/M3

COMMON NAME:	HEPTANE		
CAS NUMBER:	142-82-5		
ACGIH(TWA):	400 PPM	OSHA(TWA):	500 PPM
ACGIH(STEL):	500 PPM		
COMMON NAME:	CRYSTALLINE SILICA, CRISTOBALITE		
CAS NUMBER:	14464-46-1		
ACGIH(TWA):	0.025 MG/M3	OSHA(TWA):	0.05 MG/M3
COMMON NAME:	QUARTZ		
CAS NUMBER:	14808-60-7		
ACGIH(TWA):	0.025 MG/M3	OSHA(TWA):	0.1 MG/M3
COMMON NAME:	PETROLEUM HYDROCARBON RESIN		
CAS NUMBER:	64742-16-1		
ACGIH(TWA):	10 MG/M3	OSHA(TWA):	15 MG/M3
COMMON NAME:	LIGHT ALIPHATIC SOLVENT NAPHTHA (PETROLEUM)		
CAS NUMBER:	64742-89-8		
OSHA(TWA):	300 PPM		
COMMON NAME:	HYDROTREATED LIGHT DISTILLATE		
CAS NUMBER:	68410-97-9		
OSHA(TWA):	500 PPM		

#### RESPIRATORY PROTECTION

CONTROL ENVIRONMENTAL CONCENTRATIONS BELOW APPLICABLE EXPOSURE STANDARDS WHEN USING THIS MATERIAL. WHEN RESPIRATORY PROTECTION IS DETERMINED TO BE NECESSARY, USE A NIOSH/MSHA (CANADIAN Z94.4) APPROVED ELASTOMERIC SEALING-SURFACE FACEPIECE RESPIRATOR OUTFITTED WITH ORGANIC VAPOR CARTRIDGES AND PAINT SPRAY (DUST/MIST) PREFILTERS. DETERMINE THE PROPER LEVEL OF PROTECTION BY CONDUCTING APPROPRIATE AIR MONITORING. CONSULT 29CFR1910.134 FOR SELECTION OF RESPIRATORS (CANADIAN Z94.4).

VENTILATION: PROVIDE DILUTION VENTILATION OR LOCAL EXHAUST TO PREVENT BUILD-UP OF VAPORS. USE EXPLOSION-PROOF EQUIPMENT. USE NON-SPARKING EQUIPMENT.

#### PERSONAL PROTECTIVE EQUIPMENT:

EYE WASH, SAFETY SHOWER, SAFETY GLASSES OR GOGGLES,  
IMPERVIOUS GLOVES, IMPERVIOUS CLOTHING, FACE SHIELD

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE:	NOT AVAILABLE	SPECIFIC GRAVITY:	1.171
BOILING RANGE (F/C):	182-220/ 83-104	WEIGHT PER GALLON:	9.75 / 11.71 IMP
%VOLATILE BY VOLUME:	56.99	APPEARANCE:	TAN
PHYSICAL STATE:	PASTE	PH:	N/A
SOLUBILITY IN WATER:	NO		

## SECTION 10: STABILITY AND REACTIVITY

UNDER NORMAL CONDITIONS: STABLE (SEE SECTION 5 FIRE FIGHTING MEASURES)

MATERIALS TO AVOID: OXIDIZERS, ACIDS, HALOGENS, AMMONIUM SALTS, PEROXIDES, STYRENE MONOMER

CONDITIONS TO AVOID:

ELEVATED TEMPERATURES, CONTACT WITH OXIDIZING AGENT, SPARKS, OPEN FLAME, IGNITION SOURCES

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

## SECTION 11: TOXICOLOGICAL INFORMATION

COMMON NAME: CYCLOHEXANE  
CAS NUMBER: 110-82-7  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: > 180.00 GM/KG SKN RBT  
LD50: 12.70 GM/KG ORL RAT  
LC50: 70.00 PPM IHL MAM

COMMON NAME: LIMESTONE  
CAS NUMBER: 1317-65-3  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 6450.00 MG/KG ORL RAT

COMMON NAME: CLAY  
CAS NUMBER: 1332-58-7  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO

COMMON NAME: TITANIUM DIOXIDE  
CAS NUMBER: 13463-67-7  
CARCINOGENICITY LISTED BY: NTP YES 2B IARC YES 2B OSHA NO ACGIH NO  
LD50: 24.00 GM/KG ORL RAT  
LC50: 6820.00 MG/M3/4HR IHL RAT

COMMON NAME: HEPTANE  
CAS NUMBER: 142-82-5  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 222.00 MG/KG IVN MOU

COMMON NAME: CRYSTALLINE SILICA, CRISTOBALITE  
CAS NUMBER: 14464-46-1  
CARCINOGENICITY LISTED BY: NTP YES IARC YES 1 OSHA NO ACGIH YES A2

COMMON NAME: QUARTZ  
CAS NUMBER: 14808-60-7  
CARCINOGENICITY LISTED BY: NTP YES IARC YES 1 OSHA NO ACGIH YES A2

COMMON NAME: HEPTANE, BRANCHED, CYCLIC AND LINEAR  
CAS NUMBER: 426260-76-6  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO

COMMON NAME: PETROLEUM HYDROCARBON RESIN  
CAS NUMBER: 64742-16-1  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 7.00 GM/KG ORL MAM

COMMON NAME: LIGHT ALIPHATIC SOLVENT NAPHTHA (PETROLEUM)  
CAS NUMBER: 64742-89-8  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: > 3.16 GM/KG SKN RBT  
LD50: > 5.00 GM/KG ORL RAT

COMMON NAME: HYDROTREATED LIGHT DISTILLATE  
CAS NUMBER: 68410-97-9  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO

COMMON NAME: STYRENE-BUTADIENE POLYMER  
CAS NUMBER: 9003-55-8  
CARCINOGENICITY LISTED BY: NTP NO IARC YES 3 OSHA NO ACGIH NO

#### SUPPLEMENTAL HEALTH INFORMATION

CONTAINS A CHEMICAL THAT MAY BE ABSORBED THROUGH SKIN.

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 MAY BE HARMFUL OR FATAL. OTHER EFFECTS OF OVEREXPOSURE MAY INCLUDE TOXICITY TO CENTRAL NERVOUS SYSTEM.

CARCINOGENICITY: CONTAINS CRYSTALLINE SILICA WHICH IS CONSIDERED A HAZARD BY INHALATION. IARC HAS CLASSIFIED CRYSTALLINE SILICA AS CARCINOGENIC TO HUMANS (GROUP 1). CRYSTALLINE SILICA IS ALSO A KNOWN CAUSE OF SILICOSIS, A NONCANCEROUS LUNG DISEASE. THE NATIONAL TOXICOLOGY PROGRAM (NTP) HAS CLASSIFIED CRYSTALLINE SILICA AS A KNOWN HUMAN CARCINOGEN. IN A LIFETIME INHALATION STUDY, EXPOSURE TO 250 MG/M3 TITANIUM DIOXIDE RESULTED IN THE DEVELOPMENT OF LUNG TUMORS IN RATS. THESE TUMORS OCCURRED ONLY AT DUST LEVELS THAT OVERWHELMED THE ANIMALS' LUNG CLEARANCE MECHANISMS AND WERE DIFFERENT FROM COMMON HUMAN LUNG TUMORS IN BOTH TYPE AND LOCATION. THE RELEVANCE OF THESE FINDINGS TO HUMANS IS UNKNOWN BUT QUESTIONABLE. THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) HAS CLASSIFIED TITANIUM DIOXIDE AS POSSIBLY CARCINOGENIC TO HUMANS (GROUP 2B) BASED ON INADEQUATE EVIDENCE OF CARCINOGENICITY IN HUMANS AND SUFFICIENT EVIDENCE OF CARCINOGENICITY IN EXPERIMENTAL ANIMALS.

REPRODUCTIVE EFFECTS: NO REPRODUCTIVE EFFECTS ARE ANTICIPATED

MUTAGENICITY: NO MUTAGENIC EFFECTS ARE ANTICIPATED

TERATOGENICITY: NO TERATOGENIC EFFECTS ARE ANTICIPATED



## SECTION 12: ECOLOGICAL INFORMATION

NO ECOLOGICAL TESTING HAS BEEN DONE BY AKZO NOBEL ON THIS PRODUCT AS  
A WHOLE.

## SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.  
AVOID DISCHARGE TO NATURAL WATERS.

## SECTION 14: TRANSPORT INFORMATION

DOT: UN1133, ADHESIVES, 3, PGIII,ERG 128  
IMDG: UN1133, ADHESIVES, CLASS 3, PG III,LTD QTY, (IMDG 3.4.7,2.3.2.3) ERG128,  
UN1133, ADHESIVES, CLASS 3, PG III  
IATA: ID8000, CONSUMER COMMODITY, 9  
TDG: NOT AVAILABLE

## SECTION 15: REGULATORY INFORMATION

	SARA 302	SARA 313	CERCLA 302.4	HAZ AIR POLLUTANT	MARINE POLTNT
CAS NUMBER: 110-82-7	NO	YES	YES	NO	NO
COMMON NAME: CYCLOHEXANE					

AS OF THE DATE OF THIS MSDS, ALL OF THE COMPONENTS IN THIS PRODUCT ARE LISTED (OR ARE OTHERWISE EXEMPT FROM LISTING) ON THE TSCA INVENTORY. THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR (CONTROLLED PRODUCTS REGULATIONS) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

## SECTION 16: OTHER INFORMATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE AT THE TIME OF PREPARATION OF THIS DATA SHEET AND WHICH AKZO NOBEL BELIEVES TO BE RELIABLE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA. AKZO NOBEL SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS INFORMATION, OR OF ANY PRODUCT, METHOD OR APPARATUS MENTIONED AND YOU MUST MAKE YOUR OWN DETERMINATION OF ITS SUITABILITY AND COMPLETENESS FOR YOUR OWN USE, FOR THE PROTECTION OF THE ENVIRONMENT, AND THE HEALTH AND SAFETY OF YOUR EMPLOYEES AND USERS OF THIS MATERIAL. COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD 29CFR1910.1200.

**MSDS for: FRP-310****Revised: 24-May-2005****SECTION 1:**

PRODUCT IDENTIFIER: FRP-310 LATEX ADHESIVE FOR FRP  
DATE OF PREPARATION: JUNE 7, 2004  
PRODUCT USE: ADHESIVE

MANUFACTURED BY: MACCO ADHESIVES  
15885 SPRAGUE RD.  
STRONGSVILLE, OHIO 44136, U.S.A.

ICI PAINTS (CANADA)  
8200 KEELE STREET  
CONCORD, ONTARIO L4K 2A5, CANADA

EMERGENCY AND MSDS TELEPHONE NUMBER: 1-800-545-2643

MSDS PREPARED BY: PRODUCT SAFETY AND TOXICOLOGY DEPARTMENT  
ICI PAINTS NORTH AMERICA

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

<b>INGREDIENT</b>		<b>WT. %</b>
CHEMICAL NAME:	ACRYLIC RESIN	10-20
COMMON NAME:	ACRYLIC RESIN	
CAS NUMBER:	CONFIDENTIAL	
CHEMICAL NAME:	LIMESTONE	30-40
COMMON NAME:	LIMESTONE	
CAS NUMBER:	1317-65-3	
CHEMICAL NAME:	KAOLIN	10-20
COMMON NAME:	CLAY	
CAS NUMBER:	1332-58-7	
CHEMICAL NAME:	QUARTZ	0.1-1.0
COMMON NAME:	QUARTZ	
CAS NUMBER:	14808-60-7	
CHEMICAL NAME:	2-PROPANONE	1-5
COMMON NAME:	ACETONE	
CAS NUMBER:	67-64-1	
CHEMICAL NAME:	WATER	30-40
COMMON NAME:	WATER	
CAS NUMBER:	7732-18-5	
CHEMICAL NAME:	1,2-BENZENEDICARBOXYLIC ACID, BUTYL PHENYLMETHYL ESTER	1-5
COMMON NAME:	BUTYL BENZYL PHTHALATE	
CAS NUMBER:	85-68-7	

### **SECTION 3: HAZARDS IDENTIFICATION**

PRIMARY ROUTE(S) OF EXPOSURE: INHALATION, SKIN CONTACT, EYE CONTACT, INGESTION

#### **EFFECTS OF OVEREXPOSURE**

INHALATION: IRRITATION OF RESPIRATORY TRACT. PROLONGED INHALATION MAY LEAD TO MUCOUS MEMBRANE IRRITATION, FATIGUE, DROWSINESS, DIZZINESS AND/OR LIGHTHEADEDNESS, HEADACHE, UNCOORDINATION, NAUSEA, VOMITING, ABDOMINAL PAIN, COUGHING, DIFFICULTY WITH SPEECH, CENTRAL NERVOUS SYSTEM DEPRESSION, DIFFICULTY OF BREATHING, BLOOD ABNORMALITIES, LIVER DAMAGE, KIDNEY DAMAGE, PNEUMOCONIOSIS.

SKIN CONTACT: IRRITATION OF SKIN. PROLONGED OR REPEATED CONTACT CAN CAUSE DERMATITIS, DEFATTING.

EYE CONTACT: IRRITATION OF EYES. PROLONGED OR REPEATED CONTACT CAN CAUSE CONJUNCTIVITIS, TEARING OF EYES, REDNESS OF EYES.

INGESTION: INGESTION MAY CAUSE MOUTH AND THROAT IRRITATION, MUCOUS MEMBRANE IRRITATION, NAUSEA, VOMITING, DIARRHEA, GASTRO-INTESTINAL DISTURBANCES, ABDOMINAL PAIN.

#### **MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE**

EYE, SKIN, RESPIRATORY DISORDERS, LUNG DISORDERS, RESPIRATORY DISORDERS

### **SECTION 4: FIRST-AID MEASURES**

INHALATION: REMOVE TO FRESH AIR. RESTORE AND SUPPORT CONTINUED BREATHING. GET EMERGENCY MEDICAL ATTENTION. HAVE TRAINED PERSON GIVE OXYGEN IF NECESSARY. GET MEDICAL HELP FOR ANY BREATHING DIFFICULTY. REMOVE TO FRESH AIR IF INHALATION CAUSES EYE WATERING, HEADACHES, DIZZINESS, OR OTHER DISCOMFORT.

SKIN CONTACT: WASH THOROUGHLY WITH SOAP AND WATER. IF ANY PRODUCT REMAINS, GENTLY RUB PETROLEUM JELLY, VEGETABLE OR MINERAL/BABY OIL ONTO SKIN. REPEATED APPLICATIONS MAY BE NEEDED. REMOVE CONTAMINATED CLOTHING. WASH CONTAMINATED CLOTHING BEFORE RE-USE.

EYE CONTACT: FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER, ESPECIALLY UNDER LIDS FOR AT LEAST 15 MINUTES. IF IRRITATION OR OTHER EFFECTS PERSIST, OBTAIN MEDICAL TREATMENT.

INGESTION: IF SWALLOWED, OBTAIN MEDICAL TREATMENT IMMEDIATELY.

## **SECTION 5: FIRE-FIGHTING MEASURES**

FLASH POINT (SETA): ABOVE 200F/93C

LOWER EXPLOSIVE LIMIT: NOT AVAILABLE

UPPER EXPLOSIVE LIMIT: 13.0 %

FIRE EXTINGUISHING MEDIA: DRY CHEMICAL OR FOAM, WATER FOG, CARBON DIOXIDE

UNUSUAL FIRE AND EXPLOSION HAZARDS

VAPORS MAY IGNITE EXPLOSIVELY AT AMBIENT TEMPERATURES. VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL LONG DISTANCES TO A SOURCE OF IGNITION AND FLASH BACK. CLOSED CONTAINERS MAY BURST IF EXPOSED TO EXTREME HEAT OR FIRE. MAY DECOMPOSE UNDER FIRE CONDITIONS EMITTING IRRITANT AND/OR TOXIC GASES.

FIRE FIGHTING PROCEDURES

WATER MAY BE USED TO COOL AND PROTECT EXPOSED CONTAINERS. FIREFIGHTERS SHOULD USE FULL PROTECTIVE CLOTHING, EYE PROTECTION, AND SELF-CONTAINED BREATHING APPARATUS.

HAZARDOUS DECOMPOSITION OR COMBUSTION PRODUCTS

CARBON MONOXIDE, CARBON DIOXIDE, ACRYLIC MONOMERS,  
OXIDES OF CALCIUM

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

COMPLY WITH ALL APPLICABLE HEALTH AND ENVIRONMENTAL REGULATIONS. ELIMINATE ALL SOURCES OF IGNITION. VENTILATE AREA. SPILLS MAY BE COLLECTED WITH ABSORBENT MATERIALS. EVACUATE ALL UNNECESSARY PERSONNEL. PLACE COLLECTED MATERIAL IN PROPER CONTAINER. COMPLETE PERSONAL PROTECTIVE EQUIPMENT MUST BE USED DURING CLEANUP.

LARGE SPILLS: SHUT OFF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN SPILL. PUMP TO STORAGE OR SALVAGE VESSELS. USE ABSORBENT TO PICK UP EXCESS RESIDUE. KEEP SALVAGEABLE MATERIAL AND RINSE WATER OUT OF SEWERS AND WATER COURSES.

SMALL SPILLS: USE ABSORBENT TO PICK UP RESIDUE AND DISPOSE OF PROPERLY.

## **SECTION 7: HANDLING AND STORAGE**

HANDLING AND STORAGE: STORE BELOW 100F (38C). KEEP FROM FREEZING.

OTHER PRECAUTIONS

USE ONLY WITH ADEQUATE VENTILATION. DO NOT TAKE INTERNALLY. KEEP OUT OF REACH OF CHILDREN. AVOID CONTACT WITH SKIN AND EYES, AND BREATHING OF VAPORS. WASH HANDS THOROUGHLY AFTER HANDLING, ESPECIALLY BEFORE EATING OR SMOKING. KEEP CONTAINERS TIGHTLY CLOSED AND UPRIGHT WHEN NOT IN USE. GROUND EQUIPMENT WHEN TRANSFERRING TO PREVENT ACCUMULATION OF STATIC CHARGE.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

COMMON NAME:	LIMESTONE		
CAS NUMBER:	1317-65-3		
ACGIH(TWA):	10 MG/M3	OSHA(TWA):	5 MG/M3
COMMON NAME:	CLAY		
CAS NUMBER:	1332-58-7		
ACGIH(TWA):	2 MG/M3	OSHA(TWA):	5 MG/M3
COMMON NAME:	QUARTZ		
CAS NUMBER:	14808-60-7		
ACGIH(TWA):	0.05MG/M3	OSHA(TWA):	0.1 MG/M3
COMMON NAME:	ACETONE		
CAS NUMBER:	67-64-1		
ACGIH(TWA):	500PPM	OSHA(TWA):	1000 PPM
ACGIH(STEL):	750PPM		
COMMON NAME:	BUTYL BENZYL PHTHALATE		
CAS NUMBER:	85-68-7		
ACGIH(TWA):	5 MG/M3	OSHA(TWA):	5 MG/M3

### RESPIRATORY PROTECTION

WHERE RESPIRATORY PROTECTION IS REQUIRED, USE ONLY NIOSH/MSHA APPROVED RESPIRATORS IN ACCORDANCE WITH OSHA STANDARD 29 CFR 1910.134.

### VENTILATION

PROVIDE DILUTION VENTILATION OR LOCAL EXHAUST TO PREVENT BUILD-UP OF VAPORS. USE EXPLOSION-PROOF EQUIPMENT.

### PERSONAL PROTECTIVE EQUIPMENT

EYE WASH, SAFETY SHOWER, SAFETY GLASSES OR GOGGLES,  
IMPERVIOUS GLOVES, IMPERVIOUS CLOTHING

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE:	NOT AVAILABLE	SPECIFIC GRAVITY:	1.436
BOILING RANGE (F/C):	133-698/ 56-370	WEIGHT PER GALLON:	11.96/ 14.36 IMP
APPEARANCE:	TAN	%VOLATILE BY VOLUME:	56.24
PHYSICAL STATE:	PASTE	SOLUBLE IN WATER:	Y
PH:	9.60		

## SECTION 10: STABILITY AND REACTIVITY

UNDER NORMAL CONDITIONS: STABLE (SEE SECTION 5 FIRE FIGHTING MEASURES)

MATERIALS TO AVOID: OXIDIZERS, ACIDS, AMINES, NITRIC ACID,  
STYRENE MONOMER.

CONDITIONS TO AVOID: ELEVATED TEMPERATURES, FREEZING, SPARKS,  
OPEN FLAME, IGNITION SOURCES

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

#### SECTION 11: TOXICOLOGICAL INFORMATION

COMMON NAME: LIMESTONE  
CAS NUMBER: 1317-65-3  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 6450.00 MG/KG ORL RAT

COMMON NAME: CLAY  
CAS NUMBER: 1332-58-7  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO

COMMON NAME: QUARTZ  
CAS NUMBER: 14808-60-7  
CARCINOGENICITY LISTED BY: NTP YES IARC YES 1 OSHA NO ACGIH NO

COMMON NAME: ACETONE  
CAS NUMBER: 67-64-1  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 5800.00 MG/KG ORL RAT  
LD50: > 9400.00 MG/KG SKN GPG

COMMON NAME: BUTYL BENZYL PHTHALATE  
CAS NUMBER: 85-68-7  
CARCINOGENICITY LISTED BY: NTP NO IARC NO OSHA NO ACGIH NO  
LD50: 2330.00 MG/KG ORL RAT  
LD50: 6700.00 MG/KG SKN RAT

#### SUPPLEMENTAL HEALTH INFORMATION

CONTAINS A CHEMICAL THAT MAY BE ABSORBED THROUGH SKIN.

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 MAY BE HARMFUL OR FATAL.

CARCINOGENICITY: CONTAINS CRYSTALLINE SILICA WHICH IS CONSIDERED A HAZARD BY INHALATION. IARC HAS CLASSIFIED CRYSTALLINE SILICA AS CARCINOGENIC TO HUMANS (GROUP 1). CRYSTALLINE SILICA IS ALSO A KNOWN CAUSE OF SILICOSIS, A NONCANCEROUS LUNG DISEASE. THE NATIONAL TOXICOLOGY PROGRAM (NTP) HAS CLASSIFIED CRYSTALLINE SILICA AS A KNOWN HUMAN CARCINOGEN.

REPRODUCTIVE EFFECTS: NO REPRODUCTIVE EFFECTS ARE ANTICIPATED

MUTAGENICITY: NO MUTAGENIC EFFECTS ARE ANTICIPATED

TERATOGENICITY: NO TERATOGENIC EFFECTS ARE ANTICIPATED

## SECTION 12: ECOLOGICAL INFORMATION

NO ECOLOGICAL TESTING HAS BEEN DONE BY ICI PAINTS ON THIS PRODUCT AS A WHOLE.

## SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: DISPOSE IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.AVOID DISCHARGE TO NATURAL WATERS.

## SECTION 14: TRANSPORT INFORMATION

DOT: ADHESIVE  
IMDG: NOT AVAILABLE  
IATA: NOT AVAILABLE  
TDG: NOT AVAILABLE

## SECTION 15: REGULATORY INFORMATION

	SARA 302	SARA 313	CERCLA 302.4	HAZ AIR POLLUTANT	MARINE POLTNT
CAS NUMBER: 67-64-1 COMMON NAME: ACETONE	NO	NO	YES	NO	NO
CAS NUMBER: 85-68-7 COMMON NAME: BUTYL BENZYL PHTHALATE	NO	NO	YES	NO	

AS OF THE DATE OF THIS MSDS, ALL OF THE COMPONENTS IN THIS PRODUCT ARE LISTED (OR ARE OTHERWISE EXEMPT FROM LISTING) ON THE TSCA INVENTORY. THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR (CONTROLLED PRODUCTS REGULATIONS) AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

## SECTION 16: OTHER INFORMATION

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE AT THE TIME OF PREPARATION OF THIS DATA SHEET AND WHICH ICI PAINTS BELIEVES TO BE RELIABLE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THIS DATA. ICI PAINTS SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS INFORMATION, OR OF ANY PRODUCT, METHOD OR APPARATUS MENTIONED AND YOU MUST MAKE YOUR OWN DETERMINATION OF ITS SUITABILITY AND COMPLETENESS FOR YOUR OWN USE, FOR THE PROTECTION OF THE ENVIRONMENT, AND THE HEALTH AND SAFETY OF YOUR EMPLOYEES AND USERS OF THIS MATERIAL. COMPLIES WITH OSHA HAZARD COMMUNICATION STANDARD 29CFR1910.1200.



# Material Safety Data Sheet

LN-903 HVY DUTY VOC AHE90324TN0

## 1. Product and company identification

Product name	: LN-903 HVY DUTY VOC AHE90324TN0
Manufacturer	: Akzo Nobel Paints LLC 15885 West Sprague Road Strongsville, OH 44136 U.S.A.
Validation date	: 2013-03-12.
Print date	: 2013-03-12.
Responsible name	: Product Safety and Compliance
In case of emergency	: 1-800-545-2643

## 2. Hazards identification

### Emergency overview

Physical state	: Liquid.
Signal word	: WARNING!
Hazard statements	CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.
Precautionary measures	: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Use personal protective equipment as required. Wash thoroughly after handling.

### Potential acute health effects

Inhalation	: Irritating to respiratory system.
Ingestion	: Harmful if swallowed.
Skin	: Irritating to skin.
Eyes	: Irritating to eyes.

### Potential chronic health effects

Chronic effects	: Contains material that may cause target organ damage, based on animal data.
Carcinogenicity	: Contains material which can 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.
Target organs	: Contains material which may cause damage to the following organs: kidneys, lungs, upper respiratory tract, skin, eyes, stomach, testes.

### 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



## 2. Hazards identification

- Eyes** : Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness

See toxicological information (Section 11)

## 3. Composition/information on ingredients

Name	CAS number	%
Limestone	1317-65-3	10-<30
Kaolin	1332-58-7	10-<30
Acrylic resin, waterborne		10-<30
Acrylic (co)polymer, waterborne		1-<5
Quartz (SiO <sub>2</sub> )	14808-60-7	1-<5
titanium dioxide	13463-67-7	0.1-<1.0
cristobalite	14464-46-1	0.1-<1.0
water	7732-18-5	10-<30
Formaldehyde	50-00-0	< 0.01

## 4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. If any product remains, gently rub with petroleum jelly, vegetable or mineral/baby oil then wash again with soap and water. Repeat as needed. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

## 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 thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 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).
- Methods for 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.
- 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). 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.

## 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. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. 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. Keep out of the reach of children.
- 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. Keep from freezing.

## 8. Exposure controls/personal protection

Ingredient	Exposure limits
Limestone	<b>NIOSH REL (United States, 6/2009).</b> TWA: 5 mg/m <sup>3</sup> 10 hour(s). Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 10 hour(s). Form: Total <b>OSHA PEL (United States, 6/2010).</b> TWA: 5 mg/m <sup>3</sup> 8 hour(s). Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hour(s). Form: Total dust <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hour(s). Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hour(s). Form: Total dust
Kaolin	<b>ACGIH TLV (United States, 1/2011). Notes: 1996 Adoption Refers to Appendix A -- Carcinogens. Respirable fraction; see Appendix C, paragraph C.</b> TWA: 2 mg/m <sup>3</sup> 8 hour(s). Form: Respirable fraction <b>NIOSH REL (United States, 6/2009).</b> TWA: 5 mg/m <sup>3</sup> 10 hour(s). Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 10 hour(s). Form: Total <b>OSHA PEL (United States, 6/2010).</b>

## 8. Exposure controls/personal protection

Quartz (SiO <sub>2</sub> )	<p>TWA: 5 mg/m<sup>3</sup> 8 hour(s). Form: Respirable fraction TWA: 15 mg/m<sup>3</sup> 8 hour(s). Form: Total dust <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m<sup>3</sup> 8 hour(s). Form: Respirable fraction TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: Total dust</p> <p><b>OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO<sub>2</sub>+2)</b> TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: Respirable <b>OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO<sub>2</sub>+5)</b> TWA: 250 mppcf 8 hour(s). Form: Respirable <b>OSHA PEL 1989 (United States, 3/1989). Notes: as quartz</b> TWA: 0.1 mg/m<sup>3</sup>, (as quartz) 8 hour(s). Form: Respirable dust <b>ACGIH TLV (United States, 1/2011). Notes: Respirable fraction; see Appendix C, paragraph C.</b> TWA: 0.025 mg/m<sup>3</sup> 8 hour(s). Form: Respirable fraction <b>OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO<sub>2</sub>+2)</b> TWA: 30 mg/m<sup>3</sup> 8 hour(s). Form: Total dust. <b>NIOSH REL (United States, 6/2009). Notes: See Appendix A - NIOSH Potential Occupational Carcinogen</b> TWA: 0.05 mg/m<sup>3</sup> 10 hour(s). Form: respirable dust</p>
titanium dioxide	<p><b>OSHA PEL (United States, 6/2010).</b> TWA: 15 mg/m<sup>3</sup> 8 hour(s). Form: Total dust <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: Total dust <b>ACGIH TLV (United States, 1/2011). Notes: Substance identified by other sources as a suspected or confirmed human carcinogen. 1996 Adoption Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL. Refers to Appendix A -- Carcinogens.</b> TWA: 10 mg/m<sup>3</sup> 8 hour(s).</p>
cristobalite	<p><b>OSHA PEL Z3 (United States, 9/2005). Notes: 1/2[10/(%SiO<sub>2</sub>+2)]</b> TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: Respirable <b>OSHA PEL Z3 (United States, 9/2005). Notes: 1/2[250/(%SiO<sub>2</sub>+5)]</b> TWA: 250 mppcf 8 hour(s). Form: Respirable <b>OSHA PEL 1989 (United States, 3/1989). Notes: as quartz</b> TWA: 0.05 mg/m<sup>3</sup>, (as quartz) 8 hour(s). Form: Respirable dust <b>ACGIH TLV (United States, 1/2011). Notes: Respirable fraction; see Appendix C, paragraph C.</b> TWA: 0.025 mg/m<sup>3</sup> 8 hour(s). Form: Respirable fraction <b>OSHA PEL Z3 (United States, 9/2005). Notes: 1/2[30/(%SiO<sub>2</sub>+2)]</b> TWA: 30 mg/m<sup>3</sup> 8 hour(s). Form: Total dust. <b>NIOSH REL (United States, 6/2009).</b> TWA: 0.05 mg/m<sup>3</sup> 10 hour(s). Form: respirable dust</p>

### 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

## 8. Exposure controls/personal protection

<b>Respiratory</b>	: A NIOSH-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 uncontrolled release, exposure levels are not known or any other circumstances where air-purifying respirators may not provide adequate protection.
<b>Hands</b>	: 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.
<b>Eyes</b>	: 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.
<b>Skin</b>	: 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.
<b>Environmental exposure controls</b>	: 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

<b>Physical state</b>	: Liquid.
<b>Flash point</b>	: Closed cup: 96°C (204.8°F)
<b>Auto-ignition temperature</b>	: Not available.
<b>Flammable limits</b>	: Not available.
<b>Color</b>	: Not available.
<b>Odor</b>	: not available
<b>pH</b>	: Not available.
<b>Boiling/condensation point</b>	: 100°C (212°F)
<b>Melting/freezing point</b>	: 0°C (32°F)
<b>Specific gravity</b>	: 1.486
<b>Density (lbs/gal)</b>	: 12.401
<b>Vapor pressure</b>	: Not available.
<b>Vapor density</b>	: Not available.
<b>Volatility</b>	: 44.04% (v/v), 29.67% (w/w)
<b>Viscosity</b>	: Dynamic: 99999 mPa·s (99999 cP)
<b>Dispersibility properties</b>	: Easily dispersible in the following materials: cold water.
<b>Solubility</b>	: Easily soluble in the following materials: cold water.
<b>VOC g/l</b>	: 46 g/l [Method 24]

## 10. Stability and reactivity

<b>Chemical stability</b>	: The product is stable.
<b>Conditions to avoid</b>	: No specific data.
<b>Incompatible materials</b>	: No specific data.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.

## 11. Toxicological information

### Acute toxicity

Conclusion/Summary : Not available.

### Chronic toxicity

Conclusion/Summary : Not available.

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

Conclusion/Summary : Not available.

### Sensitizer

Conclusion/Summary : Not available.

### Carcinogenicity

Conclusion/Summary : Not available.

### Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Kaolin	A4	-	-	-	-	-
Quartz (SiO <sub>2</sub> )	A2	1	-	+	Proven.	-
titanium dioxide	A4	2B	-	+	-	-
cristobalite	A2	1	-	+	Proven.	-

### Mutagenicity

Conclusion/Summary : Not available.

### Teratogenicity

Conclusion/Summary : Not available.

### Reproductive toxicity

Conclusion/Summary : Not available.

## 12. Ecological information

Ecotoxicity : No known significant effects or critical hazards.

### Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute EC50 5.83 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 5.5 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	Acute LC50 >1000000 ug/L Marine water	Fish - Fundulus heteroclitus	96 hours

Conclusion/Summary : Not available.

### Persistence/degradability

Conclusion/Summary : Not available.

## 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.

## 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
IMDG Class	Not available.	Not available.	Not available.	-		-

PG\* : Packing group

## 15. Regulatory information

**U.S. Federal regulations** : **United States inventory (TSCA 8b)**: All components are listed or exempted.  
**SARA 302/304/311/312 extremely hazardous substances**: No components were found.  
**SARA 302/304 emergency planning and notification**: No components were found.  
**SARA 302/304/311/312 hazardous chemicals**: Limestone; Kaolin; Quartz (SiO<sub>2</sub>)  
**SARA 311/312 MSDS distribution - chemical inventory - hazard identification**:  
 Limestone: Immediate (acute) health hazard; Kaolin: Delayed (chronic) health hazard;  
 Quartz (SiO<sub>2</sub>): Immediate (acute) health hazard, Delayed (chronic) health hazard

### State regulations

**Massachusetts** : The following components are listed: CALCIUM CARBONATE; SILICA, CRYSTALLINE, QUARTZ

**New York** : None of the components are listed.

**New Jersey** : The following components are listed: CALCIUM CARBONATE; LIMESTONE; KAOLIN; SILICA, QUARTZ; QUARTZ (SiO<sub>2</sub>); TITANIUM DIOXIDE; TITANIUM OXIDE (TiO<sub>2</sub>); SILICA, CRISTOBALITE; CRISTOBALITE (SiO<sub>2</sub>)

**Pennsylvania** : The following components are listed: LIMESTONE; KAOLIN; QUARTZ (SiO<sub>2</sub>); TITANIUM OXIDE (TiO<sub>2</sub>); CRISTOBALITE (SiO<sub>2</sub>)

### California Prop. 65

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

### International regulations

**Canada inventory** : Not determined.

## 16. Other information

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

Health	*	2
Flammability		1
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 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.

## 16. Other information

The customer is responsible for determining the PPE code for this material.

**Prepared by** : Product Safety and Compliance Akzo Nobel Paints LLC

**Notice to reader**

The information contained herein is based on data available at the time of preparation of this data sheet and which Akzo Nobel Paints LLC believes to be reliable. However, no warranty is expressed or implied regarding the accuracy of this data. Akzo Nobel Paints LLC shall not be responsible for the use of this information, or of any product, method or apparatus mentioned and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and the health and safety of your employees and users of this material.

Complies with OSHA Hazard Communication Standard 29CFR1910.1200.





**1 . Product and company identification**

<b>Product name</b>	: LN-609 PANEL & FOAM AHE60912TNL
<b>Manufacturer</b>	: Akzo Nobel Paints LLC 15885 West Sprague Road Strongsville, OH 44136 U.S.A.
<b>Validation date</b>	: <b>2013-03-12.</b>
<b>Print date</b>	: 2013-03-12.
<b>Responsible name</b>	: Product Safety and Compliance
<b>In case of emergency</b>	: 1-800-545-2643

**2. Hazards identification****Emergency overview**

<b>Physical state</b>	: Liquid.
<b>Signal word</b>	: WARNING!
<b>Hazard statements</b>	CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT MAY CAUSE TARGET ORGAN DAMAGE, BASED ON ANIMAL DATA. CANCER HAZARD - CONTAINS MATERIAL WHICH CAN CAUSE CANCER.
<b>Precautionary measures</b>	: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Do not eat, drink or smoke when using this product. Avoid contact with eyes, skin and clothing. Keep container tightly closed. Use personal protective equipment as required. Wash thoroughly after handling.

**Potential acute health effects**

<b>Inhalation</b>	: Irritating to respiratory system.
<b>Ingestion</b>	: Harmful if swallowed.
<b>Skin</b>	: Irritating to skin.
<b>Eyes</b>	: Irritating to eyes.

**Potential chronic health effects**

<b>Chronic effects</b>	: Contains material that may cause target organ damage, based on animal data.
<b>Carcinogenicity</b>	: Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.
<b>Target organs</b>	: Contains material which may cause damage to the following organs: kidneys, lungs, upper respiratory tract, skin, eyes, stomach, testes.

**Over-exposure signs/symptoms**

<b>Inhalation</b>	: Adverse symptoms may include the following: respiratory tract irritation coughing
<b>Ingestion</b>	: No specific data.
<b>Skin</b>	: Adverse symptoms may include the following: irritation redness



## 2. Hazards identification

- Eyes** : Adverse symptoms may include the following:  
 pain or irritation  
 watering  
 redness

See toxicological information (Section 11)

## 3. Composition/information on ingredients

Name	CAS number	%
Limestone	1317-65-3	10-<30
Kaolin	1332-58-7	10-<30
Acrylic resin, waterborne		10-<30
Acrylic (co)polymer, waterborne		1-<5
Quartz (SiO <sub>2</sub> )	14808-60-7	1-<5
titanium dioxide	13463-67-7	0.1-<1.0
cristobalite	14464-46-1	0.1-<1.0
water	7732-18-5	10-<30
Formaldehyde	50-00-0	< 0.01

## 4. First aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. If any product remains, gently rub with petroleum jelly, vegetable or mineral/baby oil then wash again with soap and water. Repeat as needed. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

## 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 thermal decomposition products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 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).
- Methods for 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.
- 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). 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.

## 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. Remove contaminated clothing and protective equipment before entering eating areas. Avoid exposure - obtain special instructions before use. Do not get in eyes or on skin or clothing. Do not ingest. 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. Keep out of the reach of children.
- 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. Keep from freezing.

## 8. Exposure controls/personal protection

Ingredient	Exposure limits
Limestone	<b>NIOSH REL (United States, 6/2009).</b> TWA: 5 mg/m <sup>3</sup> 10 hour(s). Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 10 hour(s). Form: Total <b>OSHA PEL (United States, 6/2010).</b> TWA: 5 mg/m <sup>3</sup> 8 hour(s). Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hour(s). Form: Total dust <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hour(s). Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hour(s). Form: Total dust
Kaolin	<b>ACGIH TLV (United States, 1/2011). Notes: 1996 Adoption Refers to Appendix A -- Carcinogens. Respirable fraction; see Appendix C, paragraph C.</b> TWA: 2 mg/m <sup>3</sup> 8 hour(s). Form: Respirable fraction <b>NIOSH REL (United States, 6/2009).</b> TWA: 5 mg/m <sup>3</sup> 10 hour(s). Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 10 hour(s). Form: Total <b>OSHA PEL (United States, 6/2010).</b>

## 8. Exposure controls/personal protection

Quartz (SiO <sub>2</sub> )	<p>TWA: 5 mg/m<sup>3</sup> 8 hour(s). Form: Respirable fraction  TWA: 15 mg/m<sup>3</sup> 8 hour(s). Form: Total dust  <b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 5 mg/m<sup>3</sup> 8 hour(s). Form: Respirable fraction  TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: Total dust</p> <p><b>OSHA PEL Z3 (United States, 9/2005). Notes: 10/(SiO<sub>2</sub>+2)</b>  TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: Respirable  <b>OSHA PEL Z3 (United States, 9/2005). Notes: 250/(%SiO<sub>2</sub>+5)</b>  TWA: 250 mppcf 8 hour(s). Form: Respirable  <b>OSHA PEL 1989 (United States, 3/1989). Notes: as quartz</b>  TWA: 0.1 mg/m<sup>3</sup>, (as quartz) 8 hour(s). Form: Respirable dust  <b>ACGIH TLV (United States, 1/2011). Notes: Respirable fraction; see Appendix C, paragraph C.</b>  TWA: 0.025 mg/m<sup>3</sup> 8 hour(s). Form: Respirable fraction  <b>OSHA PEL Z3 (United States, 9/2005). Notes: 30/(%SiO<sub>2</sub>+2)</b>  TWA: 30 mg/m<sup>3</sup> 8 hour(s). Form: Total dust.  <b>NIOSH REL (United States, 6/2009). Notes: See Appendix A - NIOSH Potential Occupational Carcinogen</b>  TWA: 0.05 mg/m<sup>3</sup> 10 hour(s). Form: respirable dust</p>
titanium dioxide	<p><b>OSHA PEL (United States, 6/2010).</b>  TWA: 15 mg/m<sup>3</sup> 8 hour(s). Form: Total dust  <b>OSHA PEL 1989 (United States, 3/1989).</b>  TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: Total dust  <b>ACGIH TLV (United States, 1/2011). Notes: Substance identified by other sources as a suspected or confirmed human carcinogen. 1996 Adoption Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL. Refers to Appendix A -- Carcinogens.</b>  TWA: 10 mg/m<sup>3</sup> 8 hour(s).</p>
cristobalite	<p><b>OSHA PEL Z3 (United States, 9/2005). Notes: 1/2[10/(%SiO<sub>2</sub>+2)]</b>  TWA: 10 mg/m<sup>3</sup> 8 hour(s). Form: Respirable  <b>OSHA PEL Z3 (United States, 9/2005). Notes: 1/2[250/(%SiO<sub>2</sub>+5)]</b>  TWA: 250 mppcf 8 hour(s). Form: Respirable  <b>OSHA PEL 1989 (United States, 3/1989). Notes: as quartz</b>  TWA: 0.05 mg/m<sup>3</sup>, (as quartz) 8 hour(s). Form: Respirable dust  <b>ACGIH TLV (United States, 1/2011). Notes: Respirable fraction; see Appendix C, paragraph C.</b>  TWA: 0.025 mg/m<sup>3</sup> 8 hour(s). Form: Respirable fraction  <b>OSHA PEL Z3 (United States, 9/2005). Notes: 1/2[30/(%SiO<sub>2</sub>+2)]</b>  TWA: 30 mg/m<sup>3</sup> 8 hour(s). Form: Total dust.  <b>NIOSH REL (United States, 6/2009).</b>  TWA: 0.05 mg/m<sup>3</sup> 10 hour(s). Form: respirable dust</p>

### 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

## 8. Exposure controls/personal protection

- |  |   |
|--|---|
| <b>Respiratory</b>                     | : A NIOSH-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 uncontrolled release, exposure levels are not known or any other circumstances where air-purifying respirators may not provide adequate protection. |
| <b>Hands</b>                           | : 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.   |
| <b>Eyes</b>                            | : 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.  |
| <b>Skin</b>                            | : 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.   |
| <b>Environmental exposure controls</b> | : 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

- |                                   |  |
|-----------------------------------|--|
| <b>Physical state</b>             | : Liquid.  |
| <b>Flash point</b>                | : Closed cup: 96°C (204.8°F)                                 |
| <b>Auto-ignition temperature</b>  | : Not available.   |
| <b>Flammable limits</b>           | : Not available.   |
| <b>Color</b>                      | : Not available.   |
| <b>Odor</b>                       | : not available  |
| <b>pH</b>                         | : Not available.   |
| <b>Boiling/condensation point</b> | : 100°C (212°F)  |
| <b>Melting/freezing point</b>     | : 0°C (32°F)   |
| <b>Specific gravity</b>           | : 1.486  |
| <b>Density (lbs/gal)</b>          | : 12.401   |
| <b>Vapor pressure</b>             | : Not available.   |
| <b>Vapor density</b>              | : Not available.   |
| <b>Volatility</b>                 | : 44.04% (v/v), 29.67% (w/w)                                 |
| <b>Viscosity</b>                  | : Dynamic: 99999 mPa·s (99999 cP)                            |
| <b>Dispersibility properties</b>  | : Easily dispersible in the following materials: cold water. |
| <b>Solubility</b>                 | : Easily soluble in the following materials: cold water.     |
| <b>VOC g/l</b>                    | : 46 g/l [Method 24]   |

## 10. Stability and reactivity

- |   |  |
|---|--|
| <b>Chemical stability</b>                 | : The product is stable.   |
| <b>Conditions to avoid</b>                | : No specific data.  |
| <b>Incompatible materials</b>             | : No specific data.  |
| <b>Hazardous decomposition products</b>   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced. |
| <b>Possibility of hazardous reactions</b> | : Under normal conditions of storage and use, hazardous reactions will not occur.                      |

## 11. Toxicological information

### Acute toxicity

**Conclusion/Summary** : Not available.

### Chronic toxicity

**Conclusion/Summary** : Not available.

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
titanium dioxide	Skin - Mild irritant	Human	-	72 hours 300 Micrograms Intermittent	-

**Conclusion/Summary** : Not available.

### Sensitizer

**Conclusion/Summary** : Not available.

### Carcinogenicity

**Conclusion/Summary** : Not available.

### Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Kaolin	A4	-	-	-	-	-
Quartz (SiO <sub>2</sub> )	A2	1	-	+	Proven.	-
titanium dioxide	A4	2B	-	+	-	-
cristobalite	A2	1	-	+	Proven.	-

### Mutagenicity

**Conclusion/Summary** : Not available.

### Teratogenicity

**Conclusion/Summary** : Not available.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

## 12. Ecological information

**Ecotoxicity** : No known significant effects or critical hazards.

### Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
titanium dioxide	Acute EC50 5.83 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 5.5 ppm Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - <24 hours	48 hours
	Acute LC50 >1000000 ug/L Marine water	Fish - Fundulus heteroclitus	96 hours

**Conclusion/Summary** : Not available.

### Persistence/degradability

**Conclusion/Summary** : Not available.

## 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.

## 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
IMDG Class	Not available.	Not available.	Not available.	-		-

PG\* : Packing group

## 15. Regulatory information

**U.S. Federal regulations** : **United States inventory (TSCA 8b)**: All components are listed or exempted.  
**SARA 302/304/311/312 extremely hazardous substances**: No components were found.  
**SARA 302/304 emergency planning and notification**: No components were found.  
**SARA 302/304/311/312 hazardous chemicals**: Limestone; Kaolin; Quartz (SiO<sub>2</sub>)  
**SARA 311/312 MSDS distribution - chemical inventory - hazard identification**:  
 Limestone: Immediate (acute) health hazard; Kaolin: Delayed (chronic) health hazard;  
 Quartz (SiO<sub>2</sub>): Immediate (acute) health hazard, Delayed (chronic) health hazard

### State regulations

**Massachusetts** : The following components are listed: CALCIUM CARBONATE; SILICA, CRYSTALLINE, QUARTZ  
**New York** : None of the components are listed.  
**New Jersey** : The following components are listed: CALCIUM CARBONATE; LIMESTONE; KAOLIN; SILICA, QUARTZ; QUARTZ (SiO<sub>2</sub>); TITANIUM DIOXIDE; TITANIUM OXIDE (TiO<sub>2</sub>); SILICA, CRISTOBALITE; CRISTOBALITE (SiO<sub>2</sub>)  
**Pennsylvania** : The following components are listed: LIMESTONE; KAOLIN; QUARTZ (SiO<sub>2</sub>); TITANIUM OXIDE (TiO<sub>2</sub>); CRISTOBALITE (SiO<sub>2</sub>)

### California Prop. 65

**WARNING**: This product contains a chemical known to the State of California to cause cancer.

### International regulations

**Canada inventory** : Not determined.

## 16. Other information

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

Health	*	2
Flammability		1
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 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.

## 16. Other information

The customer is responsible for determining the PPE code for this material.

**Prepared by** : Product Safety and Compliance Akzo Nobel Paints LLC

**Notice to reader**

The information contained herein is based on data available at the time of preparation of this data sheet and which Akzo Nobel Paints LLC believes to be reliable. However, no warranty is expressed or implied regarding the accuracy of this data. Akzo Nobel Paints LLC shall not be responsible for the use of this information, or of any product, method or apparatus mentioned and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and the health and safety of your employees and users of this material.

Complies with OSHA Hazard Communication Standard 29CFR1910.1200.





**MATERIAL SAFETY DATA SHEET**

**NFPA RATING:** Health = 0 Flammability = 0 Reactivity = 0  
**HMIS RATING:** Health = / 0 Flammability = 0 Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (481N-48A)****Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** LIQUID TRAP SHOOTER**Address:** 302 North Fourth Street**Date Prepared:** March 12, 1997

St. Joseph, MO 64501

**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	---
Mixture of Bacterial Spores	N/A	not established	not established	N/A	---

**V.O.C.** = 633 gm./l.; **V.O.S.** = 0.08 lbs./gal.

**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**

<b>Boiling Point:</b> 208 °F	<b>Specific Gravity (H<sub>2</sub>O = 1):</b> 25°C = 1.00 & 39°C = 1.00
<b>Vapor Pressure (mm Hg.):</b> 17.5	<b>Percent Volatile by Volume (%):</b> 99.3%
<b>Vapor Density (AIR = 1):</b> 0.6	<b>Evaporation Rate (ethyl ether = 1):</b> slower than 1
<b>Solubility in Water:</b> Complete	<b>Appearance and Odor:</b> Hazy, green liquid, spring fresh odor
<b>pH (concentrate) =</b> 6.3	

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**

**Flash point:** None to Boiling (Tag Closed Cup)      **Flammable Limits:** LEL = N/A    UEL = N/A  
**Extinguishing Media:** Not applicable.  
**Special Fire Fighting Procedures:** None known to manufacturer  
**Unusual Fire and Explosion Hazards:** None known to manufacturer

**SECTION V -- PHYSICAL HAZARDS**

**Stability:** Stable      **Conditions to Avoid:** Excessive hot or cold temperatures may kill microorganisms.  
**Incompatibility (Materials to Avoid):** Strong acids, alkalis or disinfectants may kill these microorganisms  
**Hazardous Decomposition Products or Byproducts:** None known to manufacturer  
**Hazardous Polymerization:** Will not occur      **Conditions to Avoid:** None known to Hillyard

**SECTION VI -- HEALTH HAZARD DATA**

**Routes of entry:** Inhalation? no      Skin? no      Ingestion? no

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. According to Primary Skin Irritation Test (FHSA), product concentrate is not an irritant; prolonged exposure may produce slight irritation in sensitive individuals; Eye Irritation Test (FHSA) = not irritant.
2. No data is available at this time.

**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 or equal to 0.1%.



## SECTION VI -- HEALTH HAZARD DATA cont.

**Signs and Symptoms of Exposure:** Prolonged eye or skin contact with concentrate can cause mild irritation. Ingestion may cause nausea, vomiting and diarrhea.

**Medical Conditions Generally Aggravated by Exposure:** Bacterial infection may occur through open wounds or broken skin.

**Emergency and First Aid Procedures:** In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. If irritation persists get medical attention. In case of skin contact, wash with soap and water; if irritation persists get medical attention. If ingested, give person several glasses of water and call a physician, hospital emergency room or poison control center for how to induce vomiting. Never give anything by mouth to an unconscious person.

## SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps To Be Taken In Case Material Is Released Or Spilled:** Pick up on absorbent material or flush away with water.

**Waste Disposal Method:** This product may be disposed of in sanitary sewer or septic tank. Container disposal: Triple rinse or equivalent then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewer to a public-owned treatment works in compliance with applicable federal, state and local requirements.

**Precautions To Be Taken In Handling And Storing:** Store in a cool dry place. Keep container tightly closed when not in use. To maintain biological properties, do not freeze and do not store above 100 °F.

**Other Precautions:** Keep out of reach of children. 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):** Not required for normal use

**Ventilation:**

**Local Exhaust =** Suggest      **Mechanical (General) =** N/A      **Special =** N/A      **Other =** N/A

**Protective Gloves:** Rubber gloves      **Eye Protection:** Splash goggles suggested

**Other Protective Clothing or Equipment:** Cover exposed skin.

**Work / Hygienic Practices:** Wash hands thoroughly after use.

## 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: not listed

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.

<b>00445-0000</b>
<b>-1003</b>
<b>-1004</b>
<b>-1006</b>

REVISION DATE: 01/07/08

**SAFETY DATA SHEET**  
**WINSOR & NEWTON LIQUIN ORIGINAL**

**1 IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND COMPANY UNDERTAKING**

PRODUCT NAME            WINSOR & NEWTON LIQUIN ORIGINAL

APPLICATION                Alkyd Medium for art and creative use

SUPPLIER                   ColArt America Inc.  
                                 11 Constitution Avenue  
                                 Piscataway  
                                 New Jersey  
                                 08855-1396

Emergency telephone number    1-800-628-3385  
Tel. number for information      732-562-0770

**2. COMPOSITION INFORMATION ON INGREDIENTS**

## COMPOSITION COMMENTS:

Hazardous Components	CAS Number	OSHA PEL	TLV
Low aromatic petroleum hydrocarbons	64742-47-8	No data	No data
2-butanone oxime	96-29-7	No data	No data

**3. HAZARD IDENTIFICATION**

## CLASSIFICATION

In accordance with ASTM D-4236 Standard Practice for Labeling Art Materials for Chronic Adverse Health Effects this product labeled as:

DANGER. HARMFUL OR FATAL IF SWALLOWED, COMBUSTIBLE, IRRITABLE TO SKIN AND EYES. VAPOR HARMFUL. CONTAINS PETROLEUM DISTILLATES. Use only with adequate ventilation. KEEP OUT OF REACH OF CHILDREN.

If swallowed, do not induce vomiting. Call a physician or poison control center immediately. Get prompt medical attention.

**4. FIRST AID MEASURES**

## INHALATION

Move the exposed person to fresh air at once. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.

**INGESTION**

DO NOT INDUCE VOMITING! Rinse mouth thoroughly. Drink plenty of water. Get medical attention if any discomfort

**SKIN CONTACT**

Remove affected person from source of contamination. Remove contaminated clothing. Wash the skin immediately with soap and water. Get prompt medical attention if any discomfort continues.

**EYE CONTACT**

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lid. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

**5. FIRE FIGHTING MEASURES****EXTINGUISHING MEDIA**

This product is not flammable. Use fire extinguishing media appropriate for surrounding materials.

**6. ACCIDENTAL RELEASE MEASURES****SPILL CLEAN UP METHODS**

Ventilate well. Wear necessary protective equipment. Absorb in vermiculite, dry sand or earth and place in to containers. Do not contaminate water courses or sewer. Dispose of the colour in accordance with local regulations.

**7. HANDLING AND STORAGE****USAGE PRECAUTIONS**

Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapors.

**STORAGE PRECAUTIONS**

Keep in original container. Store at moderate temperatures in dry, well ventilated area. Persons susceptible for allergic reactions should not handle this product.

**8. EXPOSURE CONTROLS/ PERSONAL PROTECTION****ENGINEERING MEASURES**

Provide adequate general and local exhaust ventilation.

**HAND PROTECTION**

Use suitable protective gloves if risk of skin contamination.

**EYE PROTECTION**

If risk of splashing, wear safety goggles or face shield.

**OTHER PROTECTION**

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

**HYGEINE MEASURES**

Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	Liquid
COLOR	Lightly colored
ODOR	Hydrocarbon
SOLUBILITY	Insoluble in water
BOILING POINT (°C)	150 - 200 760 mm Hg
RELATIVE DENSITY	0.89
VOLATILE BY VOL (%)	80
FLASH POINT (°C)	70 (Closed cup)
FLAMMABLE LIMITS	LEL = 0.9; UEL = 6.0
pH-VALUE CONC. SOL .	Not applicable

**10. STABILITY AND REACTIVITY****STABILITY**

Stable under normal temperature conditions.

**CONDITIONS TO AVOID**

Avoid contact with acids and oxidizing substances. Avoid excessive heat for prolonged periods of time.

**HAZARDOUS DECOMPOSITION PRODUCTS**

High temperature generates fumes of carbon dioxide and carbon monoxide.

**11. TOXICOLOGICAL INFORMATION****GENERAL INFORMATION****INHALATION**

May cause sensitization by inhalation.

**INGESTION**

May cause discomfort if swallowed

#### SKIN CONTACT

Prolonged contact may cause sensitization.

#### EYE CONTACT

Spray and vapor in the eyes may cause irritation and smarting.

#### ROUTE OF ENTRY

Inhalation. Skin and eye contact.

#### MEDICAL SYMPTOMS

Inhalation of large quantities of vapor may cause dizziness, headache. Prolonged contact with skin may cause irritation.

### 12. ECOLOGICAL INFORMATION

#### ECOTOXICITY

Not regarded as dangerous to the environment

### 13. DISPOSAL CONSIDERATIONS

#### DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

### 14. TRANSPORT INFORMATION

RAIL TRANSPORT NOTES      Not classified

SEA TRANSPORT NOTES      Not classified

AIR TRANSPORT NOTES      Not classified

### 15. REGULATORY INFORMATION

This product has been evaluated by a toxicologist and is labeled for acute and chronic health hazards in accordance with the Labeling of Hazardous Art Materials Act and Federal regulation 16 CFR 1500.14 of the Federal Hazardous Substances Act.

This product conforms to ASTM D 4236 Standard Practice for Labeling Art Materials for Chronic Adverse Health Hazards. The warning given on the product label is:

DANGER. HARMFUL OR FATAL IF SWALLOWED. COMBUSTIBLE. IRRITABLE TO SKIN AND EYES. VAPOR HARMFUL. CONTAINS PETROLEUM DISTILLATES. Use only with adequate ventilation. KEEP OUT OF REACH OF CHILDREN.

If swallowed, do not induce vomiting. Call a physician or poison control center immediately. Get prompt medical attention.

**16. OTHER INFORMATION**

**INFORMATON SOURCE**

Material Safety ~Data Sheet, Misc. manufacturers.

REVISION DATE  
01/07/08

## LIQUINOX MSDS

### Section 1 : PRODUCT AND COMPANY IDENTIFICATION

**Chemical family:** Detergent.

**Manufacturer:** Alconox, Inc.  
30 Glenn St.  
Suite 309  
White Plains, NY 10603.

**Manufacturer emergency** 800-255-3924.

**phone number:** 813-248-0585 (outside of the United States).

**Supplier:** Same as manufacturer.

**Product name:** Liquinox

### Section 2 : INGREDIENT INFORMATION

C.A.S.	CONCENTRATION %	Ingredient Name	T.L.V.	LD/50	LC/50
25155-30-0	10-30	SODIUM DODECYLBENZENESULFONATE	NOT AVAILABLE	438 MG/KG RAT ORAL  1330 MG/KG MOUSE ORAL	NOT AVAILABLE

### Section 3 : HAZARD IDENTIFICATION

**Route of entry:** Skin contact, eye contact, inhalation and ingestion.

**Effects of acute exposure**

**Eye contact:** May cause irritation.

**Skin contact:** Prolonged and repeated contact may cause irritation.

**Inhalation:** May cause headache and nausea.

**Ingestion:** May cause vomiting and diarrhea.  
May cause gastric distress.

**Effects of chronic exposure:** See effects of acute exposure.

### Section 4 : FIRST AID MEASURES

**Skin contact:** Remove contaminated clothing.  
Wash thoroughly with soap and water.  
Seek medical attention if irritation persists.

- Eye contact:** Check for and remove contact lenses.  
Flush eyes with clear, running water for 15 minutes while holding eyelids open: if irritation persists, consult a physician.
- Inhalation:** Remove victim to fresh air.  
If irritation persists, seek medical attention.
- Ingestion:** Do not induce vomiting, seek medical attention.  
Dilute with two glasses of water.  
Never give anything by mouth to an unconscious person.

## Section 5 : FIRE FIGHTING MEASURES

- Flammability:** Not flammable.
- Conditions of flammability:** Surrounding fire.
- Extinguishing media:** Carbon dioxide, dry chemical, foam.  
Water  
Water fog.
- Special procedures:** Self-contained breathing apparatus required.  
Firefighters should wear the usual protective gear.  
Use water spray to cool fire exposed containers.
- Auto-ignition temperature:** Not available.
- Flash point (°C), method:** None
- Lower flammability limit (% vol):** Not applicable.
- Upper flammability limit (% vol):** Not applicable.
- Explosion Data**
- Sensitivity to static discharge:** Not available.
- Sensitivity to mechanical impact:** Not available.
- Hazardous combustion products:** Oxides of carbon (COx).  
Hydrocarbons.
- Rate of burning:** Not available.
- Explosive power:** Containers may rupture if exposed to heat or fire.

## Section 6 : ACCIDENTAL RELEASE MEASURES

- Leak/Spill:** Contain the spill.  
Prevent entry into drains, sewers, and other waterways.  
Wear appropriate protective equipment.  
Small amounts may be flushed to sewer with water.  
Soak up with an absorbent material.  
Place in appropriate container for disposal.  
Notify the appropriate authorities as required.

## Section 7 : HANDLING AND STORAGE

- Handling procedures and equipment:** Protect against physical damage.  
Avoid breathing vapors/mists.



Wear personal protective equipment appropriate to task.  
Wash thoroughly after handling.  
Keep out of reach of children.  
Avoid contact with skin, eyes and clothing.  
Avoid extreme temperatures.  
Launder contaminated clothing prior to reuse.

**Storage requirements:** Store away from incompatible materials.  
Keep containers closed when not in use.

## Section 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

### Precautionary Measures

**Gloves/Type:**



Wear appropriate gloves.

**Respiratory/Type:** None required under normal use.

**Eye/Type:**



Safety glasses recommended.

**Footwear/Type:** Safety shoes per local regulations.

**Clothing/Type:** As required to prevent skin contact.

**Other/Type:** Eye wash facility should be in close proximity.  
Emergency shower should be in close proximity.

**Ventilation requirements:** Local exhaust at points of emission.

**Exposure limit of material:** Not available.

## Section 9 : PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid.

**Appearance & odor:** Odourless.  
Pale yellow.

**Odor threshold (ppm):** Not available.

**Vapour pressure @ 20°C (68°F):**  
**(mmHg):** 17

**Vapour density (air=1):** >1

### Volatiles (%)

**By volume:** Not available.

**Evaporation rate (butyl acetate = 1):** < 1.

**Boiling point (°C):** 100 (212F)

**Freezing point (°C):** Not available.

**pH:** 8.5

**Specific gravity @ 20 °C:** (water = 1).  
1.083

**Solubility in water (%):** Complete.

**Coefficient of water\oil  
dist.:** Not available.

**VOC:** None

**Chemical family:** Detergent.

#### Section 10 : STABILITY AND REACTIVITY

**Chemical stability:** Product is stable under normal handling and storage conditions.

**Conditions of instability:** Extreme temperatures.

**Hazardous  
polymerization:** Will not occur.

**Incompatible  
substances:** Strong acids.  
Strong oxidizing agents.

**Hazardous  
decomposition products:** See hazardous combustion products.

#### Section 11 : TOXICOLOGICAL INFORMATION

**LD50 of product, species  
& route:** > 5000 mg/kg rat oral.

**LC50 of product, species  
& route:** Not available.

**Sensitization to product:** Not available.

**Carcinogenic effects:** Not listed as a carcinogen.

**Reproductive effects:** Not available.

**Teratogenicity:** Not available.

**Mutagenicity:** Not available.

**Synergistic materials:** Not available.

#### Section 12 : ECOLOGICAL INFORMATION

**Environmental toxicity:** No data at this time.

**Environmental fate:** No data at this time.

#### Section 13 : DISPOSAL CONSIDERATIONS

**Waste disposal:** In accordance with local and federal regulations.

#### Section 14 : TRANSPORT INFORMATION

**D.O.T. CLASSIFICATION:** Not regulated.

**Special shipping  
information:** Not regulated.

#### Section 15 : REGULATORY INFORMATION

**Canadian Regulatory  
Information**

**WHMIS classification:** Not controlled.

**DSL status:** Not available.

**USA Regulatory  
Information**

**SARA hazard categories** Immediate (Acute) Health Hazard: No.  
**sections 311/312:** Delayed (Chronic) Health Hazard: No.  
Fire Hazard: No.  
Sudden Release of Pressure: No.  
Reactive: No.

**SARA Section 313:** None

**TSCA inventory:** All components of this product are listed on the TSCA inventory.

**NFPA**

**Health Hazard:** 1

**Flammability:** 0

**Physical hazard:** 0

<b>Section 16 : OTHER INFORMATION</b>
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**Supplier MSDS date:** 2005/02/24

**Data prepared by:** Global Safety Management  
3340 Peachtree Road, #1800  
Atlanta, GA 30326

Phone: 877-683-7460

Fax: (877) 683-7462

Web: [www.globalsafetynet.com](http://www.globalsafetynet.com)

Email: [info@globalsafetynet.com](mailto:info@globalsafetynet.com).

**General note:** This material safety data sheet was prepared from information obtained from various sources, including product suppliers and the Canadian Center for Occupational Health and Safety.

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## **Material Safety Data Sheet**

**Product Name:**

LIQUITEX® ACRYLIC GESSO

**Product Family:**

### **1. Chemical Product and Company Identification**

ColArt Americas, Inc.  
1100 Constitution Avenue  
PO Box 1396  
Piscataway, NJ 08855  
1-800-445-4278

EMERGENCY TELEPHONE NUMBER:  
1-800-628-3385

SUBSTANCE:  
LIQUITEX® ACRYLIC GESSO

TRADE NAMES/SYNONYMS: LIQUITEX ACRYLIC GESSO

PRODUCT CODES : 5304 ; 5308 ; 5316 ; 5332 ; 5334 ; 5336

PRODUCT USE:  
Arts and Crafts

CREATION DATE:  
Nov 11 1997

REVISION DATE:  
06 September 2002

### **2. Composition, Information on Ingredients**

COMPONENT:  
Product has been certified as non-toxic by The Art and Creative Materials Institute, Inc. and conforms to ASTM D-4236 Standard Practice for Labeling Art Materials for Acute and Chronic Adverse Health Hazards.

CAS NUMBER:  
Not assigned.

EC NUMBER:  
Not assigned.

PERCENTAGE:  
100

### **3. Hazards Identification**

None

EC CLASSIFICATION (CALCULATED):  
Not classified

EMERGENCY OVERVIEW:

COLOR:  
white

PHYSICAL FORM:  
liquid

ODOR:  
fruity odor

MAJOR HEALTH HAZARDS:  
No significant target effects reported.

POTENTIAL HEALTH EFFECTS:

INHALATION:  
none

SKIN CONTACT:  
none

EYE CONTACT:  
none

INGESTION:  
none

CARCINOGEN STATUS:

OSHA:  
No

NTP:.  
No

IARC:  
No

#### **4. First Aid Measures**

INHALATION:  
It is unlikely that emergency treatment will be required. Remove from exposure. Get medical attention, if needed.

SKIN CONTACT:  
It is unlikely that emergency treatment will be required. If adverse effects occur, wash with soap or mild detergent and large amounts of water. Get medical attention, if needed.

EYE CONTACT:  
It is unlikely that emergency treatment will be required. Wash with large amounts of water or normal saline until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

INGESTION:  
Contact local poison control center or physician immediately.

#### **5. Fire Fighting Measures**

FIRE AND EXPLOSION HAZARDS:  
Slight fire hazard.

EXTINGUISHING MEDIA:  
regular dry chemical, carbon dioxide, water, regular foam

FIRE FIGHTING:  
Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products.

FLASH POINT:  
No data available.

#### **6. Accidental Release Measures**

OCCUPATIONAL RELEASE:  
Absorb with sand or other non-combustible material. Collect spilled material

in appropriate container for disposal.

## **7. Handling and Storage**

Store and handle in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

## **8. Exposure Controls, Personal Protection**

### EXPOSURE LIMITS:

#### LIQUITEX(R) ACRYLIC GESSO

No occupational exposure limits established.

### VENTILATION:

Based on available information, additional ventilation is not required.

### EYE PROTECTION:

Eye protection not required under normal conditions.

### CLOTHING:

Protective clothing is not required under normal conditions.

### GLOVES:

Protective gloves are not required under normal conditions.

### RESPIRATOR:

No respirator is required under normal conditions of use.  
Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

## **9. Physical and Chemical Properties**

### PHYSICAL STATE:

liquid

### COLOR:

white

### TEXTURE:

viscous

### ODOR:

fruity odor

### BOILING POINT:

> 100

### FREEZING POINT:

Not available

### VAPOR PRESSURE:

Not available

### VAPOR DENSITY: ( Air =1 )

>1

### SPECIFIC GRAVITY:

1.5

### WATER SOLUBILITY:

Dilutable

PH:  
8-9

VOLATILITY:  
Not available

ODOR THRESHOLD:  
Not available

EVAPORATION RATE: ( BuAc = 1 )  
<1

## **10. Stability and Reactivity**

REACTIVITY:  
Stable at normal temperatures and pressure.

CONDITIONS TO AVOID:  
None reported.

INCOMPATIBILITIES:  
oxidizing materials

HAZARDOUS DECOMPOSITION:  
Thermal decomposition products: oxides of carbon, various organic fragments

POLYMERIZATION:  
Will not polymerize.

**11. Toxicological Information**  
Not available

**12. Ecological Information**  
Not available

**13. Disposal Considerations**  
Dispose in accordance with all applicable regulations.

**14. Transport Information**  
No classification assigned.

LAND TRANSPORT ADR/RID:  
No classification assigned.

AIR TRANSPORT IATA/ICAO:  
No classification assigned.

MARITIME TRANSPORT IMDG:  
No classification assigned.

## **15. Regulatory Information**

U.S. REGULATIONS:

TSCA INVENTORY STATUS:  
Yes

TSCA 12(b) EXPORT NOTIFICATION:  
Not listed.

CERCLA SECTION 103 (40CFR302.4):  
No

SARA SECTION 302 (40CFR355.30):  
No

SARA SECTION 304 (40CFR355.40):  
No

SARA SECTION 313 (40CFR372.65):  
No

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE:  
No

CHRONIC:  
No

FIRE:  
No

REACTIVE:  
No

SUDDEN RELEASE:  
No

OSHA PROCESS SAFETY (29CFR1910.119):  
No

STATE REGULATIONS:

California Proposition 65:  
No

EUROPEAN REGULATIONS:

EC NUMBER:  
Not applicable

## **16. Other Information**

The information contained herein is provided for identification of hazards in normal use and does not constitute a product specification.



## **Material Safety Data Sheet**

**Product Name:**  
LIQUITEX® BASICS

**Product Family:**  
**1. Chemical Product and Company Identification**

ColArt Americas, Inc.  
11 Constitution Ave.  
PO Box 1396  
Piscataway, NJ 08855  
1-800-445-4278

EMERGENCY TELEPHONE NUMBER:  
1-800-628-3885

**SUBSTANCE:**  
LIQUITEX® BASICS

**TRADE NAMES/SYNONYMS:**  
LIQUITEX® BASICS; **PRODUCT COLORS/CODES:** ALL COLORS

**PRODUCT USE:**  
Arts and Crafts

**CREATION DATE:**  
Nov 11 1997

**REVISION DATE:**  
02 September 2002

### **2. Composition, Information on Ingredients**

**COMPONENT:**  
Product has been certified as non-toxic by The Art and Creative Materials Institute, Inc. and conforms to ASTM D-4236 Standard Practice for Labelling Art Materials for Acute and Chronic Adverse Health Hazards.

**CAS NUMBER:**  
Not assigned.

**EC NUMBER:**  
Not assigned.

**PERCENTAGE:**  
100

### **3. Hazards Identification**

**EC CLASSIFICATION (CALCULATED):**  
Not classified

**EMERGENCY OVERVIEW:**

**COLOR:** various colors

**PHYSICAL FORM:**  
liquid

**ODOR:**  
odorless

**MAJOR HEALTH HAZARDS:**  
No significant target effects reported.

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:**  
none

**SKIN CONTACT:**

none

**EYE CONTACT:**

none

**INGESTION:**

none

**CARCINOGEN STATUS:**

**OSHA:**

No

**NTP:**

No

**IARC:**

No

**4. First Aid Measures**

**INHALATION:**

It is unlikely that emergency treatment will be required. Remove from exposure. Get medical attention, if needed.

**SKIN CONTACT:**

It is unlikely that emergency treatment will be required. If adverse effects occur, wash with soap or mild detergent and large amounts of water. Get medical attention, if needed.

**EYE CONTACT:**

It is unlikely that emergency treatment will be required. Wash with large amounts of water or normal saline until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

**INGESTION:**

Contact local poison control center or physician immediately.

**5. Fire Fighting Measures**

**FIRE AND EXPLOSION HAZARDS:**

Slight fire hazard.

**EXTINGUISHING MEDIA:**

regular dry chemical, carbon dioxide, water, regular foam

**FIRE FIGHTING:**

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products.

**FLASH POINT:**

No data available.

**6. Accidental Release Measures**

**OCCUPATIONAL RELEASE:**

Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

**7. Handling and Storage**

Store and handle in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

**8. Exposure Controls, Personal Protection**

**EXPOSURE LIMITS:**

**LIQUITEX(R) BASICS:**

No occupational exposure limits established.

**VENTILATION:**

Based on available information, additional ventilation is not required.

**EYE PROTECTION:**

Eye protection not required under normal conditions.

**CLOTHING:**

Protective clothing is not required under normal conditions.

**GLOVES:**

Protective gloves are not required under normal conditions.

**RESPIRATOR:**

No respirator is required under normal conditions of use.

Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

**9. Physical and Chemical Properties**

**PHYSICAL STATE:**

liquid

**COLOR:**

various colors

**ODOR:**

odorless

**BOILING POINT:**

> 100

**FREEZING POINT:**

Not available

**VAPOR PRESSURE:**

Not available

**VAPOR DENSITY:**

Not available

**SPECIFIC GRAVITY:**

1-2

**WATER SOLUBILITY:**

Dilutable

**PH:**

8-9

**VOLATILITY:**

Not available

**ODOR THRESHOLD:**

Not available

**EVAPORATION RATE: BuAc=1**

Not available

**10. Stability and Reactivity**

**REACTIVITY:**

Stable at normal temperatures and pressure.

CONDITIONS TO AVOID:

None reported.

INCOMPATIBILITIES:

oxidizing materials

HAZARDOUS DECOMPOSITION:

Thermal decomposition products: oxides of carbon

POLYMERIZATION:

Will not polymerize.

**11. Toxicological Information**

Not available

**12. Ecological Information**

Not available

**13. Disposal Considerations**

Dispose in accordance with all applicable regulations.

**14. Transport Information**

No classification assigned.

LAND TRANSPORT ADR/RID:

No classification assigned.

AIR TRANSPORT IATA/ICAO:

No classification assigned.

MARITIME TRANSPORT IMDG:

No classification assigned.

**15. Regulatory Information**

U.S. REGULATIONS:

TSCA INVENTORY STATUS:

Yes

TSCA 12(b) EXPORT NOTIFICATION:

Not listed.

CERCLA SECTION 103 (40CFR302.4):

No

SARA SECTION 302 (40CFR355.30):

No

SARA SECTION 304 (40CFR355.40):

No

SARA SECTION 313 (40CFR372.65):

No

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE:

No

CHRONIC:

No

FIRE:

No

REACTIVE:

No

SUDDEN RELEASE:

No

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:

California Proposition 65:

No

EUROPEAN REGULATIONS:

EC NUMBER:

Not assigned.

## **16. Other Information**

The information contained herein is provided for identification of hazards in normal use and does not constitute a product specification.

## **Material Safety Data Sheet**

**Product Name:**

LIQUITEX(R) GLOSSIES ACRYLIC ENAMELS

**Product Family:**

**1. Chemical Product and Company Identification**

Colart Americas, Inc.  
11 Constitution Avenue  
PO Box 1396  
Piscataway, NJ 08855  
1-800-445-4278

EMERGENCY TELEPHONE NUMBER:

1-800-628-3385

**SUBSTANCE:**

LIQUITEX(R) GLOSSIES ACRYLIC ENAMELS

**TRADE NAMES/SYNONYMS:**

LIQUITEX GLOSSIES ACRYLIC ENAMELS  
ALL COLORS

**PRODUCT USE:**

Arts and Crafts

**CREATION DATE:**

Nov 12 1997

**REVISION DATE:**

23<sup>rd</sup> December 2008

**2. Composition, Information on Ingredients**

**COMPONENT:**

Product has been certified as non-toxic by The Art and Creative Materials Institute, Inc. and conforms to ASTM D-4236 Standard Practice for Labeling Art Materials for Acute and Chronic Adverse Health Hazards.

**CAS NUMBER:**

Not assigned.

**EC NUMBER:**

Not assigned.

**PERCENTAGE:**

100

**3. Hazards Identification**

**EC CLASSIFICATION (CALCULATED):**

Not classified

**EMERGENCY OVERVIEW:**

**COLOR:**

various colors

**PHYSICAL FORM:**

liquid

**ODOR:**

odorless

**MAJOR HEALTH HAZARDS:**

No significant target effects reported.

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:**

none

**SKIN CONTACT:**

none

**EYE CONTACT:**

none

**INGESTION:**

none

**CARCINOGEN STATUS:**

**OSHA:**

No

**NTP:**

No

**IARC:**

No

**4. First Aid Measures**

**INHALATION:**

It is unlikely that emergency treatment will be required. Remove from exposure. Get medical attention, if needed.

**SKIN CONTACT:**

It is unlikely that emergency treatment will be required. If adverse effects occur, wash with soap or mild detergent and large amounts of water. Get medical attention, if needed.

**EYE CONTACT:**

It is unlikely that emergency treatment will be required. Wash with large amounts of water or normal saline until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

**INGESTION:**

Contact local poison control center or physician immediately.

**5. Fire Fighting Measures**

**FIRE AND EXPLOSION HAZARDS:**

Slight fire hazard.

**EXTINGUISHING MEDIA:**

regular dry chemical, carbon dioxide, water, regular foam

**FIRE FIGHTING:**

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products.

**FLASH POINT:**

No data available.

**6. Accidental Release Measures**

**OCCUPATIONAL RELEASE:**

Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

**7. Handling and Storage**

Store and handle in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

**8. Exposure Controls, Personal Protection**

**EXPOSURE LIMITS:**

**LIQUITEX(R) GLOSSIES ACRYLIC ENAMELS:**

No occupational exposure limits established.

**VENTILATION:**

Based on available information, additional ventilation is not required.

**EYE PROTECTION:**

Eye protection not required under normal conditions.

**CLOTHING:**

Protective clothing is not required under normal conditions.

**GLOVES:**

Protective gloves are not required under normal conditions.

**RESPIRATOR:**

No respirator is required under normal conditions of use.  
Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

**9. Physical and Chemical Properties**

**PHYSICAL STATE:**

liquid

**COLOR:**

various colors

**ODOR:**

odorless

**BOILING POINT:**

215 F

**FREEZING POINT:**

Not available

**VAPOR PRESSURE:**

Not available

**VAPOR DENSITY:**

Not available

**SPECIFIC GRAVITY:**

1.0 – 1.2

**WATER SOLUBILITY:**

Dilutable

**PH:**

8-9

**VOLATILITY:**

VOC < 49.3 g/litre

**ODOR THRESHOLD:**

Not available

**EVAPORATION RATE: BuAc =1**

< 1

**COEFFICIENT OF WATER/OIL DISTRIBUTION:**

Not available

**10. Stability and Reactivity**

**REACTIVITY:**

Stable at normal temperatures and pressure.



**CONDITIONS TO AVOID:**

None reported.

**INCOMPATIBILITIES:**

oxidizing materials

**HAZARDOUS DECOMPOSITION:**

Thermal decomposition products: oxides of carbon

**POLYMERIZATION:**

Will not polymerize.

**11. Toxicological Information**

Not available

**12. Ecological Information**

Not available

**13. Disposal Considerations**

Dispose in accordance with all applicable regulations.

**14. Transport Information**

No classification assigned.

**LAND TRANSPORT ADR/RID:**

No classification assigned.

**AIR TRANSPORT IATA/ICAO:**

No classification assigned.

**MARITIME TRANSPORT IMDG:**

No classification assigned.

**15. Regulatory Information**

**U.S. REGULATIONS:**

**TSCA INVENTORY STATUS:**

Yes

**TSCA 12(b) EXPORT NOTIFICATION:**

Not listed.

**CERCLA SECTION 103 (40CFR302.4):**

No

**SARA SECTION 302 (40CFR355.30):**

No

**SARA SECTION 304 (40CFR355.40):**

No

**SARA SECTION 313 (40CFR372.65):**

No

**SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):**

**ACUTE:**

No

**CHRONIC:**

No

**FIRE:**

No

**REACTIVE:**

No

SUDDEN RELEASE:

No

OSHA PROCESS SAFETY (29CFR1910.119):

No

STATE REGULATIONS:

California Proposition 65:

No

EUROPEAN REGULATIONS:

EC NUMBER:

Not assigned.

#### **16. Other Information**

The information contained herein is provided for identification of hazards in normal use and does not constitute a product specification.



## **Material Safety Data Sheet**

**Product Name:**

LIQUITEX(R) HEAVY BODY ARTIST ACRYLIC CADMIUM COLORS

**Product Family:****1. Chemical Product and Company Identification**

Colart Americas, Inc.  
11 Constitution Avenue  
PO Box 1396  
Piscataway, NJ 08855  
1-800-445-4278

EMERGENCY TELEPHONE NUMBER:  
1-800-628-3385

**SUBSTANCE:**

LIQUITEX(R) HIGH VISCOSITY ARTIST ACRYLIC CADMIUM COLORS

**TRADE NAMES/SYNONYMS:**

LIQUITEX HEAVY BODY ARTIST ACRYLIC CADMIUM COLORS  
150 CADMIUM ORANGE; 152 CADMIUM RED LIGHT; 154 CADMIUM  
RED MEDIUM; 160 CADMIUM YELLOW LIGHT; 161 CADMIUM YELLOW MEDIUM; 162 CADMIUM  
YELLOW DEEP

**PRODUCT USE:**

Arts and Crafts

**CREATION DATE:**

Aug 19 1998

**REVISION DATE:**

3<sup>rd</sup> November 2011

**2. Composition, Information on Ingredients****COMPONENT:**

CADMIUM PIGMENT, PROPRIETARY

**CAS NUMBER:**

Not assigned.

**EC NUMBER:**

Not assigned.

**3. Hazards Identification****EC CLASSIFICATION (CALCULATED):**

Not classified

**EMERGENCY OVERVIEW:****COLOR:**

various colors

**PHYSICAL FORM:**

liquid

**ODOR:**

fruity odor

**MAJOR HEALTH HAZARDS:****CONTAINS:**

CADMIUM PIGMENT. Do not spray apply.

**POTENTIAL HEALTH EFFECTS:****INHALATION:**

none

**SKIN CONTACT:**

none

**EYE CONTACT:**

none

**INGESTION:**

none

**CARCINOGEN STATUS:**

**OSHA:**

No

**NTP:**

No

**IARC:**

No

**4. First Aid Measures**

**INHALATION:**

It is unlikely that emergency treatment will be required. Remove from exposure. Get medical attention, if needed.

**SKIN CONTACT:**

It is unlikely that emergency treatment will be required. If adverse effects occur, wash with soap or mild detergent and large amounts of water. Get medical attention, if needed.

**EYE CONTACT:**

It is unlikely that emergency treatment will be required. Wash with large amounts of water or normal saline until no evidence of chemical remains (at least 15-20 minutes). Get medical attention immediately.

**INGESTION:**

Contact local poison control center or physician immediately.

**5. Fire Fighting Measures**

**FIRE AND EXPLOSION HAZARDS:**

Slight fire hazard.

**EXTINGUISHING MEDIA:**

regular dry chemical, carbon dioxide, water, regular foam

**FIRE FIGHTING:**

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products.

**FLASH POINT:**

No data available.

**6. Accidental Release Measures**

**OCCUPATIONAL RELEASE:**

Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

**7. Handling and Storage**

Store and handle in accordance with all current regulations and standards. See original container for storage recommendations. Keep separated from incompatible substances.

**8. Exposure Controls, Personal Protection**

**EXPOSURE LIMITS:**

**LIQUITEX(R) HIGH VISCOSITY ARTIST ACRYLIC CADMIUM COLORS:**

No occupational exposure limits established.

**VENTILATION:**

Based on available information, additional ventilation is not required.

**EYE PROTECTION:**

Eye protection not required under normal conditions.

**CLOTHING:**

Protective clothing is not required under normal conditions.

**GLOVES:**

Protective gloves are not required under normal conditions.

**RESPIRATOR:**

No respirator is required under normal conditions of use.  
Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

**9. Physical and Chemical Properties****PHYSICAL STATE:**

liquid

**COLOR:**

various colors

**TEXTURE:**

viscous

**ODOR:**

fruity odor

**BOILING POINT:**

Not available

**FREEZING POINT:**

Not available

**VAPOR PRESSURE:**

Not available

**VAPOR DENSITY:**

Not available

**SPECIFIC GRAVITY:**

Not available

**WATER SOLUBILITY:**

Not available

**PH:**

Not available

VOC content: <49.3 g/ litre

**ODOR THRESHOLD:**

Not available

**EVAPORATION RATE:**

Not available

**COEFFICIENT OF WATER/OIL DISTRIBUTION:**

Not available

**10. Stability and Reactivity**

**REACTIVITY:**

Stable at normal temperatures and pressure.

**CONDITIONS TO AVOID:**

None reported.

**INCOMPATIBILITIES:**

oxidizing materials

**HAZARDOUS DECOMPOSITION:**

Thermal decomposition products: oxides of carbon

**POLYMERIZATION:**

Will not polymerize.

**11. Toxicological Information**

LIQUITEX(R) HIGH VISCOSITY ARTIST ACRYLIC CADMIUM COLORS:

**ADDITIONAL DATA:**

**CONTAINS:**

CADMIUM PIGMENT.

Do not spray apply.

**12. Ecological Information**

Not available

**13. Disposal Considerations**

Dispose in accordance with all applicable regulations.

**14. Transport Information**

No classification assigned.

**LAND TRANSPORT ADR/RID:**

No classification assigned.

**AIR TRANSPORT IATA/ICAO:**

No classification assigned.

**MARITIME TRANSPORT IMDG:**

No classification assigned.

**15. Regulatory Information**

**U.S. REGULATIONS:**

**TSCA INVENTORY STATUS:**

Yes

**TSCA 12(b) EXPORT NOTIFICATION:**

Not listed.

**CERCLA SECTION 103 (40CFR302.4):**

No

**SARA SECTION 302 (40CFR355.30):**

No

**SARA SECTION 304 (40CFR355.40):**

No

**SARA SECTION 313 (40CFR372.65):**

No

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE:

No

CHRONIC:

No

FIRE:

No

REACTIVE:

No

SUDDEN RELEASE:

No

OSHA PROCESS SAFETY (29CFR1910.119):

No

STATE REGULATIONS:

California Proposition 65:

WARNING:

DO NOT SPRAY APPLY- This product contains cadmium, a chemical known to the State of California to cause cancer by means of inhalation.

EUROPEAN REGULATIONS:

EC NUMBER:

Not applicable

## **16. Other Information**

The information contained herein is provided for identification of hazards in normal use and does not constitute a product specification.





# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 453.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Lithium 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: 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
Lithium carbonate	554-13-2	Li <sub>2</sub> CO <sub>3</sub>	73.89	

### 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:** Rinse 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 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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.  
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.

Melting point: 735 °C

Soluble: Dilute acid. Slightly in water. Insoluble in alcohol.

Specific gravity: 2.111

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with acids. Strong oxidizing agent.

Shelf life: Poor, hygroscopic. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Moderately toxic, eye irritant.

ORL-RAT LD<sub>50</sub>: 525 mg/kg

Chronic effects: Possible teratogen.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: Nerves.

SKN-RBT LD<sub>50</sub>: 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: Not regulated. Hazard class: N/A. UN number: N/A.

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

---

TSCA-listed, EINECS-listed (209-062-5).

---

**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

# FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

## Material Safety Data Sheet (MSDS)

MSDS #: 454.10

Revision Date: November 25, 2002

---

### Section 1 — Chemical Product and Company Identification

---

#### Lithium 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

---

Lithium Chloride (7447-41-8) 4% and Water (7732-18-5) 96%

CAS#: None established.

---

### Section 3 — Hazards Identification

---

Clear, colorless, odorless liquid.

Irritant to body tissues. Avoid body tissue contact.

#### FLINN AT-A-GLANCE

Health-0

Flammability-0

Reactivity-0

Exposure-1

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 #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool dry place. 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.

### Section 9 — Physical and Chemical Properties

Clear, colorless, odorless liquid.

Formula: LiCl

Formula Weight: 42.39

### Section 10 — Stability and Reactivity

Avoid contact with strong oxidizers and strong acids.

Shelf life: Indefinite.

### Section 11 — Toxicological Information

Acute effects: Irritant

Chronic effects: Possible teratogen

Target organs: Central nervous system

ORL-RAT LD50: 526 mg/kg as LiCl2

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

TSCA-listed, EINECS-listed (231-212-3).

### 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.

## FLINN SCIENTIFIC INC.

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Use Flinn Chemicals*

flinn@flinnsci.com www.flinnsci.com  
P.O. Box 219 Batavia IL 60510  
(800) 452-1261 Fax (866) 452-1436

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 454.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Lithium 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 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: 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
Lithium chloride	7447-41-8	LiCl	42.40	

### SECTION 4 — FIRST AID MEASURES

Call a POISON CENTER or physician if you feel unwell (P312).

**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:** 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 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.

---

**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**

---

White crystals. Odorless.  
Soluble: Water and alcohol

Boiling point: 1383 °C  
Melting point: 610 °C  
Specific gravity: 2.07

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong oxidizers and strong acids.  
Shelf life: Fair to poor, deliquescent. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Irritant.  
Chronic effects: Possible teratogen.  
Target organs: Central nervous system.

ORL-RAT LD<sub>50</sub>: 526 mg/kg  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: 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 (231-212-3).

---

**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

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 456.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Lithium 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 2,3). 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).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Lithium nitrate	7790-69-4	LiNO <sub>3</sub>	68.95	

### 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.

Oxidizer; explosion risk when shocked or heated.

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.



---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides. Deliquescent. Store in a cool, dry place within a Flinn Chem-Saf™ bag then inside a Flinn Saf-Stor™ can. 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, eye protection, and face protection (P280). Wash hands thoroughly after handling. Use only in a hood or well-ventilated area (P271).

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

Colorless powder. Odorless.  
Soluble: Water and alcohol

Melting point: 261 °C  
Specific gravity: 2.38

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong reducers and organic materials.  
Shelf life: Fair, deliquescent. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Irritant, stomach pains, vomiting, diarrhea, nausea, dizziness, headache.  
Chronic effects: Convulsions.  
Target organs: Blood, central nervous system .

ORL-RAT LD<sub>50</sub>: N.A.  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: 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: Lithium nitrate. Hazard class: 5.1, Oxidizer. UN number: UN2722.

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

---

TSCA-listed, EINECS-listed (232-218-9), 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

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 458.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Lithium 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, 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
Lithium sulfate	10102-25-7	Li <sub>2</sub> SO <sub>4</sub> ·H <sub>2</sub> O	127.96	

### 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 (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 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.

---

**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

Boiling point: 860 °C

Melting point: 130 °C

Specific gravity: 2.06

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong oxidizers.

Shelf life: Indefinite, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: N.A.

Chronic effects: Possible teratogen.

Target organs: N.A.

ORL-MUS LD<sub>50</sub>: 613 mg/kg

IHL-RAT LC<sub>50</sub>: N.A.

SKN-RBT LD<sub>50</sub>: 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**

---

EINECS-listed (233-820-4).

---

**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



## Safety Data Sheet

### Litmus Solution, 0.5% aqueous

#### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Litmus Solution, 0.5% aqueous

**Synonyms/Generic Names:** None

**SDS Number:** 418.00

**Product Use:** For Educational Use Only

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information Contact:** Ward's Science  
5100 West Henrietta Rd.  
PO Box 92912-9012  
Rochester, NY 14692  
(800) 962-2660 (Monday-Friday 7:30-7:00 Eastern Time)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

#### 2. HAZARDS IDENTIFICATION

**OSHA Hazards:** No known OSHA hazards.

**Target Organs:** None

**Signal Word:** None

**Pictograms:** None

**GHS Classification:**

Not a hazardous mixture according to GHS.	
---	--

**GHS Label Elements, including precautionary statements:**

**Hazard Statements:**

None	
------	--

**Precautionary Statements:**

None	
------	--

#### Potential Health Effects

<b>Eyes</b>	May cause eye irritation.
<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Causes skin irritation.
<b>Ingestion</b>	May be harmful if swallowed.

**NFPA Ratings**

Health	1
Flammability	0
Reactivity	0
Specific hazard	Not Available

**HMIS Ratings**

Health	1
Fire	0
Reactivity	0
Personal	A

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Litmus	<1	1393-92-6	N/A	N/A	N/A
Water	Balance	7732-18-5	231-791-2	H <sub>2</sub> O	18.00 g/mol

**4. FIRST-AID MEASURES**

<b>Eyes</b>	Rinse with water and seek medical attention if necessary.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention if necessary.
<b>Skin</b>	Flush with water and wash using soap. Get medical attention if necessary.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention if necessary.

**5. FIRE-FIGHTING MEASURES**

<b>Suitable (and unsuitable) extinguishing media</b>	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	May emit toxic fumes under fire conditions. Nature of decomposition products not known. (See also Stability and Reactivity section).

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Absorb spill with noncombustible absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

**7. HANDLING AND STORAGE****Precautions for safe handling**

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

**Conditions for safe storage, including any incompatibilities**

Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

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**Occupational exposure controls:** Contains no substances with occupational exposure limit values.

**Personal Protection**

<b>Eyes</b>	Wear chemical safety glasses or goggles.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear nitrile or rubber gloves, and apron or lab coat.
<b>Other</b>	Not Available

**Other Recommendations**

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

---

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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Appearance (physical state, color, etc.)	Violet, brown, or red liquid.
Odor	Not Available
Odor threshold	Not Available
pH	Not Available
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Density	Not Available
Solubility (ies)	Not Available
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

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**10. STABILITY AND REACTIVITY**

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<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	Not Available
<b>Incompatible Materials</b>	Strong oxidizing agents.
<b>Hazardous Decomposition Products</b>	Nature of decomposition products not known.

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## 11. TOXICOLOGICAL INFORMATION

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### Acute Toxicity

<b>Skin</b>	Not Available
<b>Eyes</b>	Not Available
<b>Respiratory</b>	Not Available
<b>Ingestion</b>	Not Available

### Carcinogenicity

<b>IARC</b>	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>NTP</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<b>OSHA</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Signs & Symptoms of Exposure

<b>Skin</b>	Irritation, redness.
<b>Eyes</b>	Irritation, redness, watering eyes.
<b>Respiratory</b>	Irritation, coughing.
<b>Ingestion</b>	Irritation, nausea, vomiting, diarrhea.

<b>Chronic Toxicity</b>	Not Available
<b>Teratogenicity</b>	Not Available
<b>Mutagenicity</b>	Not Available
<b>Embryotoxicity</b>	Not Available
<b>Specific Target Organ Toxicity</b>	Not Available
<b>Reproductive Toxicity</b>	Not Available
<b>Respiratory/Skin Sensitization</b>	Not Available

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

<b>Aquatic Vertebrate</b>	Not Available
<b>Aquatic Invertebrate</b>	Not Available
<b>Terrestrial</b>	Not Available

<b>Persistence and Degradability</b>	Not Available
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Not Available

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## 13. DISPOSAL CONSIDERATIONS

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<b>Waste Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residues.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product containers.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

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## 14. TRANSPORTATION INFORMATION

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US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

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## 15. REGULATORY INFORMATION

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TSCA Inventory Status	All ingredients are listed on the TSCA inventory.
DSCL (EEC)	All ingredients are listed on the DSCL inventory.
California Proposition 65	Not Listed
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	No SARA Hazards
SARA 312	No SARA Hazards
SARA 313	Not Listed
WHMIS Canada	Not Listed

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## 16. OTHER INFORMATION

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Revision	Date
Revision 1	01/09/2013

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# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 460.00

Revision Date: February 6, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Litmus 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
Litmus	1393-92-6	Unspecified	Unspecified	0.5-1%
Water	7732-18-5	H <sub>2</sub> O	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 the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

**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.

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Changes color with acidity of solution. Cabbage-like odor. pH indicator: 4.5 red to 8.3 blue.

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**SECTION 10 — STABILITY AND REACTIVITY**

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Shelf life: Indefinite, if stored properly. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: N.A.

ORL-RAT LD<sub>50</sub>: N.A.

Chronic effects: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: N.A.

SKN-RBT LD<sub>50</sub>: N.A.

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

---

**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26b is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

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Not listed.

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**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

# Material Safety Data Sheet



Revision Number: 007.0

Issue date: 01/04/2011

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** LOCTITE® 262™ THREADLOCKER  
**HIGH STRENGTH**  
**Product type:** Anaerobic Sealant

**IDH number:** 135374

**Item number:** 26231  
**Region:** United States

**Company address:**  
Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067

**Contact information:**  
Telephone: 860.571.5100  
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  
Internet: www.henkelna.com

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

**Physical state:** Liquid  
**Color:** Red  
**Odor:** Mild

**HMIS:**  
**HEALTH:** \*2  
**FLAMMABILITY:** 1  
**PHYSICAL HAZARD:** 1  
**Personal Protection:** See MSDS Section 8

**WARNING:** CAUSES EYE IRRITATION.  
MAY CAUSE ALLERGIC SKIN REACTION.  
MAY CAUSE RESPIRATORY TRACT IRRITATION.  
MAY CAUSE SKIN IRRITATION.

**Relevant routes of exposure:** Skin, Inhalation, Eyes, Respiratory system

### Potential Health Effects

**Inhalation:** May cause respiratory tract irritation.  
**Skin contact:** May cause allergic skin reaction. May cause skin irritation with discomfort or rash.  
**Eye contact:** Contact with eyes will cause irritation.  
**Ingestion:** May be harmful if swallowed.

**Existing conditions aggravated by exposure:** Eye, skin, and respiratory disorders.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Polyglycol dimethacrylate	25852-47-5	60 - 100
Bisphenol A fumarate resin	39382-25-7	10 - 30
Saccharin	81-07-2	1 - 5
Cumene hydroperoxide	80-15-9	1 - 5
N,N-Diethyl-p-toluidine	613-48-9	1 - 5

IDH number: 135374

Product name: LOCTITE® 262™ THREADLOCKER HIGH STRENGTH  
Page 1 of 5

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Wash with soap and water. Remove contaminated clothing and footwear. Wash clothing before reuse. If symptoms develop and persist, get medical attention.
<b>Eye contact:</b>	Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Keep individual calm. Get medical attention.

#### 5. FIRE FIGHTING MEASURES

<b>Flash point:</b>	> 93.3 °C (> 199.94 °F) Tagliabue closed cup
<b>Autoignition temperature:</b>	Not available
<b>Flammable/Explosive limits - lower:</b>	Not available
<b>Flammable/Explosive limits - upper:</b>	Not available
<b>Extinguishing media:</b>	If product is involved in fire extinguish with dry powder, foam or carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Thermal decomposition can lead to release of irritating gases and vapors. 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.

<b>Environmental precautions:</b>	Do not allow product to enter sewer or waterways. Do not allow product to enter sewer or waterways.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal. Ensure adequate ventilation. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up spilled material and place in a closed container for disposal.

#### 7. HANDLING AND STORAGE

<b>Handling:</b>	Avoid contact with eyes, skin and clothing. Avoid breathing vapors or mists of this product. Wash thoroughly after handling.
<b>Storage:</b>	For safe storage, store at or below 38 °C (100.4 °F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

## 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 components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Polyglycol dimethacrylate	None	None	None	None
Bisphenol A fumarate resin	None	None	None	None
Saccharin	None	None	None	None
Cumene hydroperoxide	None	None	1 ppm (6 mg/m <sup>3</sup> ) TWA (SKIN)	None
N,N-Diethyl-p-toluidine	None	None	None	None

**Engineering controls:**

No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.

**Respiratory protection:**

Use a NIOSH approved supplied air respirator with an organic cartridge if the potential to exceed established exposure limits exists.

**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. Natural rubber gloves. Neoprene gloves. Butyl rubber gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Red
Odor:	Mild
Odor threshold:	Not available
pH:	Not applicable
Vapor pressure:	< 5 mm hg (27 °C (80.6 °F))
Boiling point/range:	> 149 °C (> 300.2 °F)
Melting point/ range:	Not available
Specific gravity:	1.05
Vapor density:	Not available
Flash point:	> 93.3 °C (> 199.94 °F) Tagliabue closed cup
Flammable/Explosive limits - lower:	Not available
Flammable/Explosive limits - upper:	Not available
Autoignition temperature:	Not available
Evaporation rate:	Not available
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available
VOC content:	0 %; 0 g/l

## 10. STABILITY AND REACTIVITY

Stability:	Stable
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Phenolics. Irritating organic vapours.
Incompatible materials:	Iron. Copper. Rust. Aluminum. Zinc. Reducing agents. Strong acids and oxidizing agents. Oxygen scavengers. Strong alkalis.
Conditions to avoid:	See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

## 11. TOXICOLOGICAL INFORMATION

Acute oral product toxicity:	LD50 (rat) > 10,000 mg/kg
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Acute dermal product toxicity:

LD50 (rabbit) > 5,000 mg/kg

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Polyglycol dimethacrylate	No	No	No
Bisphenol A fumarate resin	No	No	No
Saccharin	No	No	No
Cumene hydroperoxide	No	No	No
N,N-Diethyl-p-toluidine	No	No	No

Hazardous components	Health Effects/Target Organs
Polyglycol dimethacrylate	Irritant, Allergen
Bisphenol A fumarate resin	No Target Organs
Saccharin	No Target Organs
Cumene hydroperoxide	Allergen, Central nervous system, Corrosive, Irritant, Mutagen
N,N-Diethyl-p-toluidine	No Target Organs

## 12. ECOLOGICAL INFORMATION

Ecological information:

Not available

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal:

Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number:

Not a RCRA hazardous waste.

## 14. TRANSPORT INFORMATION

The shipping classifications in this sections are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

### 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 minimus

<b>CERCLA/SARA Section 302 EHS:</b>	None above reporting de minimus
<b>CERCLA/SARA Section 311/312:</b>	Immediate Health, Delayed Health
<b>CERCLA/SARA 313:</b>	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). Cumene hydroperoxide (CAS# 80-15-9). Cumene hydroperoxide (CAS# 80-15-9) 10 lbs. (4.54 kg) Saccharin (CAS# 81-07-2) 100 lbs. (45.4 kg)
<b>CERCLA Reportable quantity:</b>	
<b>California Proposition 65:</b>	This product contains a chemical known in the State of California to cause cancer.

#### Canada Regulatory Information

<b>CEPA DSL/NDL Status:</b>	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
<b>WHMIS hazard class:</b>	D.2.B

### 16. OTHER INFORMATION

**This material safety data sheet contains changes from the previous version in sections:** New Material Safety Data Sheet format. 2, 8, 11

**Prepared by:** Kyra Kozak Woods, Manager, Regulatory Affairs

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## SPEEDI-BURN PRODUCTS CO INC -- LOCQUIC PRIMER N(AEROSOL) 76456 -- 8030-00-980-3975

## ===== Product Identification =====

Product ID:LOCQUIC PRIMER N(AEROSOL) 76456

MSDS Date:01/09/1994

FSC:8030

NIIN:00-980-3975

MSDS Number: BHFVF

=== Responsible Party ===

Company Name:SPEEDI-BURN PRODUCTS CO INC

Address:534 LINDEN ST

City:WEST HEMPSTEAD

State:NY

ZIP:11552-2649

Country:US

Info Phone Num:203-571-5100 TELEX: 275207

Emergency Phone Num:203-571-5100

Preparer's Name:STEPHEN REPETTO

CAGE:05792

=== Contractor Identification ===

Company Name:SPEEDI-BURN PRODUCTS CO INC

Address:534 LINDEN ST

Box:City:WEST HEMPSTEAD

State:NY

ZIP:11552-2649

Country:US

CAGE:05792

## ===== Composition/Information on Ingredients =====

Ingred Name:METHYL CHLOROFORM (1,1,1-TRICHLOROETHANE) (SARA III)

CAS:71-55-6

RTECS #:KJ2975000

Fraction by Wt: 95-100%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:350 PPM

ACGIH TLV:350 PPM/450STEL;9394

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ozone Depleting Chemical:1

Ingred Name:CARBON DIOXIDE

CAS:124-38-9

RTECS #:FF6400000

Fraction by Wt: 3-5%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:5000 PPM

ACGIH TLV:5000PPM/30000STEL;94

Ingred Name:TERT-BUTYL ALCOHOL (SARA III)

CAS:75-65-0

RTECS #:EO1925000

Fraction by Wt: 1-3%

Other REC Limits:NONE RECOMMENDED

OSHA PEL:100 PPM

ACGIH TLV:100PPM; 9394

Ingred Name:DIMETHOXYMETHANE



CAS:109-87-5  
RTECS #:PA8750000  
Fraction by Wt: 1-3%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:1000 PPM  
ACGIH TLV:1000 PPM; 9394

Ingred Name:2-ETHYLHEXANOIC ACID  
CAS:149-57-5  
RTECS #:MO7700000  
Fraction by Wt: 0.1-1%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:ORGANO-COPPER COMPOUND (2-ETHYLHEXANOIC ACID, COPPER SALT)  
CAS:22221-10-9  
RTECS #:MO7708000  
Fraction by Wt: 0.1-1%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:TRIALKYLAMMONIUM CARBOXYLATE  
CAS:58823-74-8  
Fraction by Wt: 0.1-1%  
Other REC Limits:NONE RECOMMENDED

Ingred Name:VOLITILE ORGANIC CONTENT AS LISTED ON MSDS. (EPA METHOD 24)  
67.98 G/L OF BASE MATERIAL.  
RTECS #:9999999VC  
Fraction by Wt: 4.03%  
Other REC Limits:NONE RECOMMENDED

===== Hazards Identification =====

LD50 LC50 Mixture:DERMAL >2000 MG/KG  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:POSSIBLE EYE IRRITANT. MODERATELY  
TOXIC BY INGESTION.  
Explanation of Carcinogenicity:PER MSDS:CARCINOGEN PER  
NTP/IARC/OSHA:NO.  
Effects of Overexposure:HEADACHE, NAUSEA, DIZZINESS. NARCOSIS AT HIGH  
CONCENTRATION.  
Medical Cond Aggravated by Exposure:CNS,LIVER,HEART DISEASE,  
ALCOHOLISM, SKIN DISORDERS, EYE PROBLEMS, RESP  
DISORDERS (1,1,1-TRICHLOROETHANE). DERMATITIS (2-ETHYLHEXANOIC  
ACID). TARGET ORGANS:GI/LIVER/CNS.

===== First Aid Measures =====

First Aid:INGESTION: DO NOT INDUCE VOMITING. GET MED ATTENTION.  
INHALATION: REMOVE TO FRESH AIR. GET MED ATTN. SKIN CONTACT: FLUSH  
WITH WATER. EYE: FLUSH AT LEAST 15 MIN WITH WATER. GET MED  
ATTENTION.

===== Fire Fighting Measures =====

Flash Point Method:TCC  
Flash Point:NONE  
Extinguishing Media:CO2, FOAM, DRY CHEMICAL  
Fire Fighting Procedures:NONE SPECIFIED BY MANUFACTURER. HOWEVER USE  
APPROPRIATE PROT CLOTHING/EQPMT AS CONDITIONS WARRANT.  
Unusual Fire/Explosion Hazard:CANS MAY RUPTURE IN FIRES.

===== Accidental Release Measures =====

Spill Release Procedures:ALLOW TO EVAPORATE WITH GOOD VENTILATION. SOAK

UP RESIDUE IN INERT ABSORBENT. STORE IN CLOSED CONTAINER UNTIL DISPOSAL.

===== Handling and Storage =====

Handling and Storage Precautions:STORE BELOW 110F. AVOID PROLONGED BREATHING OF VAPOR. KEEP AWAY FROM EYES. AVOID PROLONGED SKIN CONTACT.

Other Precautions:NONE

===== Exposure Controls/Personal Protection =====

Respiratory Protection:NONE SPECIFIED BY MANUFACTURER.

Ventilation:PROVIDE ADEQUATE VENTILATION TO MAINTAIN VAPOR CONCENTRATION BELOW TLV.

Protective Gloves:RUBBER OR PLASTIC GLOVES RECOMMENDED

Eye Protection:SAFETY GLASSES OR GOGGLES

Other Protective Equipment:NONE SPECIFIED BY MANUFACTURER.

Work Hygienic Practices:DO NOT EAT, DRINK OR SMOKE WHILE WORKING WITH THIS PRODUCT.

Supplemental Safety and Health  
NK

===== Physical/Chemical Properties =====

HCC:V2

Boiling Pt:B.P. Text:170F,77C

Vapor Pres:<100 @70F

Vapor Density:APPROX 4.5

Spec Gravity:1.32 @70F

Evaporation Rate & Reference:2.7 (ETHER=1)

Solubility in Water:NIL

Appearance and Odor:GREEN LIQUID SHARP ODOR, AEROSOL CAN.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

SOLVENT MAY REACT VIOLENTLY WITH ALUMINUM ON PROLONGED CONTACT.

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER. HOWEVER AVOID HIGH TEMPERATURES.

Hazardous Decomposition Products:HAZARDOUS PRODUCTS FORMED BY FIRE OR THERMAL DECOMPOSITION, TOXIC CHLORIDES.

===== Disposal Considerations =====

Waste Disposal Methods:FOLLOW EPA AND LOCAL REGULATIONS FOR DISPOSAL OF CHLORINATED HYDROCARBONS. DO NOT INCINERATE PRESSURIZED CANS.

Disclaimer (provided with this information by the compiling agencies):  
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Revision Number: 001.0

Issue date: 04/04/2011

## 1. PRODUCT AND COMPANY IDENTIFICATION

<b>Product name:</b>	<b>Loctite PL Premium Polyurethane Adhesive</b>	<b>IDH number:</b>	1451588
<b>Product type:</b>	1-component-polyurethane adhesive	<b>Region:</b>	United States
<b>Company address:</b>	<b>Contact information:</b> Telephone: 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		
Henkel Corporation One Henkel Way Rocky Hill, Connecticut 06067			

## 2. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

<b>Physical state:</b>	Highly viscous	<b>HMIS:</b>	
<b>Color:</b>	Beige	<b>HEALTH:</b>	2
<b>Odor:</b>	Like vegetable oil	<b>FLAMMABILITY:</b>	1
		<b>PHYSICAL HAZARD:</b>	0
		<b>Personal Protection:</b>	B

**WARNING:** HARMFUL IF INHALED.  
CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.  
MAY CAUSE ALLERGIC SKIN AND RESPIRATORY REACTION.

**Relevant routes of exposure:** Inhalation, Skin, Eyes, Ingestion

### Potential Health Effects

**Inhalation:** As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the TLV. Chronic overexposure to isocyanates has been reported to cause lung damage. Dryness of nasal passages, sore throat, cough, tightness of chest, shortness of breath. Persons suffering from allergic reactions to isocyanates should avoid contact with the product. This product may cause sensitization by inhalation and skin contact. May cause respiratory tract irritation.

**Skin contact:** Contact with skin can cause irritation and allergic reaction (sensitization) in some individuals. This product may discolor the skin.

**Eye contact:** Contact with eyes will cause irritation.

**Ingestion:** Ingestion of this product may cause nausea, vomiting and diarrhea.

**Existing conditions aggravated by exposure:** Development of preexisting skin or lung allergy symptoms may increase. Asthma.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous components	CAS NUMBER	%
Talc	14807-96-6	30 - 60
Methylenebis(phenylisocyanate)	101-68-8	10 - 30
Hydrocarbon C11-25 dearomatized	64742-46-7	10 - 30
Methylene bisphenyl isocyanate	26447-40-5	1 - 5
Diphenylmethane-diisocyanate, isomers and homologues	9016-87-9	1 - 5

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	If inhaled, immediately remove the affected person to fresh air. Immediate medical treatment necessary.
<b>Skin contact:</b>	Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.
<b>Eye contact:</b>	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Rinse the mouth. Drink plenty of water. Immediate medical advice necessary.
<b>Notes to physician:</b>	An individual having a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate. The physician's judgment should be used to control symptoms and clinical condition based on the individual reactions of the patient.

### 5. FIRE FIGHTING MEASURES

<b>Flash point:</b>	> 200 °F (> 93.33 °C) no method
<b>Autoignition temperature:</b>	No information available.
<b>Flammable/Explosive limits - lower:</b>	1.6 %
<b>Flammable/Explosive limits - upper:</b>	10.2 %
<b>Extinguishing media:</b>	Water fog. Foam Carbon dioxide.
<b>Special firefighting procedures:</b>	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
<b>Unusual fire or explosion hazards:</b>	None known
<b>Hazardous combustion products:</b>	Nitrous gases Irritating fumes. Isocyanate vapors.

### 6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

<b>Environmental precautions:</b>	Do not empty into drains / surface water / ground water.
<b>Clean-up methods:</b>	Ensure adequate ventilation. Scrape up spilled material and place in a closed container for disposal. Wear suitable protective clothing, gloves and eye/face protection.

## 7. HANDLING AND STORAGE

### Handling:

Avoid contact with eyes, skin and clothing. Avoid extreme temperatures. Exposure to vapors of heated MDI can be extremely dangerous. Wash thoroughly after handling. Protect from moisture. Use only with adequate ventilation.

### Storage:

For safe storage, store between 18.3 °C (64.9 °F) and 40 °C (104°F). Avoid moisture. Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for 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 components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Talc	2 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	50 ppm
Methylenebis(phenylisocyanate)	0.005 ppm TWA	0.02 ppm (0.2 mg/m3) Ceiling	None	None
Hydrocarbon C11-25 dearomatized	5 mg/m3 TWA Inhalable fraction.	5 mg/m3 TWA Mist.	None	None
Methylene bisphenyl isocyanate	None	None	None	None
Diphenylmethane-diisocyanate, isomers and homologues	0.005 ppm TWA	0.02 ppm (0.2 mg/m3) Ceiling	None	None

### Engineering controls:

Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

### Respiratory protection:

Observe OSHA regulations for respiratory use (29 CFR 1910.134). Use a NIOSH approved air-purifying respirator if the potential to exceed established exposure limits exists. Respirator with combination filter for vapor/particulate. However, due to the poor warning properties of MDI, proper fit and timely replacement of filter elements must be ensured.

### Eye/face protection:

Safety glasses with side-shields. Full face protection should be used if the potential for splashing or spraying of product exists.

### Skin protection:

Suitable protective clothing

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Highly viscous
Color:	Beige
Odor:	like vegetable oil
Odor threshold:	Not available
pH:	Neutral
Vapor pressure:	Not available
Boiling point/range:	Not available
Melting point/ range:	Not applicable
Specific gravity:	1.2600
Vapor density:	Heavier than air
Flash point:	> 200 °F (> 93.33 °C) no method
Flammable/Explosive limits - lower:	1.6 %
Flammable/Explosive limits - upper:	10.2 %
Autoignition temperature:	No information available.

Evaporation rate:	Not available
Solubility in water:	Slightly soluble
Partition coefficient (n-octanol/water):	Not available
VOC content:	< 4.00 %; 50 g/l

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under normal conditions of storage and use.
<b>Hazardous reactions:</b>	Contact with moisture, other materials that react with isocyanates, or temperatures above 350° F (177° C), may cause polymerization.
<b>Hazardous decomposition products:</b>	Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition. nitrogen oxides Aromatic isocyanates. carbon oxides.
<b>Incompatible materials:</b>	Oxidizing agents. Alcohols. Water.
<b>Conditions to avoid:</b>	Avoid moisture. Keep away from open flames, hot surfaces and sources of ignition. Prolonged exposure to heat.

## 11. TOXICOLOGICAL INFORMATION

<b>Acute dermal product toxicity:</b>	May cause sensitization by skin contact.
<b>Acute inhalation product toxicity:</b>	May cause sensitization by inhalation.

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Talc	No	No	No
Methylenebis(phenylisocyanate)	No	No	No
Hydrocarbon C11-25 dearomatized	No	No	No
Methylene bisphenyl isocyanate	No	No	No
Diphenylmethane-diisocyanate, isomers and homologues	No	No	No

Hazardous components	Health Effects/Target Organs
Talc	Irritant, Lung, Some evidence of carcinogenicity
Methylenebis(phenylisocyanate)	Irritant, Respiratory, Allergen
Hydrocarbon C11-25 dearomatized	Irritant
Methylene bisphenyl isocyanate	Allergen, Irritant, Mutagen, Respiratory
Diphenylmethane-diisocyanate, isomers and homologues	Allergen, Irritant, Kidney, Liver, Respiratory

## 12. ECOLOGICAL INFORMATION

<b>Ecological information:</b>	Not available
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### 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

#### 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 minimus

**CERCLA/SARA Section 302 EHS:** None above reporting de minimus  
**CERCLA/SARA Section 311/312:** Immediate Health, Delayed Health  
**CERCLA/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 (40 CFR 372). Methylenabis(phenylisocyanate) (CAS# 101-68-8). Diphenylmethane-diisocyanate, isomers and homologues (CAS# 9016-87-9).

**California Proposition 65:** No California Proposition 65 listed chemicals are known to be present.

#### Canada Regulatory Information

**CEPA DSL/NDL Status:** All components are listed on or are exempt from listing on the Domestic Substances List.

### 16. OTHER INFORMATION

**This material safety data sheet contains changes from the previous version in sections:** New Material Safety Data Sheet format.

**Prepared by:** Karim Nasr, Regulatory Affairs Specialist

**DISCLAIMER:** The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation does not assume responsibility for any results obtained by persons over whose methods Henkel Corporation has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any of Henkel Corporation's products. In light of the foregoing, Henkel Corporation specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel Corporation's products. Henkel Corporation further disclaims any liability for consequential or incidental damages of any kind, including lost profits.



622678 Part# 20468  
GLUE, POWER GRAB, 10-OZ #20468  
3416000 HENKEL CONSUMER ADHESIVES  
Buyer: Bernard W. Aubuchon Jr.

**CONSUMER MATERIAL SAFETY DATA SHEET**  
**NAME OF PRODUCT: Loctite Power Grab Construction Adhesive**  
**MSDS DATE: 09-23-2004**

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**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

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**PRODUCT NAME:** Loctite Power Grab Construction Adhesive  
**PRODUCT CODES:** 01-20468  
**SUPPLIER:** Henkel Consumer Adhesives.  
**ADDRESS:** 32150 Just Imagine Drive  
Avon, Ohio 44011  
**MANUFACTURER:** Henkel Consumer Adhesives  
**ADDRESS:** 50 West Dr.  
Brampton, Ontario  
Canada L6T 2J4  
**DOMESTIC EMERGENCY PHONE:** Chemtrec 1-800-424-9300  
In Canada Canutec 613-996-6666  
**OTHER CALLS:** Regulatory Affairs 905-459-1140  
**FAX PHONE:** Regulatory Affairs 905-459-8031  
**CHEMICAL FAMILY:** Acrylic Copolymer  
**PRODUCT USE:** Consumer Product; Construction Adhesive  
**PREPARED BY:** S. Dhalla  
**MSDS PREPARATION DATE:** 09-23-2004

**SECTION 1 NOTES:**

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**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

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<u>INGREDIENT:</u>	<u>CAS NO.</u>	<u>% WT</u>
Crystalline Silica	14808-60-7	0.1-1%

The Crystalline silica that is present is bound within the adhesive matrix and therefore will not become airborne under normal conditions of use. The remaining ingredients are non-hazardous.

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**SECTION 3: HAZARDS IDENTIFICATION**

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**EMERGENCY OVERVIEW:** May Cause Skin and Eye Irritation.  
This product is intended for consumer use. Keep out of reach of children.

**ROUTES OF ENTRY:** oral, dermal

**POTENTIAL HEALTH EFFECTS**

**EYES:** May cause irritation.

**SKIN:** May cause irritation especially on-prolonged contact.

**INGESTION:** May cause irritation of gastrointestinal tract, nausea, vomiting and diarrhea.

**INHALATION:** Not expected to be a hazard under normal conditions of use.

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## **SECTION 4: FIRST AID MEASURES**

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**EYES:** Rinse eyes with plenty of water. If irritation persists seek medical advice.

**SKIN:** Wash skin with soap and water. Seek medical attention if irritation persists.

**INGESTION:** Do not induce vomiting. Seek medical attention.

**INHALATION:** Remove to fresh air. Seek medical attention if symptoms persist.

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## **SECTION 5: FIRE-FIGHTING MEASURES**

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### **NFPA HAZARD CLASSIFICATION**

**HEALTH: FLAMMABILITY: REACTIVITY:** <1,0,0>

**EXTINGUISHING MEDIA:** water, CO2, Dry chemical

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of carbon at high temperatures.

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## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**ACCIDENTAL RELEASE MEASURES:** Scrape or pick up spilled product. Surface areas should be cleaned immediately before product cures. Use plenty of water to clean surfaces. Soap or surfactant may be required to remove residual product.

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## **SECTION 7: HANDLING AND STORAGE**

---

**HANDLING AND STORAGE:** Store in a cool, dry place. Protect from freezing. Avoid prolonged skin contact. Keep away from eyes. Keep out of reach of children.

See label on product for use directions.

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## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

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<b>ENGINEERING CONTROLS:</b>	not required under normal use conditions. Avoid generating dusts of cured material.
<b>VENTILATION:</b>	not required under normal use conditions.
<b>RESPIRATORY PROTECTION:</b>	not required under normal use conditions.
<b>EYE PROTECTION:</b>	not required under normal use conditions.
<b>SKIN PROTECTION:</b>	not required under normal use conditions. Use impervious gloves for long term contact. Wash hands after using.

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## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

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<b>APPEARANCE:</b>	White paste
<b>ODOR:</b>	Slight odor.
<b>PHYSICAL STATE:</b>	Solid

<b>pH AS SUPPLIED:</b>	<b>8.0-9.0</b>
<b>SPECIFIC GRAVITY (H2O = 1):</b>	<b>1.25-1.35</b>
<b>SOLUBILITY IN WATER:</b>	<b>Emulsifiable</b>
<b>EVAPORATION RATE:</b>	<b>1 (water=1)</b>
<b>VAPOR DENSITY</b>	<b>0.62 (air=1)</b>

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## **SECTION 10: STABILITY AND REACTIVITY**

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<b>STABILITY:</b>	<b>Stable</b>
<b>HAZARDOUS POLYMERIZATION:</b>	<b>Will not occur</b>
<b>INCOMPATIBILITY:</b>	<b>Strong oxidizers, Strong Acids</b>

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## **SECTION 11: TOXICOLOGICAL INFORMATION**

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**TOXICOLOGICAL INFORMATION:** The toxicological profile of the formulation was evaluated based upon the data of the ingredients. This product is not toxic as defined by the Federal Hazardous Substance Act.

Toxicological information for regulated components.

Crystalline silica OSHA PEL 0.1mg/kg

LD50: Not available

Crystalline silica is an IARC listed lung carcinogen. Crystalline silica in this product will not typically become airborne during normal conditions of use.

### **SECTION 11 NOTES**

Contact Regulatory Affairs if further information is required.

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## **SECTION 12: ECOLOGICAL INFORMATION**

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**ECOLOGICAL INFORMATION:** No data available.

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## **SECTION 13: DISPOSAL CONSIDERATIONS**

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**WASTE DISPOSAL METHOD:** Cured materials are non-hazardous and may be discarded in trash. Follow federal, state and local regulations that may be applicable for disposal of product and empty container.

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## **SECTION 14: TRANSPORT INFORMATION**

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**U.S. DEPARTMENT OF TRANSPORTATION**  
**PROPER SHIPPING NAME:** Not Regulated  
**HAZARD CLASS:** N/A

**IATA**  
**PROPER SHIPPING NAME:** Not Regulated  
**HAZARD CLASS:** N/A

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## **SECTION 15: REGULATORY INFORMATION**

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### **U.S. FEDERAL REGULATIONS**

**This product is labeled in accordance to the Consumer Product Safety regulations as defined by the Federal Hazardous Substances Act.**

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## **SECTION 16: OTHER INFORMATION**

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**OTHER INFORMATION:** Information provided in this MSDS is intended to provide supplementary information for consumer uses of this product. This product is not intended for industrial uses. Contact Regulatory Affairs for additional information.

**PREPARATION INFORMATION:** Created and approved on 09-23-2004 by S.Dhalla

**DISCLAIMER:** The information appearing herein is furnished without express or implied warranty and is based upon tests and data believed to be accurate to the best knowledge of Henkel Consumer Adhesives Inc.. It is the user's responsibility to ensure that the product is handled safely and that the instructions for use are properly communicated and followed. Henkel Consumer Adhesives Inc. assumes no legal responsibility or liability for any use not in accordance with the use described in this MSDS or in the product labeling.



Revision Number: 001.1

Issue date: 08/09/2012

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product name:** Loctite General Performance Spray  
**Product type:** Adhesive Aerosol  
**Company address:** Henkel Corporation  
One Henkel Way  
Rocky Hill, Connecticut 06067

**IDH number:** 1712314

**Region:** United States

**Contact information:**  
Telephone: 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**

<b>Physical state:</b>	Liquid	<b>HMIS:</b>	
<b>Color:</b>	white	<b>HEALTH:</b>	1
<b>Odor:</b>	Solvent	<b>FLAMMABILITY:</b>	4
		<b>PHYSICAL HAZARD:</b>	0
		<b>Personal Protection:</b>	See MSDS Section 8

**DANGER:** EXTREMELY FLAMMABLE.  
VAPOR MAY CAUSE FLASH FIRE.  
HARMFUL IF INHALED.  
CONTENTS UNDER PRESSURE.  
CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

**Relevant routes of exposure:** Skin, Inhalation, Eyes

**Potential Health Effects**

**Inhalation:** May be harmful if inhaled. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

**Skin contact:** Prolonged and/or repeated skin contact may result in mild irritation or redness. Repeated or prolonged contact can result in drying of skin. Symptoms may include redness, burning, drying, cracking and skin burns.

**Eye contact:** Symptoms can include irritation, redness, scratching of the cornea, and tearing. Mild eye irritation.

**Ingestion:** May be harmful if swallowed. Aspiration may occur during swallowing or vomiting, resulting in lung damage.

**Existing conditions aggravated by exposure:** Other pre-existing skin conditions. Other respiratory disorders (bronchitis, emphysema, bronchial hyperreactivity).

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

See Section 11 for additional toxicological information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Hazardous components	CAS NUMBER	%
Acetone	67-64-1	30 - 60
n-Heptane	142-82-5	10 - 30
Propane/Isobutane	68476-86-8	10 - 30

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Move to fresh air. In case of adverse health effects seek medical advice.
<b>Skin contact:</b>	Wash affected area immediately with soap and water. If symptoms develop and persist, get medical attention. Remove contaminated clothes.
<b>Eye contact:</b>	In case of contact with the eyes, rinse immediately with plenty of water for 15 minutes, and seek immediate medical attention.
<b>Ingestion:</b>	If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. If vomiting occurs, prevent aspiration by keeping the patient's head below the knees.
<b>Notes to physician:</b>	This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity when deciding whether to induce vomiting.

#### 5. FIRE FIGHTING MEASURES

<b>Flash point:</b>	Not available.
<b>Flashback:</b>	This product exhibits flashback when tested for flame extension.
<b>Autoignition temperature:</b>	Not available.
<b>Flammable/Explosive limits - lower:</b>	Not available.
<b>Flammable/Explosive limits - upper:</b>	Not available.
<b>Extinguishing media:</b>	Carbon dioxide. Alcohol-resistant foam Dry powder.
<b>Special firefighting procedures:</b>	Firefighters should wear self-contained breathing apparatus. Water may be ineffective, but may be used to cool exposed containers to prevent pressure build-up and possible auto-ignition or explosion when exposed to extreme heat. If water is used, fog nozzles are preferable.
<b>Unusual fire or explosion hazards:</b>	Contents under pressure. Do not handle or store near an open flame, heat or other sources of ignition. Do not puncture or incinerate pressurized containers. Exposure to temperatures above 49°C (120°F) may cause container to burst.
<b>Hazardous combustion products:</b>	Not available.

#### 6. ACCIDENTAL RELEASE MEASURES

**Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.**

<b>Environmental precautions:</b>	Not available.
<b>Clean-up methods:</b>	Absorb spill with inert material. Shovel material into appropriate container for disposal. Follow all local, state, federal and provincial regulations for disposal.

#### 7. HANDLING AND STORAGE

<b>Handling:</b>	Keep out of the reach of children. Keep in a cool, well ventilated area. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Ventilate working rooms thoroughly. Avoid naked flames, sparking and sources of ignition. Switch off electrical devices. Do not smoke, do not weld. Do not empty waste into waste water drains. Do not puncture or incinerate pressurized containers.
------------------	---

**Storage:**

For safe storage, store between 13 °C (55.4 °F) and 35 °C (95°F)  
Keep away from heat, spark and flame. Store in a cool, dry, well-ventilated area.

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 components	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Acetone	500 ppm TWA 750 ppm STEL	1,000 ppm (2,400 mg/m <sup>3</sup> ) TWA	None	None
n-Heptane	400 ppm TWA 500 ppm STEL	500 ppm (2,000 mg/m <sup>3</sup> ) TWA	None	None
Propane/Isobutane	None	None	None	None

**Engineering controls:**

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

**Respiratory protection:**

Use a NIOSH approved respirator if ventilation is inadequate.

**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:	Liquid
Color:	white
Odor:	Solvent
Odor threshold:	Not available.
pH:	Not available.
Vapor pressure:	Not available.
Boiling point/range:	> 100 °F (> 37.8 °C)
Melting point/ range:	Not available.
Specific gravity:	0.755 - 0.765
Vapor density:	Not available.
Flash point:	Not available.
Flashback:	This product exhibits flashback when tested for flame extension.
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Evaporation rate:	> 1 (Butyl acetate = 1)
Solubility in water:	Insoluble
Partition coefficient (n-octanol/water):	Not available.
VOC content:	60.08 %

## 10. STABILITY AND REACTIVITY

Stability:	Not available.
Hazardous reactions:	Will not occur.
Hazardous decomposition products:	Carbon dioxide. Carbon monoxide. Hydrocarbons.
Incompatible materials:	Strong oxidizing agents.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.

## 11. TOXICOLOGICAL INFORMATION

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Acetone	No	No	No
n-Heptane	No	No	No
Propane/Isobutane	No	No	No

Hazardous components	Health Effects/Target Organs
Acetone	Blood, Central nervous system, Irritant, Reproductive
n-Heptane	Central nervous system, Irritant
Propane/Isobutane	No Records

## 12. ECOLOGICAL INFORMATION

Ecological information: Not available.

## 13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

**Recommended method of disposal:** Follow all local, state, federal and provincial regulations for disposal.

**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 shipping classification in this section are for bulk packaging only. Shipping classification may be different for non-bulk packaging as exceptions may apply. Refer to shipping documents for package specific transportation classification.

### U.S. Department of Transportation Ground (49 CFR)

**Proper shipping name:** Aerosols  
**Hazard class or division:** 2.1  
**Identification number:** UN 1950  
**Packing group:** None  
**DOT Reportable quantity:** Acetone

### International Air Transportation (ICAO/IATA)

**Proper shipping name:** Aerosols, flammable  
**Hazard class or division:** 2.1  
**Identification number:** UN 1950  
**Packing group:** None

### Water Transportation (IMO/IMDG)

**Proper shipping name:** AEROSOLS (n-Heptane)  
**Hazard class or division:** 2.1  
**Identification number:** UN 1950  
**Packing group:** None  
**Marine pollutant:** n-Heptane

## 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 minimus



<b>CERCLA/SARA Section 302 EHS:</b>	None above reporting de minimus
<b>CERCLA/SARA Section 311/312:</b>	Immediate Health, Delayed Health, Fire, Sudden Release
<b>CERCLA/SARA 313:</b>	None above reporting de minimus
<b>California Proposition 65:</b>	No California Proposition 65 listed chemicals are known to be present.

**Canada Regulatory Information**

<b>CEPA DSL/NDL Status:</b>	All components are listed on or are exempt from listing on the Canadian Domestic Substances List.
<b>WHMIS hazard class:</b>	D.2.B, A, B.5

**16. OTHER INFORMATION**

**This material safety data sheet contains changes from the previous version in sections:** Corrected information in Section(s): 15

**Prepared by:** Mary Ellen Roddy, Sr. Regulatory Affairs Specialist

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## Material Safety Data Sheet



Revision Date: 04/12/2006

Issue date: 04/12/2006

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product name:** Loctite(R) 242(R) Threadlocker Medium Strength  
**Product type:** Anaerobic Sealant  
**Company address:** Henkel Corporation  
 1001 Trout Brook Crossing  
 Rocky Hill, Connecticut 06067

**Item No. :** 24221  
**Region:** United States  
**Contact Information:**  
 Telephone: 860.571.5100  
 Emergency telephone: 860.571.5100  
 Internet: www.loctite.com

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous components</u>	<u>%</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>	<u>OTHER</u>
Polyglycol dimethacrylate 25852-47-5	60-100	None	None	None
Polyglycol oleate 9004-96-0	10-30	None	None	None
Saccharin 81-07-2	1-5	None	None	None
Silica, amorphous, fumed, crystalline-free 112945-52-5	1-5	6 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> TWA	3 mg/m <sup>3</sup> TWA respirable dust
Cumene hydroperoxide 80-15-9	1-5	None	None	1 ppm (6 mg/m <sup>3</sup> ) Skin (WEEL), 1ppm, skin TWA, (WEEL)
Propylene glycol 57-55-6	1-5	None	None	10 mg/m <sup>3</sup> TWA, (WEEL)

## 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEWHMIS:

**Physical state:** Liquid  
**Color:** Blue  
**Odor:** Mild

**HEALTH:** 2\*  
**FLAMMABILITY:** 1  
**PHYSICAL HAZARD:** 1  
**Personal Protection:** See Section 8

**WARNING:** CAUSES EYE IRRITATION.  
 MAY CAUSE SKIN IRRITATION.  
 MAY CAUSE ALLERGIC SKIN REACTION.  
 MAY CAUSE RESPIRATORY TRACT IRRITATION.

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects

**Inhalation:** May cause respiratory tract irritation.  
**Skin contact:** May cause allergic skin reaction. May cause skin irritation.  
**Eye contact:** Contact with eyes will cause irritation.  
**Ingestion:** Not expected to be harmful by ingestion.

Item No. : 24221

Product name: Loctite(R) 242(R) Threadlocker Medium Strength

**Existing conditions aggravated by exposure:**

Eye, skin, and respiratory disorders.

**See Section 11 for additional toxicological information.**

#### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Remove to fresh air. If symptoms develop and persist, get medical attention.
<b>Skin contact:</b>	Wash with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if symptoms occur.
<b>Eye contact:</b>	Flush with copious amounts of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.
<b>Ingestion:</b>	Do not induce vomiting. Keep individual calm. Obtain medical attention.

#### 5. FIRE-FIGHTING MEASURES

<b>Flash point:</b>	Greater than 93°C (200°F)    Tagliabue closed cup
<b>Autoignition temperature:</b>	Not available
<b>Flammable/Explosive limits-lower %:</b>	2.6 % (propylene glycol)
<b>Flammable/Explosive limits-upper %:</b>	12.5 % (propylene glycol)
<b>Extinguishing media:</b>	Foam, dry chemical or carbon dioxide.
<b>Special fire fighting procedures:</b>	None
<b>Unusual fire or explosion hazards:</b>	None
<b>Hazardous combustion products:</b>	Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapors.

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Environmental precautions:</b>	Prevent product from entering drains or open waters.
<b>Clean-up methods:</b>	Soak up with inert absorbent. Store in a partly filled, closed container until disposal.

#### 7. HANDLING AND STORAGE

<b>Handling:</b>	Avoid contact with eyes, skin and clothing. Avoid breathing vapor and mist. Wash thoroughly after handling.
<b>Storage:</b>	For safe storage, store at or below 38°C (100°F). Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.
<b>Incompatible products:</b>	Refer to Section 10.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Engineering controls:</b>	No specific ventilation requirements noted, but forced ventilation may still be required if concentrations exceed occupational exposure limits.
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**Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

**Skin protection:** Use impermeable gloves and protective clothing as necessary to prevent skin contact. Neoprene gloves. Butyl rubber gloves. Natural rubber gloves.

**Eye/face protection:** Safety goggles or safety glasses with side shields.

See Section 2 for exposure limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid  
**Color:** Blue  
**Odor:** Mild  
**Vapor pressure:** Less than 5 mm Hg at 27°C (80°F)  
**pH:** Not applicable  
**Boiling point/range:** Greater than 149°C (300°F)  
**Melting point/range:** Not available  
**Specific gravity:** 1.1 at 23.9°C (75°F)  
**Vapor density:** Not available  
**Evaporation rate:** Not available  
**Solubility in water:** Slight  
**Partition coefficient (n-octanol/water):** Not available  
**VOC content:** 4.48%; 49.3 grams/liter (EPA Method 24)

## 10. STABILITY AND REACTIVITY

**Stability:** Stable.

**Hazardous polymerization:** Will not occur.

**Hazardous decomposition products:** Oxides of carbon. Oxides of sulfur. Oxides of nitrogen. Irritating organic vapors.

**Incompatibility:** Strong oxidizers. Free radical initiators. Strong reducing agents. Alkalis. Oxygen scavengers. Other polymerization initiators. Copper. Iron. Zinc. Aluminum. Rust.

**Conditions to avoid:** See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

## 11. TOXICOLOGICAL INFORMATION

**Product toxicity data:** Acute oral LD50 greater than 10, 000 mg/kg (rat). Acute dermal LD50 greater than 5000 mg/kg (rabbit).

### Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Polyglycol dimethacrylate 25852-47-5	No	No	No
Polyglycol oleate 9004-96-0	No	No	No
Saccharin 81-07-2	No	No	No
Silica, amorphous, fumed, crystalline-free 112945-52-5	No	No	No
Cumene hydroperoxide 80-15-9	No	No	No
Propylene glycol 57-55-6	No	No	No

### Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Polyglycol dimethacrylate 25852-47-5	Allergen, Irritant
Polyglycol oleate 9004-96-0	Irritant
Saccharin 81-07-2	No Target Organs
Silica, amorphous, fumed, crystalline-free 112945-52-5	Nuisance dust
Cumene hydroperoxide 80-15-9	Allergen, Central nervous system, Corrosive, Irritant, Mutagen
Propylene glycol 57-55-6	Irritant

## 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.

EPA hazardous waste number: Not a RCRA hazardous waste.

## 14. TRANSPORT INFORMATION

### U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: Unrestricted  
Hazard class or division: None  
Identification number: None  
Packing group: None

### International Air Transportation (ICAO/IATA):

Proper shipping name: Unrestricted  
Hazard class or division: None  
Identification number: None  
Packing group: None

### WaterTransportation (IMO/IMDG):

Proper shipping name: Unrestricted  
Hazard class or division: None  
Identification number: None  
Packing group: None  
Marine pollutant: None

## 15. REGULATORY INFORMATION

### United States Regulatory Information

<b>TSCA 8 (b) Inventory Status:</b>	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
<b>TSCA 12 (b) Export Notification:</b>	4-Methoxyphenol (150-76-5).
<b>CERCLA/SARA Section 302 EHS:</b>	None above reporting de minimus.
<b>CERCLA/SARA Section 311/312:</b>	Immediate Health Hazard, Delayed Health Hazard
<b>CERCLA/SARA 313:</b>	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). Cumene hydroperoxide (CAS# 80-15-9) .
<b>California Proposition 65:</b>	This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

### Canada Regulatory Information

<b>CEPA DSL/NDL Status:</b>	All components are listed on or are exempt from listing on the Domestic Substances List.
<b>WHMIS hazard class:</b>	D.2.B

## 16. OTHER INFORMATION

This material safety data sheet contains changes from the previous version in sections: 15

**Prepared by:** Kyra Kozak Woods, Product Safety and Regulatory Affairs Specialist

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Revision Date: 01/07/2004

Issue date: 03/25/2004

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**Product name:** White Hi-Temp Anti-Seize  
**Product type:** Lubricant  
**Company address:**  
Henkel Corporation  
1001 Trout Brook Crossing  
Rocky Hill, Connecticut 06067

**Item number:** 34518  
**Region:** United States  
**Contact Information:**  
Telephone: 860.571.5100  
Emergency telephone: 860.571.5100  
Internet: www.loctite.com

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Hazardous components</b>	<b>%</b>	<b>ACGIH TLV</b>	<b>OSHA PEL</b>	<b>OTHER</b>
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	30-60	5 mg/m <sup>3</sup> TWA (mist) 10mg/m <sup>3</sup> STEL (mist)	5 mg/m <sup>3</sup> TWA (mist)	None
White mineral oil (petroleum) 8042-47-5	10-30	5mg/m <sup>3</sup> TWA (mist): 10mg/m <sup>3</sup> STEL (mist)	5mg/m <sup>3</sup> TWA (mist):	None
Calcium oxide 1305-78-8	5-10	2 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> (TWA)	None
Silica,mica 12001-26-2	5-10	3 mg/m <sup>3</sup> TWA	= 20 mppcf TWA	None
Calcium fluoride 7789-75-5	5-10	None	None	None
Titanium dioxide 13463-67-7	1-5	10 mg/m <sup>3</sup> TWA	15 mg/m <sup>3</sup> TWA	None
Boron nitride 10043-11-5	1-5	None	None	None
Silica, quartz 14808-60-7	0.1-1	0.05 mg/m <sup>3</sup> TWA	0.1mg/m <sup>3</sup> TWA (respirable)	None

**3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW****HMIS:**

**Physical state:** Solid  
**Color:** Off-white  
**Odor:** Mild

**HEALTH:** 2  
**FLAMMABILITY:** 1  
**PHYSICAL HAZARD:** 0  
**Personal Protection:** See Section 8

**CAUTION:** MAY CAUSE EYE AND SKIN IRRITATION.

**Relevant routes of exposure:** Skin, Eyes

**Potential Health Effects****Inhalation:**

This product has low volatility and is not expected to cause respiratory tract irritation during normal conditions of use. May cause respiratory tract irritation.  
Mild skin irritation.

**Skin contact:**

**Item number:** 34518

**Product name:** White Hi-Temp Anti-Seize

**Eye contact:**  
**Ingestion:**

Contact with eyes will cause irritation.  
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Principal hazard of ingestion is aspiration into the lungs and subsequent pneumonitis.

**Existing conditions aggravated by exposure:**

Eye disorders. Eye, skin, and respiratory disorders. Skin disorders.

**See Section 11 for additional toxicological information.**

#### 4. FIRST AID MEASURES

**Inhalation:** Remove to fresh air. If discomfort persists seek medical attention.

**Skin contact:** Wash with soap and water. Get medical attention if symptoms develop and persist.

**Eye contact:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**Ingestion:** Do not induce vomiting. Aspiration may cause pulmonary edema and pneumonitis. Obtain medical attention.

#### 5. FIRE-FIGHTING MEASURES

**Flash point:** Not applicable Product is a solid.

**Autoignition temperature:** Not determined

**Flammable/Explosive limits-lower %:** Not determined

**Flammable/Explosive limits-upper %:** Not determined

**Extinguishing media:** Carbon dioxide (CO2). Dry chemical. Foam. Water spray.

**Special fire fighting procedures:** None

**Unusual fire or explosion hazards:** None

**Hazardous combustion products:** Oxides of carbon. Oxides of nitrogen. Oxides of phosphorus. Oxides of zinc Hydrogen sulfide.

#### 6. ACCIDENTAL RELEASE MEASURES

**Environmental precautions:** No special environmental precautions required.

**Clean-up methods:** Scrape up as much material as possible. Clean residue with soap and water. Dispose of in accordance with local and national regulations.

#### 7. HANDLING AND STORAGE

**Handling:** Keep container closed. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

**Storage:** Keep in a cool, well ventilated area.

**Incompatible products:** No information available

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering controls:** General room ventilation is usually adequate. Local exhaust ventilation is recommended when general ventilation is not sufficient to control airborne contamination below occupational exposure limits.

**Item number:** 34518

**Product name:** White Hi-Temp Anti-Seize



**Respiratory protection:** Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respiratory use (29 CFR 1910.134).

**Skin protection:** Cover as much of the exposed skin area as possible with appropriate clothing.

**Eye/face protection:** Safety glasses with side-shields. Goggles.

See Section 2 for exposure limits.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Solid  
**Color:** Off-white  
**Odor:** Mild  
**Vapor pressure:** Not determined  
**pH:** Not applicable  
**Boiling point/range:** Not available  
**Melting point/range:** Not available  
**Specific gravity:** 1.116  
**Vapor density:** Not available  
**Evaporation rate:** Not determined  
**Solubility in water:** Insoluble  
**Partition coefficient (n-octanol/water):** Not determined  
**VOC content:** 0.4%; 4.7 grams/liter

## 10. STABILITY AND REACTIVITY

**Stability:** Stable at normal conditions

**Hazardous polymerization:** Will not occur.

**Hazardous decomposition products:** Oxides of carbon. Hydrocarbons

**Incompatibility:** Oxidizing agents.

**Conditions to avoid:** Prolonged exposure to heat.

## 11. TOXICOLOGICAL INFORMATION

### Carcinogen Status

Hazardous components	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen
Distillates (petroleum), hydrotreated heavy naphthenic	No	No	No
White mineral oil (petroleum)	No	No	No
Calcium oxide	No	No	No
Silica, mica	No	No	No
Calcium fluoride	No	No	No
Titanium dioxide	No	No	No
Boron nitride	No	No	No
Silica, quartz	Known Carcinogen	Group 1	Yes

### Literature Referenced Target Organ & Other Health Effects

Hazardous components	Health Effects/Target Organs
Distillates (petroleum), hydrotreated heavy naphthenic	Irritant
White mineral oil (petroleum)	Irritant
Calcium oxide	Irritant, Eyes, Corrosive
Silica, mica	Lung
Calcium fluoride	Muscle, Respiratory, Teeth
Titanium dioxide	Irritant, Respiratory
Boron nitride	Corrosive, Irritant
Silica, quartz	Some evidence of carcinogenicity, Lung, Immune system

## 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.

EPA hazardous waste number: Not a RCRA hazardous waste.

## 14. TRANSPORT INFORMATION

The shipping classifications in this section are for non-bulk packaging only (unless otherwise specified). Shipping classification may be different for bulk packaging.

### U.S. Department of Transportation Ground (49 CFR):

Proper shipping name: Unrestricted  
 Hazard class or division: None  
 Identification number: None  
 Packing group: None  
 Marine pollutant: Copper

### International Air Transportation (ICAO/IATA):

Proper shipping name: Unrestricted  
 Hazard class or division: None  
 Identification number: None  
 Packing group: None

### Water Transportation (IMO/IMDG):

Proper shipping name: Unrestricted  
 Hazard class or division: None  
 Identification number: None  
 Packing group: None  
 Marine pollutant: None

## 15. REGULATORY INFORMATION

### United States Regulatory Information

<b>TSCA 8 (b) Inventory Status:</b>	All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
<b>TSCA 12 (b) Export Notification:</b>	None.
<b>CERCLA/SARA Section 302 EHS:</b>	None.
<b>CERCLA/SARA Section 311/312:</b>	Immediate Health Hazard, Delayed Health Hazard
<b>CERCLA/SARA 313:</b>	None above reporting de minimus.
<b>California Proposition 65:</b>	This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. May contain traces of. Lead (CAS# 7439-92-1). Nickel (CAS# 7440-02-0). Cadmium (CAS# 7440-43-9). Cobalt (CAS# 7440-48-4). Mercury (CAS# 7439-97-6). Arsenic (CAS# 7440-38-2).

### Canada Regulatory Information

<b>CEPA DSL/NDL Status:</b>	Contains one or more components listed on the Non-Domestic Substances list. Those components must be tracked by all Canadian Importers of Record as required by the Canadian Environmental Protection Agency. They may be imported into Canada in limited quantities. Please contact Loctite Health & Regulatory Affairs Department for details.
<b>WHMIS hazard class:</b>	D.2.A, D.2.B

## 16. OTHER INFORMATION




This material safety data sheet contains changes from the previous version in sections: New Material Safety Data Sheet format.

**Prepared by:** C.J. Michaels, Senior Health & Regulatory Affairs Specialist

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# LOOK (RTD) GLASS CLEANER CONCENTRATE

National Fire Protection Association (NFPA)	Fire Hazard Health 3 Reactivity 0	Hazardous Material Information System (HMIS)	Health 3 Fire Hazard 0 Reactivity 0
Protective Clothing	  	Emergency Overview	Clear Blue. Liquid. See Section 9. DANGER. CORROSIVE. CAUSES EYE AND SKIN BURNS. HARMFUL OR FATAL IF SWALLOWED.

## Section 1. Chemical Product and Company Identification

Product Name	LOOK (RTD) GLASS CLEANER CONCENTRATE	Code	3165388 & 3145571
Product Use	Industrial/Institutional: Cleaning product. This product is intended to be diluted prior to use.	PMS#	3164983
MSDS#	F-00405001	Validation Date	8/6/2003
U.S. Headquarters	The Butcher Company 8310 16th Street Sturtevant, WI 53177-0902 General Information: 800-225-9475	Print Date	8/6/2003
		Supersedes	7/30/2003.
		In Case of Emergency	Emergency (24 hour) 800-228-5635 CHEMTREC (US/Canada) 800-424-9300 CHEMTREC (Int'l) +1-703-527-3887

## Section 2. Composition and Information on Ingredients

Ingredients	CAS #	% by Weight	Exposure Limits	LC50/LD50
Ammonium Hydroxide	1336-21-6	1-5	Not available.	ORAL (LD50): Acute: 350 mg/kg [Rat].
Sodium Xylene Sulfonate	1300-72-7	1-5	Not available.	Not available.
Sodium Lauryl Sulfate	151-21-3	5-10	Not available.	ORAL (LD50): Acute: 1288 mg/kg [Rat]. DUST (LC50): Acute: >3900 mg/m <sup>3</sup> 1 hour(s) [Rat].
2-Butoxyethanol	111-76-2	30-60	OSHA (United States). TWA: 120 mg/m <sup>3</sup> ACGIH (United States). TWA: 97 mg/m <sup>3</sup>	ORAL (LD50): Acute: 506 mg/kg [Rat]. DERMAL (LD50): Acute: 406 mg/kg [Rabbit]. VAPOR (LC50): Acute: 450 ppm 4 hour(s) [Rat].
Water	7732-18-5	30-60	Not available.	Not available.

## Section 3. Hazards Identification

Routes of Entry	Inhalation. Skin contact. Eye contact.
Potential Acute Health Effects	
	Eyes Corrosive. May cause permanent damage including blindness.
	Skin Corrosive. May cause permanent damage.
	Inhalation May cause irritation and corrosive effects to nose, throat and respiratory tract.
	Ingestion Corrosive. May cause burns to mouth, throat, and stomach.
Medical Conditions	Persons with pre-existing skin disorders may be more susceptible to irritating effects. Individuals with
Aggravated by Overexposure:	chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects.
See Toxicological Information (section 11)	

**Section 4. First Aid Measures**

<b>Eye Contact</b>	Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Get medical attention immediately.
<b>Skin Contact</b>	Flush immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
<b>Inhalation</b>	If breathing is difficult: Remove to fresh air. Get medical attention immediately.
<b>Ingestion</b>	Do not induce vomiting! Immediately drink 1-2 glasses of water or milk. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Section 5. Fire Fighting Measures**

<b>Flammability of the Product</b>	None known.
<b>Flash Points</b>	Closed cup: >93.333°C (200°F).
<b>Products of Combustion</b>	None known.
<b>Fire Fighting Media and Instructions</b>	Extinguish with water spray or carbon dioxide, dry chemical powder or appropriate foam. Normal fire fighting procedure may be used.
<b>Protective Clothing (Fire)</b>	Put on appropriate personal protective equipment (see Section 8.).
<b>Special Remarks on Fire and Explosion Hazards</b>	Corrosive material (See sections 8 and 10).

**Section 6. Accidental Release Measures**

<b>Personal Precautions</b>	Put on appropriate personal protective equipment (see Section 8.).
<b>Environmental Precautions and Clean-up Methods</b>	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**

<b>Handling</b>	Avoid contact with eyes, skin and clothing. Do not taste or swallow. Avoid breathing vapors or spray mists. Wash thoroughly after handling. Remove and wash contaminated clothing and footwear before re-use. 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.
<b>Storage</b>	Store in a dry, cool and well-ventilated area. Protect from freezing. Keep container tightly closed. KEEP OUT OF REACH OF CHILDREN.

**Section 8. Exposure Controls/Personal Protection**

<b>Engineering Controls</b>	Good general ventilation should be sufficient to control airborne levels. Respiratory protection is not required if good ventilation is maintained.
<b>Personal Protection</b>	
<b>Eyes</b>	Chemical splash goggles.
<b>Hands</b>	Chemical resistant gloves. Includes: Neoprene gloves.
<b>Respiratory</b>	If mists/vapors are not adequately controlled by ventilation, use appropriate respiratory protection to avoid over exposure. 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.
<b>Feet</b>	Protective footwear.
<b>Body</b>	If major exposure is possible, wear suitable protective clothing and footwear.

**Section 9. Physical and Chemical Properties**

<b>Physical State and Appearance</b>	Liquid.
<b>Odor</b>	Ammoniacal.
<b>Color</b>	Clear Blue.
<b>pH</b>	12 to 12.8 [Basic.]
<b>Specific Gravity</b>	0.98
<b>Melting/Freezing Point</b>	<0°C (32°F)
<b>Solubility in water</b>	Complete.

**Section 10. Stability and Reactivity**

<b>Stability and Reactivity</b>	The product is stable.
<b>Conditions of Instability</b>	None known.
<b>Incompatibility with Various Substances</b>	Reactive with acids.
<b>Hazardous Decomposition Products</b>	When exposed to fire: Produces normal products of combustion.
<b>Hazardous Polymerization</b>	Will not occur.

**Section 11. Toxicological Information**

<b>Acute toxicity</b>	Corrosive.
<b>Effects of Chronic Exposure</b>	None known.
<b>Other Toxic Effects</b>	None known.

**Section 12. Ecological Information**

Not available.

**Section 13. Disposal Considerations**

<b>Waste Information</b>	Undiluted product is regulated under environmental and transportation laws as a corrosive waste. Dispose of according to all federal, state and local regulations.
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**Section 14. Transport Information**
**DOT Classification**

<b>DOT Proper Shipping Name</b>	Please refer to the Bill of Lading/receiving documents for up to date shipping information.
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**TDG Classification**

<b>TDG Proper Shipping Name</b>	Please refer to the Bill of Lading/receiving documents for up to date shipping information.
<b>TDG Class</b>	

**Section 15. Regulatory Information**
**Reporting in this section is based on ingredients disclosed in Section 2**
**US Regulations**

**Federal** Clean Water Act (CWA) 311: Ammonium Hydroxide  
CERCLA: Hazardous substances.: 2-Butoxyethanol, Ammonium Hydroxide

**State** New Jersey spill list: 2-Butoxyethanol, Ammonium Hydroxide  
New Jersey: 2-Butoxyethanol, Ammonium Hydroxide  
New Jersey toxic catastrophe prevention act: Ammonium Hydroxide  
Massachusetts spill list: 2-Butoxyethanol, Ammonium Hydroxide  
Massachusetts RTK: 2-Butoxyethanol, Ammonium Hydroxide  
Pennsylvania RTK: 2-Butoxyethanol, Ammonium Hydroxide

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** WHMIS Class E: Corrosive liquid.

**WHMIS Icon**





LOOK (RTD) GLASS CLEANER CONCENTRATE

Material Safety Data Sheet

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

Section 16. Other Information

Other Special Considerations  
Not available.

Version  
1

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.*

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** CANTEX #50 AQU/BLU Low VOC Primer for PVC and CPVC Plastic Pipe**PRODUCT USE:** Low VOC Solvent Cement for PVC Plastic Pipe**SUPPLIER:****MANUFACTURER:**

IPS Corporation

17109 South Main Street, Gardena, CA 90248-3127

P.O. Box 379, Gardena, CA 90247-0379

Tel. 1-310-898-3300

**EMERGENCY:** Transportation: CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)**Medical:** CHEMTEL Tel. 800.255-3924, +1 813-248-0585 (International)

## SECTION 2 - HAZARDS IDENTIFICATION

## GHS CLASSIFICATION:

Health	Environmental	Physical
Acute Toxicity: Category 4	Acute Toxicity: None Known	Flammable Liquid Category 2
Skin Irritation: Category 3	Chronic Toxicity: None Known	
Skin Sensitization: NO		
Eye: Category 2		

**GHS LABEL:****Signal Word:**

Danger

**WHMIS CLASSIFICATION:**

CLASS B, DIVISION 2

CLASS D, DIVISION 2B

Hazard Statements	Precautionary Statements
H225: Highly flammable liquid and vapor	P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
H319: Causes serious eye irritation	P261: Avoid breathing dust/fume/gas/mist/vapors/spray
H335: May cause respiratory irritation	P280: Wear protective gloves/protective clothing/eye protection/face protection
H336: May cause drowsiness or dizziness	P337+P313: Get medical advice/attention
H351: Suspected of causing cancer	P403+P233: Store in a well ventilated place. Keep container tightly closed
EUH019: May form explosive peroxides	P501: Dispose of contents/container in accordance with local regulation

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	45 - 60
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	4 - 15
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	14 - 25

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

\* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

# indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

## SECTION 4 - FIRST AID MEASURES

<b>Contact with eyes:</b>	Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
<b>Skin contact:</b>	Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
<b>Inhalation:</b>	Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
<b>Ingestion:</b>	Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

## SECTION 5 - FIREFIGHTING MEASURES

<b>Suitable Extinguishing Media:</b>	Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.	HMIS	NFPA	0-Minimal
<b>Unsuitable Extinguishing Media:</b>	Water spray or stream.	Health	2	2
<b>Exposure Hazards:</b>	Inhalation and dermal contact	Flammability	3	3
<b>Combustion Products:</b>	Oxides of carbon, hydrogen chloride and smoke	Reactivity	0	0
		PPE	B	4-Severe

**Protection for Firefighters:** Self-contained breathing apparatus or full-face positive pressure airline masks.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Keep away from heat, sparks and open flame. Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment. Prevent contact with skin or eyes (see section 8).
<b>Environmental Precautions:</b>	Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
<b>Methods for Cleaning up:</b>	Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
<b>Materials not to be used for clean up:</b>	Aluminum or plastic containers

## SECTION 7 - HANDLING AND STORAGE

<b>Handling:</b>	Avoid breathing of vapor, avoid contact with eyes, skin and clothing. Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods. Do not eat, drink or smoke while handling.
<b>Storage:</b>	Store in ventilated room or shade below 44°C (110°F) and away from direct sunlight. Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates. Follow all precautionary information on container label, product bulletins and solvent cementing literature.

## SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL	OSHA PEL-Ceiling	CAL/OSHA PEL	CAL/OSHA Ceiling	CAL/OSHA STEL
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	N/E	N/E	200 ppm	N/E	250 ppm
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	N/E	N/E	200 ppm	N/E	300 ppm
	Acetone	500 ppm	750 ppm	1000 ppm	N/E	N/E	500 ppm	3000 ppm	750 ppm

**Engineering Controls:** Use local exhaust as needed.**Monitoring:** Maintain breathing zone airborne concentrations below exposure limits.**Personal Protective Equipment (PPE):****Eye Protection:** Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.**Skin Protection:** Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.

Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

**Respiratory Protection:** Prevent inhalation of the solvents. Use in a well-ventilated room. 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 above. With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.



**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Aqua Blue, medium syrupy liquid	<b>Odor Threshold:</b>	1 ppm (Acetone)
<b>Odor:</b>	Ketone	<b>Boiling Range:</b>	56°C (133°F) to 80°C (176°F)
<b>pH:</b>	Not Applicable	<b>Evaporation Rate:</b>	> 1.0 (BUAC = 1)
<b>Melting/Freezing Point:</b>	-108.5°C (-163.3°F) Based on first melting component: THF	<b>Flammability:</b>	Category 2
<b>Boiling Point:</b>	56°C (133°F) Based on first boiling component: Acetone	<b>Flammability Limits:</b>	<b>LEL:</b> 1.4% based on MEK
<b>Flash Point:</b>	-20°C (-4°F) TCC based on Acetone		<b>UEL:</b> 12.8% based on Acetone
<b>Specific Gravity:</b>	0.924 @23°C ( 73°F)	<b>Vapor Pressure:</b>	190 mm Hg @ 20°C (68°F) Acetone
<b>Solubility:</b>	Solvent portion soluble in water. Resin portion separates out.	<b>Vapor Density:</b>	>2.0 (Air = 1)
<b>Partition Coefficient n-octanol/water:</b>	Not Available	<b>Other Data: Viscosity:</b>	Medium bodied
<b>Auto-ignition Temperature:</b>	321°C (610°F) based on THF		
<b>Decomposition Temperature:</b>	Not Applicable		
<b>VOC Content:</b>	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤ 510g/l.		

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Stability:</b>	Stable
<b>Hazardous decomposition products:</b>	None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.
<b>Conditions to avoid:</b>	Keep away from heat, sparks, open flame and other ignition sources.
<b>Incompatible Materials:</b>	Oxidizers, strong acids and bases, amines, ammonia

**SECTION 11 - TOXICOLOGICAL INFORMATION**

Likely Routes of Exposure: Inhalation, Eye and Skin Contact

**Acute symptoms and effects:**

<b>Inhalation:</b>	Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
<b>Eye Contact:</b>	Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
<b>Skin Contact:</b>	Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
<b>Ingestion:</b>	May cause nausea, vomiting, diarrhea and mental sluggishness.

**Chronic (long-term) effects:**

Category 2 Carcinogen

**Toxicity:**LD<sub>50</sub>LC<sub>50</sub>**Target Organs**

Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m <sup>3</sup> (rat)	STOT SE3
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m <sup>3</sup> (rat)	STOT SE3
Acetone	Oral: 5800 mg/kg (rat)	Inhalation 50,100 mg/m <sup>3</sup> (rat)	STOT SE3

<b>Reproductive Effects</b>	<b>Teratogenicity</b>	<b>Mutagenicity</b>	<b>Embryotoxicity</b>	<b>Sensitization to Product</b>	<b>Synergistic Products</b>
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

**SECTION 12 - ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	None Known
<b>Mobility:</b>	In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 510g/l.
<b>Degradability:</b>	Not available
<b>Bioaccumulation:</b>	Minimal to none.

**SECTION 13 - WASTE DISPOSAL CONSIDERATIONS**

Follow local and national regulations. Consult disposal expert.

**SECTION 14 - TRANSPORT INFORMATION**

<b>Proper Shipping Name:</b>	Adhesives
<b>Hazard Class:</b>	3
<b>Secondary Risk:</b>	None
<b>Identification Number:</b>	UN 1133
<b>Packing Group:</b>	PG II
<b>Label Required:</b>	Class 3 Flammable Liquid
<b>Marine Pollutant:</b>	NO

**EXCEPTION for Ground Shipping****DOT Limited Quantity:** Up to 5L per inner packaging, 30 kg gross weight per package.**Consumer Commodity:** Depending on packaging, these quantities may qualify under DOT as "ORM-D".**TDG INFORMATION**

<b>TDG CLASS:</b>	FLAMMABLE LIQUID 3
<b>SHIPPING NAME:</b>	ADHESIVES
<b>UN NUMBER/PACKING GROUP:</b>	UN 1133, PG II

**SECTION 15 - REGULATORY INFORMATION**

<b>Precautionary Label Information:</b>	Highly Flammable, Irritant, Carc. Cat. 2	<b>Ingredient Listings:</b>	USA TSCA, Europe EINECS, Canada DSL, Australia AICS, Korea ECL/TCCL, Japan MITI (ENCS)
<b>Symbols:</b>	F, Xi		
<b>Risk Phrases:</b>	R11: Highly flammable. R36/37: Irritating to eyes and respiratory system.		R66: Repeated exposure may cause skin dryness or cracking R67: Vapors may cause drowsiness and dizziness
<b>Safety Phrases:</b>	S2: Keep out of the reach of children S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking.	S25: Avoid contact with eyes. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S33: Take precautionary measures against static discharges.	

**SECTION 16 - OTHER INFORMATION**

<b>Specification Information:</b>	All ingredients are compliant with the requirements of the European Directive on RoHS (Restriction of Hazardous Substances).		
<b>Department issuing data sheet:</b>	Safety Health & Environmental Affairs		
<b>Training necessary:</b>	Yes, training in practices and procedures contained in product literature.		
<b>Reissue date / reason for reissue:</b>	1/2/2015 / Updated GHS Standard Format		
<b>Intended Use of Product:</b>	Primer for PVC and CPVC Plastic Pipe		

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.

DICK BLICK

30434 - ALL CODES

Except

- 4916  
- 3176**MATERIAL SAFETY DATA SHEET**

Page 1

**Product:** Dick Blick Low-Fire Lead-Free Gloss Glazes**Product Code:** DBG10, 11, 20, 21, 25, 30, 31, 32, 40, 41, 42, 44, 45, 46, 50, 51, 52, 53, 54, 55, 56, 60, 61, 62, 63, 70, AND 71.

0618-01 ✓

**SECTION I - MANUFACTURER IDENTIFICATION****Manufacturer's Name:** Great Lakes Clay & Supply Co.  
120 S. Lincoln Ave.  
Carpentersville IL 60110**Emergency Phone:** 1-800-258-8796  
**Prepared By:** Tim Pfiffner**Date Printed:** 05/03/01**SECTION II - HAZARDOUS INGREDIENTS / SARA III INFORMATION**

Reportable Components:	CAS Number	Vapor Pressure mm Hg @ temp	Weight
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NO HAZARDOUS INGREDIENTS

ALL GLAZES TESTED FOR TOXICITY AND CONFORM TO ASTM-D4236

**SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS****Boiling Range:** NA**Specific Gravity (H<sub>2</sub>O=1):** Less than 2**Vapor Density:** Heavier than air  
**V.O.C:** NA**Evaporation Rate:** NA  
**Material V.O.C.:** N/A**Solubility in Water:** Yes**Appearance and Odor:**

Color differs due to pigments. No odor detected

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA****Flash Point:** NA**Method Used:** N/A**Flammable Limits in Air By Volume-Lower:** N/A**Upper:** N/A**Extinguishing Media:** N/A**Special Firefighting Procedures:** No fire hazard**Unusual Fire and Explosion Hazards:** None

**MATERIAL SAFETY DATA SHEET**

Page 2

**SECTION V - REACTIVITY DATA****Stability:** Stable**Conditions to Avoid:** None**Incompatibility:** None**Hazardous Decomposition:** Will not occur**Hazardous Polymerization:** Will not occur**SECTION VI - HEALTH HAZARD DATA**

**Inhalation risks and symptoms of exposure:** None in liquid form. Any glaze in dry form contains free silica, which, if breathed in for long periods of time can cause silicosis. Use a NIOSH approved respirator when working with dry glazes.

**Skin and eye contact health risks and symptoms of exposure:** Can cause irritation. Rinse eyes thoroughly with water for fifteen minutes and contact a physician.

**Skin absorption health risks and symptoms of exposure:** None.

**Ingestion health risks and symptoms of exposure:** Does not contain any hazardous ingredients.

**Health hazards (acute and chronic):** None.

**Carcinogenicity:** NTP Carcinogen: No. IARC Monographs: No. OSHA Regulated: No.

**Medical conditions due to exposure:** Unknown.

**Emergency and First Aid procedures:** Contact your local poison control for further information.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Spillage clean-up:** Use a wet mop, sponge or paper towel when cleaning up liquid glaze. Use a broom and dust pan or vacuum when cleaning up dry glaze. Use a NIOSH approved respirator when cleaning up dry glaze.

**Waste disposal method:** Dispose of paper towels in trash and rinse out sponge. Always follow local, state and federal regulations.

**Precautions for handling and storing:** Keep lid tightly on jar or liquid glaze to prevent drying out. Keep dry glaze in tightly sealed plastic bag or plastic pail to prevent spillage.

**MATERIAL SAFETY DATA SHEET****Page 3****SECTION VIII - CONTROL MEASURES**

**Respiratory Protection:** When spraying or mixing dry glaze, use a NIOSH certified and approved mask for dust or mist. Not needed for brush, sponge, dipping or pouring applications.

**Ventilation:** Not needed for liquid glaze. Work in a well ventilated area when mixing dry glaze.

**Protective gloves:** Not needed.

**Eye protection:** Not Needed.

**Other protective clothing or equipment:** Not needed.

**SECTION IX - DISCLAIMER**

Information presented in this MSDS has been compiled by sources considered to be dependable and is accurate and reliable to the best of our knowledge but is not guaranteed to be so. Because conditions of use are beyond our control we make no warranties, expressed or implied, except those that may be contained in our written acknowledgment.



# MATERIAL SAFETY DATA SHEET

## LPS® 1

Revision Date: October 7, 2013

Supersedes: September 19, 2011

### Section 1 • Product and Company Identification

**Product Name:** LPS® 1

**Part Number(s):** 00116 (aerosol), 00144 (wipe), 00122, 01128, 00105, 00155, C30116 (aerosol), C00144 (wipe), C00122, C01128, C00105, C00155

**Chemical Name:** Petroleum Distillates

**Product Use:** An industrial lubricant designed to displace moisture from mechanical and electrical equipment, provide light-duty lubrication and short-term rust prevention.

**Manufacturer Information:** LPS Laboratories, 4647 Hugh Howell Road, Tucker, GA, USA 30084  
**TEL:** USA & Canada: 1 800 241-8334  
Outside USA and Canada: +1 770 243-8800  
**FAX:** USA & Canada: 1 800 543-1563  
Outside USA and Canada: +1 770 243-8899

**Emergency Telephone Number:** Chemtrec: USA & Canada: 1 800 424-9300  
Outside USA and Canada: +1 703 527-3887

**Website:** <http://www.lpslabs.com>

### Section 2 • Hazards Identification

*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.*

#### Emergency Overview:

**Aerosol:** DANGER: Flammable. Contents under pressure. Harmful or fatal if swallowed.

**Bulk:** DANGER: Combustible. Keep away from heat and flame. Harmful or fatal if swallowed.

**Primary route(s) of entry:** Skin and eye contact. Inhalation.

#### Potential Acute Health Effects:

**Eyes:** Irritating to eyes.

**Skin:** Repeated exposure may cause skin dryness or cracking.

**Inhalation:** Excessive inhalation of vapors can cause irritation of the respiratory tract, nausea, dizziness or headache.

**Ingestion:** Product has a low order of acute oral toxicity, but ingestion of large quantities may cause nausea, vomiting, and gastrointestinal irritation. May cause injury if aspirated into lungs.

#### Potential Chronic Health Effects:

**Carcinogenic Effects:** NTP: No IARC: No OSHA: No ACGIH: No

**Mutagenic Effects:** None

**Teratogenic Effects:** None

**Target Organs:** None



# MATERIAL SAFETY DATA SHEET

## LPS® 1

Revision Date: October 7, 2013

Supersedes: September 19, 2011

### Medical conditions aggravated by exposure:

Persons with pre-existing central nervous system (CNS) disease, neurological conditions, skin disorders, chronic respiratory diseases, or impaired liver or kidney function should avoid exposure.

### Signs and Symptoms

Stinging in eyes. Repeated or prolonged skin contact can cause redness, irritation, and scaling of the skin (dermatitis). Breathing of high vapor concentrations may cause headaches, stupor, irritation of throat and eyes, and kidney effects.

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## Section 3 • Composition / Information on Ingredients

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Component	CASRN	Weight Percent
Distillates (Petroleum), Hydrotreated Light	64742-47-8	70 - 80%
Distillates (Petroleum), Hydrotreated Middle	64742-46-7	20 - 30%
Carbon Dioxide (aerosol only)	124-38-9	1 - 5%

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## Section 4 • First Aid Measures

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<b>Eyes:</b>	Check for and remove contact lenses. If irritation or redness develops, flush eyes with cool, clean, low pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. DO NOT use eye ointment. Seek medical attention immediately.
<b>Skin:</b>	Remove contaminated shoes and clothing. Clean affected area thoroughly with mild soap and water. DO NOT use ointments. Seek medical attention if irritation persists.
<b>Inhalation:</b>	Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If breathing is difficult, seek medical attention immediately.
<b>Ingestion:</b>	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. DO NOT leave victim unattended. Seek medical attention immediately.



# MATERIAL SAFETY DATA SHEET

## LPS® 1

Revision Date: October 7, 2013

Supersedes: September 19, 2011

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### Section 5 • Fire Fighting Measures

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<b>Products of Combustion:</b>	Carbon monoxide and carbon dioxide.		
<b>General Fire Hazards:</b>	High heat will cause product to boil, evolving vapor that could cause explosive rupture of closed containers. Aerosols may explode upon heating, spread fire and overcome sprinkler systems.		
<b>Firefighting media:</b>	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use CO2, water spray, fog or foam. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosions.		
<b>Sensitivity to Impact:</b>	None	<b>Sensitivity to Static Discharge:</b>	None
<b>Protection Clothing (Fire):</b>	Wear protective clothing and equipment suitable for the surrounding fire, including helmet, face mask, and self-contained breathing apparatus.		

**Special Remarks on Explosion Hazards:**

High heat will cause product to boil, evolving vapor that could cause explosive rupture of closed containers. Aerosols may explode upon heating, spread fire and overcome sprinkler systems.

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### Section 6 • Accidental Release Measures

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<b>Containment Procedures:</b>	<b>Small Spill and Leak:</b>	Absorb with an inert material and dispose of properly.
	<b>Large Spill and Leak:</b>	Secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection. Pick up free liquid for disposal using absorbent pads, sand, or other inert non-combustible absorbent materials. Place into appropriate waste containers for later disposal.
<b>Clean-Up Procedures:</b>	Contain and recover spilled material when possible.	
<b>Evacuation Procedures:</b>	Ventilate area of leak or spill. Keep unnecessary and unprotected people away.	
<b>Special Procedures:</b>	Remove all sources of ignition. Ventilate area. Wear personal protective equipment during cleanup.	

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### Section 7 • Handling and Storage

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<b>Handling:</b>	DO NOT spray into or around ignition sources. DO NOT allow material to come in contact with eyes or skin. Wear appropriate protective equipment during handling. Keep container closed. Avoid breathing vapors or mists. Use only with adequate ventilation. Wash thoroughly after handling.
<b>Storage:</b>	Keep container in a cool, well-ventilated area. Avoid all sources of ignition (spark or flame). Store between 40°F and 120°F (4.4°C and 49°C).

**Precautions to be taken in handling and storage:**

Store aerosols as Level 3 Aerosol (NFPA 30B). Store all materials in a dry, well-ventilated area. Avoid breathing vapors.



# MATERIAL SAFETY DATA SHEET

## LPS® 1

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### Section 8 • Exposure Controls / Personal Protection

#### Exposure Guidelines:

Component	CASRN	OSHA	ACGIH	NIOSH	Supplier
Distillates (Petroleum), Hydrotreated Light	64742-47-8	5 mg/m3 (oil mist) PEL	5 mg/m3 (oil mist) TLV 10 mg/m3 (oil mist) STEL	5 mg/m3 (oil mist) TWA 10 mg/m3 (oil mist) STEL	100 ppm TWA 525 mg/m3 TWA
Distillates (Petroleum), Hydrotreated Middle	64742-46-7	5 mg/m3 (oil mist) PEL	5 mg/m3 (oil mist) TLV 10 mg/m3 (oil mist) STEL	5 mg/m3 (oil mist) TWA 10 mg/m3 (oil mist) STEL	None reported
Carbon Dioxide (aerosol only)	124-38-9	5000 ppm PEL	5000 ppm TLV 30000 ppm STEL	5000 ppm TWA 30000 ppm STEL	None reported

**Engineering Controls:** Provide general and/or local exhaust ventilation to keep exposures below the exposure guidelines listed above.

#### Personal protective equipment

**Eye protection:** Safety glasses with side shields conforming to appropriate regulations. Eye wash fountain and emergency shower facilities are recommended.

**Hand protection:** Normally no hand protection is required; however, if product will be sprayed for an extended period, "overspray" onto skin may occur. If so, wear chemical resistant gloves conforming to appropriate regulations. Please observe the instructions regarding permeability and breakthrough time that are provided by the supplier of the gloves.

**Respiratory protection:** Typical use of this product under normal conditions does not require the use of respiratory protection. If airborne concentrations are above the applicable exposure limits (listed above), use NIOSH approved respiratory protection (i.e. organic vapor cartridge).

**General Hygiene Considerations:** Wash thoroughly after handling. Have eye-wash facilities immediately available.





# MATERIAL SAFETY DATA SHEET

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### Section 9 • Physical and Chemical Properties

<b>Appearance:</b>	Liquid	<b>Color:</b>	Pale amber
<b>Odor:</b>	Characteristic	<b>Evaporation Rate:</b>	< 0.1 (BuAc = 1)
<b>Solubility Description:</b>	Not soluble in water	<b>Flash Point:</b>	79°C (175°F) - dispensed liquid
<b>Boiling Point:</b>	213°C (415°F)	<b>Flash Point Method:</b>	Tag-Closed Cup
<b>Specific Gravity (H<sub>2</sub>O=1):</b>	0.79 - 0.81 @ 20°C	<b>Decomposition Temperature:</b>	Not established
<b>Vapor Density (air = 1):</b>	> 1	<b>Auto ignition temperature:</b>	> 228°C (442°F)
<b>Vapor Pressure:</b>	< 0.05 mm Hg @ 20°C	<b>Flammable limits (estimated):</b>	LOWER: 0.6% UPPER: 7.0%
<b>Rule 1171 PPc:</b>	Not applicable	<b>Partition Coefficient (octanol/water):</b>	< 1
<b>V.O.C. Content:</b>	Aerosol: 0.4% per US State & Federal Consumer Product Regulations Bulk: 0.4% per US State & Federal Consumer Product Regulations	<b>Odor Threshold:</b>	Not established
<b>Melting Point:</b>	< -50°C (-58°F)	<b>Viscosity:</b>	< 3.8 cSt @ 25°C
<b>pH:</b>	Not applicable	<b>Volatiles:</b>	95 - 96%
<b>Heat of combustion:</b>	Aerosol: Not established Bulk: Not established		

### Section 10 • Stability and Reactivity

<b>Chemical Stability:</b>	Product is stable under recommended storage conditions.
<b>Conditions to Avoid:</b>	Keep away from heat and ignition sources.
<b>Incompatibility:</b>	Reactive or incompatible with oxidizing agents.
<b>Hazardous Decomposition:</b>	Combustion will generate smoke, possibly thick and choking, resulting in zero visibility and combustion products include carbon monoxide and carbon dioxide.
<b>Hazardous Polymerization:</b>	Will not occur.



# MATERIAL SAFETY DATA SHEET

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### Section 11 • Toxicological Information

#### Acute and Chronic Toxicity

##### A: General Product Information

An acute toxicity study of this product has not been conducted. Information given in this section relates only to individual constituents contained in this preparation.

##### B: Component Analysis

Component	CASRN	LC-50	LD-50
Distillates (Petroleum), Hydrotreated Light	64742-47-8	> 6.8 mg/L *	> 5 g/kg*
Distillates (Petroleum), Hydrotreated Middle	64742-46-7	Not established	Not established
Carbon Dioxide (aerosol only)	124-38-9	470000 ppm / rat / 30 minutes	Not appropriate

\* Supplier Data

### Section 12 • Ecological Information

**Mobility:** Semi-volatile. Readily absorbed into soil. **Persistence / Degradability:** Only slightly biodegradable

**Bioaccumulative potential:** No bioaccumulation potential **Other adverse effects:** None known

Ecological studies have not been conducted for this product. The following information is available for component(s) of this product.

#### Ecotoxicity

Effects on Organisms	Component	CASRN	Test	Species	Results
Acute Toxicity on Fishes	Distillates (Petroleum), Hydrotreated Light	64742-47-8	96-hr LC50	Oncorhynchus Mykiss	3,200 µg/L *
Acute Toxicity on Daphnia	No data available				
Bacterial Inhibition					
Growth inhibition of algae					
Bioaccumulation in fish					

\* Supplier Data

For the 64742-47-8 component, no toxicity has been observed in water due to extremely low water solubility. However, hydrocarbon and petroleum distillates are potentially toxic to freshwater and saltwater ecosystems. If material is spilled on soil, some potential toxic effects could occur before biodegradation could remove material.

If spilled, the 64742-46-7 constituent may kill grasses and small plants by interfering with transpiration. Spilled material may coat gill structures of fish resulting in suffocation if spilled in shallow, running water. This product may be toxic to amphibians by preventing dermal respiration. This product may also cause gastrointestinal distress to birds and mammals through ingestion. Biodegradation of this product is possible within 90 to 120 days in aerobic environments at temperatures above 21°C.



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### Section 13 • Disposal Considerations

**Waste Status:** In its purchased form, non-aerosol material does not meet the definition of a RCRA hazardous waste. Aerosol products, if depressurized and emptied to less than 1 inch (2.54 cm) of fluid contents are classified as non-hazardous waste under 40 CFR 261.7 (U.S.). However, if disposed of in its received form, an aerosol carries the waste code D003. (U.S.).

**Disposal:** Waste must be disposed of in accordance with any and all applicable environmental control rules and/or regulations.

**Note:** Chemical additions to, processing of, or otherwise altering this material may make this waste management information inaccurate, incomplete, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive than federal laws and regulations.

### Section 14 • Transport Information

#### Aerosol

D.O.T. Ground	Shipping Name:	Aerosols, flammable	UN No.:	1950
	Hazard Class:	2.1	Technical Name:	NA
	Subclass:	NA	Hazard Label:	LTD QTY Already on box
	Packing Group:	NA		
Road/Rail - ADR/RID	UN No.:	1950	ADR Class:	2
	Packing Group:	NA	Classification Code:	5F
	Name and description:	AEROSOLS, flammable	Hazard ID No.:	NA
	Labeling:	2.1	Technical Name:	NA
IMDG-IMO	UN No.:	1950	Class:	2
	Shipping Name:	Aerosols	Subsidiary Risk:	2.1
	Labeling:	NA	Packing Group:	NA
	Packing Instructions:	P003, LP02	EmS:	F-D, S-U
IATA - ICAO:	Marine pollutant:	No	Technical Name:	NA
	UN No.:	1950	Class:	2.1
	Shipping Name:	Aerosols, flammable	Subclass:	NA
	Packing Instructions:	203, Y203 (Ltd. Qty.)	Packing Group:	NA
	Labeling:	Flammable Gas	Technical Name:	NA

Non-aerosol versions of this product are not regulated by any mode of transportation.

The preceding information is subject to change and must be verified prior to shipment. It is the responsibility of anyone offering hazardous materials for shipment to ensure compliance with all applicable regulations.



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### Section 15 • Regulatory Information

#### U.S. Federal Regulations

**RCRA Hazardous Waste No.:** D003 (aerosol only)

**Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA):**  
None

**Toxic Substances Control Act (TSCA):**  
All components of this product are TSCA inventory listed and/or are exempt.

**Superfund Amendments and Reauthorization Act (SARA) Title III SARA Section 311/312 (40 CFR 370) Hazard Categories:**  
Sudden Release of Pressure (aerosols only), Fire Hazard, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard

**This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):**  
No individual section 313 component is present at or above 1%.

**Section 112 Hazardous Air Pollutants (HAPs):** None

#### State Regulations

**California:** This product does not contain chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm.

**California and OTC States:** This product conforms to consumer product regulations.

#### New Jersey Right to Know:

Aerosol: Distillates (Petroleum), Hydrotreated Light 64742-47-8 • Distillates (Petroleum), Hydrotreated Middle 64742-46-7 • Carbon Dioxide 124-38-9 • Calcium Sulfonate 61789-86-4 • Sorbitan Trioleate 26266-58-0

Bulk: Distillates (Petroleum), Hydrotreated Light 64742-47-8 • Distillates (Petroleum), Hydrotreated Middle 64742-46-7 • Calcium Sulfonate 61789-86-4 • Sorbitan Trioleate 26266-58-0 • C18 Unsaturated Dimer Fatty Acids 61788-89-4

#### International Regulations

**Canadian Environmental Protection Act (CEPA):**  
All of the components of this product are included on the Canadian Domestic Substances list (DSL).

#### Canadian Workplace Hazardous Materials Information System WHMIS:

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 Classification:

Aerosol: Class A, Class B5, Class D2B



#### WHMIS Classification:

Bulk: Class B3, Class D2B



#### Other Regulations:

Montreal Protocol listed ingredients:

Stockholm Convention listed ingredients:

Rotterdam Convention listed ingredients:

RoHS Compliant:

None

None

None

Yes



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### Section 16 • Other Information

MSDS#: 10116 MSDS Preparation Responsible Name: Elena Badiuzzi Compliance Manager Telephone: +1 770 243-8800	HMIS 1996	HMIS III	Health  Reactivity Special
	Health: 1	Health: [ ] 1	
	Flammability: 2	Flammability Aerosol: 4 Flammability Bulk: 2	
	Reactivity: 0	Physical Hazard Aerosol: 2 Physical Hazard Bulk: 0	

#### 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.

Elena Badiuzzi, Compliance Manager  
LPS Laboratories, a division of Illinois Tool Works



# SAFETY DATA SHEET

## 1. Identification

**Product identifier** LPS® Magnum

**Other means of identification**

**Part Number** 00616

**Recommended use** A specialized lubricant designed to reduce friction, heat, noise and wear between moving parts and to loosen rusted or immovable parts and mechanisms.

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Manufacturer**

**Company name** LPS Laboratories, a division of Illinois Tool Works, Inc.

**Address** 4647 Hugh Howell Rd.  
Tucker, GA 30084

**Country** (U.S.A.)

**In Case of Emergency** Tel: +1 770-243-8800  
1-800-424-9300 (inside U.S.)  
+001 703-527-3887 (outside U.S.)

**Website** www.lpslabs.com

**E-mail** sds@lpslabs.com

## 2. Hazard(s) identification

**Physical hazards** Flammable aerosols Category 1

**Health hazards** Not classified.

**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Danger

**Hazard statement** Extremely flammable aerosol.

**Precautionary statement**

**Prevention** Keep away from heat/sparks/open flames/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.

**Response** Not assigned.

**Storage** Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.

**Hazard(s) not otherwise classified (HNOC)** Not classified.

## 3. Composition/information on ingredients

### Mixtures

Hazardous components			
Chemical name	Common name and synonyms	CAS number	%
Carbon Dioxide		124-38-9	1 - < 3
Dipropylene Glycol Monomethyl Ether		34590-94-8	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

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Most important symptoms/effects, acute and delayed</b>	Irritation of eyes and mucous membranes. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Symptoms of overexposure can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting, and are reversible if exposure is stopped.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. In case of shortness of breath, give oxygen. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	In the case of accident or if you feel unwell, seek medical advice immediately (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

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Fire may produce irritating, corrosive and/or toxic gases. Pressurized container may explode when exposed to heat or flame.
<b>Special protective equipment and precautions for firefighters</b>	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.
<b>Fire-fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tanks due to fire. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Use standard firefighting procedures and consider the hazards of other involved materials. In the event of fire, cool tanks with water spray. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Some of these materials, if spilled, may evaporate leaving a flammable residue.
<b>Specific methods</b>	In the event of fire and/or explosion do not breathe fumes. Use water spray to cool unopened containers. Move container from fire area if it can be done without risk. Use standard firefighting procedures and consider the hazards of other involved materials. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Consider initial downwind evacuation for at least 500 meters (1/3 mile). Keep unnecessary personnel away. Ventilate closed spaces before entering them. Keep upwind. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protection recommended in Section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	<p>Extinguish all flames in the vicinity.</p> <p>Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.</p> <p>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.</p>
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

### Precautions for safe handling

Keep away from sources of ignition - No smoking. Pressurized container: Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, on clothing. Avoid prolonged exposure. Do not use in areas without adequate ventilation. Wear personal protective equipment. Wash thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment.

### Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Contents under pressure. Do not handle or store near an open flame, heat or other sources of ignition. Store in a well-ventilated place. Keep out of the reach of children. Use care in handling/storage.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	PEL	9000 mg/m3
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	PEL	5000 ppm 600 mg/m3
		100 ppm

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	30000 ppm
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	TWA	5000 ppm
	STEL	150 ppm
	TWA	100 ppm

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Carbon Dioxide (CAS 124-38-9)	STEL	54000 mg/m3
	TWA	30000 ppm 9000 mg/m3 5000 ppm
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)	STEL	900 mg/m3
	TWA	150 ppm 600 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.

#### 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

Wear safety glasses with side shields (or goggles). Eye wash fountain is recommended.



<b>Skin protection</b>	
<b>Hand protection</b>	For prolonged or repeated skin contact use suitable protective gloves. Chemical resistant gloves are recommended.
<b>Other</b>	Avoid contact with clothing. Wear suitable protective clothing. Chemical resistant gloves.
<b>Respiratory protection</b>	No personal respiratory protective equipment normally required. 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.
<b>Thermal hazards</b>	Not applicable.
<b>General hygiene considerations</b>	When using, do not eat, drink or smoke. 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

<b>Appearance</b>	Aerosol.
<b>Physical state</b>	Gas.
<b>Form</b>	Liquid.
<b>Color</b>	Brown.
<b>Odor</b>	Mild. Sweet.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not applicable
<b>Melting point/freezing point</b>	Not established
<b>Initial boiling point and boiling range</b>	383 °F (195 °C)
<b>Flash point</b>	174.20 °F (79.00 °C) Tag Closed Cup - dispensed liquid
<b>Evaporation rate</b>	< 0.1 BuAc
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	0.6 %
<b>Flammability limit - upper (%)</b>	7 %
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	< 0.05 mm Hg @ 20°C
<b>Vapor density</b>	4.7 (air = 1)
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	< 4 %
<b>Partition coefficient (n-octanol/water)</b>	< 1
<b>Auto-ignition temperature</b>	> 442.4 °F (> 228 °C)
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	< 7 cSt @ 25°C
<b>Other information</b>	
<b>Heat of combustion</b>	> 30 kJ/g
<b>Specific gravity</b>	0.85 - 0.87 @ 20°C
<b>VOC (Weight %)</b>	2.9 % per U.S. State and Federal Consumer Product Regulations

## 10. Stability and reactivity

<b>Reactivity</b>	Strong oxidizing agents.
<b>Chemical stability</b>	Material is stable under normal conditions. Instability caused by elevated temperatures. Risk of ignition.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	Avoid temperatures exceeding the flash point. This product may react with oxidizing agents.

<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Carbon oxides.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Ingestion</b>	Harmful if swallowed. May be fatal if swallowed and enters airways.
<b>Inhalation</b>	May cause irritation to the respiratory system.
<b>Skin contact</b>	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
<b>Eye contact</b>	May be irritating to eyes.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Irritating to eyes, respiratory system and skin. 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

<b>Acute toxicity</b>	Based on available data, the classification criteria are not met.
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Components	Species	Test Results
Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	9.5 g/kg
<i>Oral</i>		
LD50	Rat	5.4 ml/kg 5.35 g/kg

\* Estimates for product may be based on additional component data not shown.

<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/eye irritation</b>	Based on available data, the classification criteria are not met.
<b>Respiratory sensitization</b>	Based on available data, the classification criteria are not met.
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Based on available data, the classification criteria are not met.
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - single exposure</b>	Based on available data, the classification criteria are not met.
<b>Specific target organ toxicity - repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met.
<b>Chronic effects</b>	Prolonged exposure may cause chronic effects.

## 12. Ecological information

<b>Ecotoxicity</b>	Toxic to aquatic life with long lasting effects.
<b>Persistence and degradability</b>	Not inherently biodegradable.
<b>Bioaccumulative potential</b>	No data available for this product.
<b>Partition coefficient n-octanol / water (log Kow)</b>	
LPS® Magnum	< 1
<b>Mobility in soil</b>	Not available.
<b>Other adverse effects</b>	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

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure.
<b>Hazardous waste code</b>	D003: Waste Reactive material
<b>Waste from residues / unused products</b>	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). Dispose of in accordance with local regulations. Avoid discharge into water courses or onto the ground.

**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. Do not re-use empty containers.

**14. Transport information****DOT**

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	2.1
Subsidiary class(es)	Not available.
Packing group	Not available.
Special precautions for user	Not available.
Labels required	2.1
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

**IATA**

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	2.1
Subsidiary class(es)	-
Packaging group	Not available.
Environmental hazards	No
Labels required	2.1
ERG Code	Not available.
Special precautions for user	Not available.

**IMDG**

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	2.1
Subsidiary class(es)	-
Packaging group	Not available.
Environmental hazards	
Marine pollutant	No
Labels required	2.1
EmS	Not available.
Special precautions for user	Not available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** This substance/mixture is not intended to be transported in bulk.

**DOT****IATA; IMDG**

## 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.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

#### SARA 304 Emergency release notification

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - Yes
	Delayed Hazard - Yes
	Fire Hazard - Yes
	Pressure Hazard - Yes
	Reactivity Hazard - No

<b>SARA 302 Extremely hazardous substance</b>	No
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<b>SARA 311/312 Hazardous chemical</b>	No
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### 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.

<b>Safe Drinking Water Act (SDWA)</b>	Not regulated.
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#### Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

<b>Food and Drug Administration (FDA)</b>	Not regulated.
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### US state regulations

#### US. Massachusetts RTK - Substance List

Carbon Dioxide (CAS 124-38-9)

Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)

#### US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

#### US. Pennsylvania RTK - Hazardous Substances

Carbon Dioxide (CAS 124-38-9)

Dipropylene Glycol Monomethyl Ether (CAS 34590-94-8)

#### US. Rhode Island RTK

Not regulated.

#### US. California Proposition 65

Not Listed.

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	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

<b>Issue date</b>	06-14-2013
<b>Revision date</b>	06-24-2013
<b>Version #</b>	02
<b>Further information</b>	Not available.

**HMIS® ratings**

Health: 1  
Flammability: 4  
Physical hazard: 2

**NFPA ratings**

Health: 1  
Flammability: 2  
Instability: 0

**Disclaimer**

Not available.

**Revision Information**

Physical & Chemical Properties: Multiple Properties  
Regulatory Information: Risk Phrases - Labeling  
GHS: Classification

# Safety Data Sheet: LUBE-TRAC AEROSOL, MM

Supersedes Date 04/14/2011

Issuing Date 10/08/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** LUBE-TRAC AEROSOL, MM  
**Recommended use** Lubricant  
**Information on Manufacturer**  
CERTIFIED LABS, DIV. OF NCH CORP.  
BOX 152170  
IRVING, TEXAS 75015

**Product Code** 5187  
**Chemical nature** Solvent mixture  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300  
**Telephone inquiry**  
972-579-2477

## 2. HAZARD IDENTIFICATION

**Color** black

**Physical State** Liquid

**Odor** Mild solvent

### GHS

#### Classification

##### Physical Hazards

Flammable aerosols  
Gases under pressure

Category 2  
Category 1

##### Health Hazard

Aspiration Toxicity  
Skin Corrosion/Irritation  
Serious Eye Damage/Eye Irritation  
Skin Sensitization  
Reproductive Toxicity  
Carcinogenicity  
Specific target organ systemic toxicity (single exposure)  
Specific target organ systemic toxicity (repeated exposure)

Category 1  
Category 2  
Category 2  
Category 1  
Category 1B  
Category 2  
Category 3  
Category 2

##### Other hazards

None

### Labeling

#### Signal Word

DANGER



#### Hazard Statements

H223 - Flammable aerosol  
H336 - May cause drowsiness or dizziness  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H320 - Causes eye irritation  
H360 - May damage fertility or the unborn child  
H351 - Suspected of causing cancer  
H373 - May cause damage to organs through prolonged or repeated exposure  
H280 - Contains gas under pressure; may explode if heated

#### Precautionary Statements

P202 - Do not handle until all safety precautions have been read and understood  
P210 - Keep away from heat, sparks, open flames or hot surfaces.  
P251 - Pressurized container: Do not pierce or burn, even after use  
P260 - Do not breathe mist.  
P271 - Use in a well-ventilated area.  
P270 - Do not eat, drink or smoke when using this product  
P280 - Wear protective gloves, protective clothing and eye protection.  
P264 - Wash face, hands and any exposed skin thoroughly after handling.  
P272 - Contaminated work clothing should not be allowed out of the workplace  
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.  
P312 - Call a physician if unwell.  
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water  
P333 - If skin irritation or rash occurs get medical attention.  
P362 - Take off contaminated clothing and wash 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.  
P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F  
P403 - Store in a well-ventilated place  
P501 - Dispose of contents and container in accordance with applicable regulations.

2 % of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Asphalt	8052-42-4	15-40
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	64742-52-5	10-30
Solvent naphtha (petroleum), medium aliphatic	64742-88-7	10-30
n-Propyl bromide	106-94-5	10-30
Propane	74-98-6	3-7
Butane	106-97-8	1-5
Polybutene	9003-29-6	1-5

### 4. FIRST AID MEASURES

<b>General advice</b>	Avoid breathing vapors, mist, or gas. Avoid contact with skin, eyes and clothing.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.
<b>Skin Contact</b>	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.
<b>Inhalation</b>	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
<b>Ingestion</b>	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.
<b>Notes to physician</b>	Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways. May cause sensitization of susceptible persons.

### 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	> 275 °F / > 135 °C	<b>Method</b>	Seta closed cup
<b>Flammability Limits in Air % Mixture.</b>		<b>Upper 9.5</b>	<b>Lower 1.8</b>
<b>Suitable Extinguishing Media</b>	Foam. Alcohol-resistant foam. Water spray. Carbon dioxide (CO2). Dry chemical.		
<b>Unsuitable Extinguishing Media</b>	No information available.		
<b>Specific hazards arising from the chemical</b>	Extremely flammable. Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Flame extension: >24 inches / 60 cm and Burnback: 0 inch / 0 cm. Material can create slippery conditions.		
<b>Protective Equipment and Precautions for Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.		
<b>Aerosol Level (NFPA 30B) -</b>	3		
<b>NFPA</b>	<b>Health 2</b>	<b>Flammability 4</b>	<b>Instability 0</b>
<b>HMIS</b>	<b>Health 2</b>	<b>Flammability 4</b>	<b>Instability 0</b>

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
<b>Methods for Containment</b>	Do not flush into surface water or sanitary sewer system.
	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).
<b>Methods for Cleaning Up</b>	Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.
<b>Neutralizing Agent</b>	Not applicable.

### 7. HANDLING AND STORAGE

<b>Handling</b>	Keep away from open flames, hot surfaces and sources of ignition. Avoid breathing vapors, mist or gas. Avoid contact with skin, eyes and clothing.			
<b>Storage</b>	Keep away from heat and sources of ignition. Keep in a dry, cool and well-ventilated place.			
<b>Storage Temperature</b>	<b>Minimum</b>	40 °F / 4 °C	<b>Maximum</b>	120 °F / 49 °C
<b>Storage Conditions</b>	<b>Indoor</b>	X	<b>Outdoor</b>	
			<b>Heated</b>	<b>Refrigerated</b>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Asphalt	TWA: 0.5 mg/m <sup>3</sup>	No data available	Ceiling: 5 mg/m <sup>3</sup>
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	TWA: 5 mg/m <sup>3</sup> ; STEL: 10 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup>	IDLH: 2,500 mg/m <sup>3</sup> ; STEL 10 mg/m <sup>3</sup> ; TWA: 5 mg/m <sup>3</sup>
Solvent naphtha (petroleum), medium aliphatic	No data available	No data available	No data available
n-Propyl bromide	TWA: 10 ppm	No data available	No data available
Propane	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m <sup>3</sup>	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m <sup>3</sup>
Butane	STEL: 1000 ppm	No data available	TWA: 800 ppm TWA: 1900 mg/m <sup>3</sup>
Polybutene	5 mg/m <sup>3</sup> as oil mist	10 mg/m <sup>3</sup> as oil mist	No data available

## 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

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	Slight Viscous
Color	black	Odor	Mild solvent
Odor Threshold	Not applicable	Appearance	Opaque
pH	Not applicable	Specific Gravity	0.89
Evaporation Rate	28.5 (Butyl acetate=1)	Percent Volatile (Volume)	73.9
VOC Content (%)	72.6	VOC Content (g/L)	646
Vapor Pressure	1957.2 mmHg @ 70°F	Vapor Density	1.8 (Air = 1.0)
Solubility	Negligible	n-Octanol/Water Partition	No data available
Melting Point/Range	No data available	Decomposition Temperature	No data available
Boiling Point/Range	100 °F / 38 °C	Flammability (solid, gas)	No data available
Flash Point	> 275 °F / > 135 °C	Method	Seta closed cup
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Mixture.	Upper 9.5 Lower 1.8	

## 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, Strong acids, Strong bases, Powdered metals, Amines.

## Hazardous Decomposition Products

Carbon oxides, Nitrogen oxides (NOx), Hydrogen bromide, Bromine.

## 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	2,709.00
Dermal LD50	1,799.00
Inhalation LC50	
Gas	747.00
Mist	7.00
Vapor	337.00

## Principle Route of Exposure

Eye contact, Skin contact, Inhalation.

## 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. May cause allergic



<b>Inhalation</b>	skin reaction. May cause irritation of respiratory tract. 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. May be fatal if inhaled in large quantities.
<b>Ingestion</b>	Ingestion may cause irritation to mucous membranes. Aspiration hazard if swallowed - can enter lungs and cause damage.
<b>Chronic Toxicity</b>	May cause sensitization by skin contact. Prolonged skin contact may defat the skin and produce dermatitis. Repeated and prolonged exposure to solvents may cause brain and nervous system damage. Liver and kidney injuries may occur. Contains a known or suspected carcinogen. Contains a known or suspected reproductive toxin.
<b>Target Organ Effects</b>	Liver, Kidney, Central nervous system, Peripheral Nervous System (PNS), Blood, Skin, Eyes, Respiratory system, Immune system, Reproductive System.
<b>Aggravated Medical Conditions</b>	Kidney disorders, Liver disorders, Skin disorders, Neurological disorders, Blood disorders, Respiratory disorders.

## Component Information

## Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Asphalt	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	no data available	no data available	no data available
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	> 5000 mg/kg ( Rat )	> 5000 mg/kg ( Rabbit )	no data available	no data available	no data available
Solvent naphtha (petroleum), medium aliphatic	> 5000 mg/kg ( Rat )	= 3000 mg/kg ( Rabbit )	> 5.28 mg/L ( Rat ) 4 h	no data available	no data available
n-Propyl bromide	no data available	no data available	= 253 g/m <sup>3</sup> ( Rat ) 30 min	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
Butane	no data available	no data available	= 658 g/m <sup>3</sup> ( Rat ) 4 h	no data available	no data available
Polybutene	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
Asphalt	no data available	Skin sensitization	no data available	no data available	eyes, respiratory system (in animals: skin tumors), immune system
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	no data available	no data available	no data available	no data available	respiratory system
Solvent naphtha (petroleum), medium aliphatic	no data available	no data available	no data available	no data available	CNS, liver, kidneys
n-Propyl bromide	no data available	no data available	no data available	X	CNS, PNS, heart, liver, kidney, respiratory system, reproductive system
Propane	no data available	no data available	no data available	no data available	CNS, heart
Butane	no data available	no data available	no data available	no data available	CNS, heart
Polybutene	no data available	no data available	no data available	no data available	Heart, liver, kidney, lung

## Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Asphalt	not applicable	Group 2B	not applicable	X	not applicable
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	not applicable	not applicable	not applicable	not applicable	not applicable
Solvent naphtha (petroleum), medium aliphatic	not applicable	not applicable	not applicable	not applicable	not applicable
n-Propyl bromide	not applicable	not applicable	not applicable	not applicable	not applicable
Propane	not applicable	not applicable	not applicable	not applicable	not applicable
Butane	not applicable	not applicable	not applicable	not applicable	not applicable
Polybutene	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
Asphalt	no data available	no data available	no data available	no data available	>6
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO)	no data available	LC50 > 5000 mg/L Oncorhynchus mykiss 96 h	no data available	EC50 > 1000 mg/L 48 h	N/A

extractable)					
Solvent naphtha (petroleum), medium aliphatic	EC50 = 450 mg/L Pseudokirchneriella subcapitata 96 h	LC50 = 800 mg/L Pimephales promelas 96 h	no data available	EC50> 100 mg/L 48 h	N/A
n-Propyl bromide	no data available	LC50 = 67.3 mg/L Pimephales promelas 96 h	no data available	no data available	2.1
Propane	no data available	no data available	no data available	no data available	2.3
Butane	no data available	no data available	no data available	no data available	2.89
Polybutene	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**

Contents under pressure. Do not puncture. Empty containers should be taken for local recycling, recovery, or waste disposal.

## 14. TRANSPORT INFORMATION

**DOT****Proper Shipping Name****DOT**

Consumer commodity

**Hazard Class**

ORM-D

**Description**

Consumer commodity, ORM-D

**TDG****Proper shipping name**

Aerosols

**Hazard Class**

2.1

**UN-No**

UN1950

**ICAO****UN-No**

UN1950

**Proper Shipping Name**

Aerosols

**Hazard Class**

2.1

**Shipping Description**

UN1950, Aerosols, 2.1 (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

**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 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 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
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Asphalt	Not applicable	Not applicable
Petroleum distillates, hydrotreated heavy naphthenic (<3% DMSO extractable)	Not applicable	Not applicable
Solvent naphtha (petroleum), medium aliphatic	Not applicable	Not applicable
n-Propyl bromide	Not applicable	Not applicable
Propane	Not applicable	Not applicable
Butane	Not applicable	Not applicable
Polybutene	Not applicable	Not applicable

#### 16. OTHER INFORMATION

**Prepared By** Adrienne McKee

**Supersedes Date** 04/14/2011

**Issuing Date** 10/08/2013

**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 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

Material Name: Lubriguard Dexron® III / Mercon® Automatic Transmission Fluid

ID: LBGD-005

## \*\*\* Section 1 - Chemical Product and Company Identification \*\*\*

**Part Number:** 70 2544 (12/1 Qt); 70 2425 (4/1 Gal); 70 2548 (5 Gal); 70 2550 (55 Gal); 70 2599 (Bulk)

**Manufacturer's Part Number:** 3-04-30090

**Chemical Name:** NA

**Product Use:** Automatic Transmission Fluid

**Synonyms:** None

### Manufacturer Information

Specialty Oil Company

Phone: 800-256-9288

Division of Quaker State Corporation

2740 Valley View Drive

Emergency # 800-424-9300 CHEMTREC

Shreveport, LA 71108

### 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
84605-20-9	Polyolefin Amide Alkeneamine Borate	1-3
68910-21-4	Polymer of Styrene and Maleic Dialkyl Esters	1-3
122-39-4	Diphenylamine	< .5
64742-65-0	Petroleum Distillates, Solvent Dewaxed Heavy Paraffinic	Blend
64742-56-9	Petroleum Distillates, Solvent Dewaxed Light Paraffinic	Blend
64742-55-8	Petroleum Distillates, Hydrotreated Light Paraffinic	Blend
64742-54-7	Petroleum Distillates, Hydrotreated Heavy Paraffinic	Blend
64741-97-5	Distillates (petroleum), Solvent Refined Light Naphthenic	Blend

### Component Information/Information on Non-Hazardous Components

The maximum percentage of the petroleum distillate and/or residual oil blend in this product is: 98%

All mineral oils used in this product have been severely hydrotreated and/or solvent refined. Exact composition of this product will vary with availability of materials. All ingredients listed above may not always be included in final product. This product is considered not hazardous under 29 CFR 1910.1200 (Hazard Communication).

## \*\*\* Section 3 - Hazards Identification \*\*\*

### Emergency Overview

Product is a non-flammable red petroleum distillate mixture. Liquid and vapor may be irritating to the eyes, skin and respiratory system. Irritating and toxic vapors may be released upon combustion of product. Extinguish fire with carbon dioxide, dry chemical, foam or water fog.

### Hazard Statements

No information is available.

### Potential Health Effects: Eyes

This product may cause irritation to the eyes.

### Potential Health Effects: Skin

This product may cause irritation to the skin. Prolonged or repeated contact may result in allergic skin sensitization reactions. Prolonged or repeated contact with this product may dry and/or defat the skin.

### Potential Health Effects: Ingestion

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.

# Material Safety Data Sheet

Material Name: **Lubriguard Dexron® III / Mercon® Automatic Transmission Fluid**

ID: **LBGD-005**

## 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: 2 Fire: 1 Reactivity: 0 Pers. Prot.:** Safety glasses, gloves

**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

For skin contact, wash immediately with soap and water. Remove contaminated clothing. Get medical attention if skin disorder develops. Launder contaminated clothing before reuse.

### 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:** 355 F (179 C)

**Upper Flammable Limit (UFL):** Not available

**Auto Ignition:** Not available

**Rate of Burning:** Not available

### General Fire Hazards

Product is a non-flammable petroleum distillate mixture. Liquid can burn upon heating to temperatures at or above the flash point. If product is heated above its flash point it will release flammable vapors which can burn in the open or be explosive in confined spaces if exposed to ignition source. Mists or sprays may be flammable below its normal flash point.

### Hazardous Combustion Products

Hazardous combustion products include fumes, smoke, sulfur oxides, oxides of phosphorus, oxides of boron, carbon monoxide, carbon dioxide and other low molecular weight hydrocarbons.

### Extinguishing Media

Water stream may spread fire. 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 inert absorbent such as dry clay, sand or diatomaceous earth, commercial sorbents, or recover using pumps. 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.

# Material Safety Data Sheet

Material Name: Lubriguard Dexron® III / Mercon® Automatic Transmission Fluid

ID: LBGD-005

## Special Procedures

Eliminate all ignition sources including flares, flames and electrical sparks. Wear appropriate protective equipment and clothing during clean-up. Surfaces may become slippery after spillage. 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 breathing of this material. Avoid prolonged or repeated skin contact with this material. Use this product with adequate ventilation. Avoid the generation of oil mists. Wash thoroughly after handling.

### Storage Procedures

Do not store this material in open or unlabeled containers. Do not store near heat, sparks, open flame or strong oxidizing agents. "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/m<sup>3</sup>; short term exposure limit of 10 mg/m<sup>3</sup>.

#### B: Component Exposure Limits

##### Diphenylamine (122-39-4)

ACGIH: 10 mg/m<sup>3</sup> TWA

OSHA: 10 mg/m<sup>3</sup> TWA

NIOSH: 10 mg/m<sup>3</sup> TWA

### 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 with side shields. 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. Eye wash fountains are recommended.

## \*\*\* Section 9 - Physical & Chemical Properties \*\*\*

**Appearance:** Red  
**Physical State:** Liquid  
**Vapor Pressure:** Not available  
**Boiling Point:** Not available  
**Solubility (H<sub>2</sub>O):** Negligible  
**Freezing Point:** Not applicable

**Percent Volatile:** Nil

**Odor:** Petroleum  
**pH:** Not available  
**Vapor Density:** Heavier than air  
**Melting Point:** Not applicable  
**Specific Gravity:** 0.85-0.88  
**Viscosity:** 33.9 cSt @ 40 C; 7.10-7.70 cSt @ 100 C

### Physical Properties: Additional Information

Pour Point: -45 F; -43 C

# Material Safety Data Sheet

Material Name: Lubriguard Dexron® III / Mercon® Automatic Transmission Fluid

ID: LBGD-005

## \*\*\* Section 10 - Chemical Stability & Reactivity Information \*\*\*

### Chemical Stability

Stable

### Chemical Stability: Conditions to Avoid

Avoid formation of mists.

### Incompatibility

Strong oxidizing agents (peroxides, chlorine, strong acids).

### Hazardous Decomposition

Decomposition products may include sulfur dioxide, boron, phosphorus, carbon monoxide, carbon dioxide 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

##### Diphenylamine (122-39-4)

Oral LD50 Rat: 2 gm/kg

Oral LD50 Mouse: 1750 mg/kg

##### Petroleum Distillates, Hydrotreated Heavy Paraffinic (64742-54-7)

RTECS: PY8035500

Oral LD50 Rat: >15 gm/kg

Dermal LD50 Rabbit: >5 gm/kg

RTECS: PY8035501

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

##### Diphenylamine (122-39-4)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

### 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/or residual oils, all of which have been solvent refined or severely hydrotreated. The petroleum distillate and/or 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 percentage is noted as "blend".

## Material Safety Data Sheet

Material Name: Lubriguard Dexron® III / Mercon® Automatic Transmission Fluid

ID: LBGD-005

### \*\*\* 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 information is available.

#### Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. 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) All known (non-proprietary) components of this product are listed on the US EPA TSCA Inventory.

##### B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

##### Diphenylamine (122-39-4)

SARA 313: form R reporting required for 1.0% de minimus concentration

#### State Regulations

##### A: General Product Information

This product may contain the following chemical(s) known to the state of California to cause cancer and/or birth defects: <1 ppm cadmium (7440-43-9), <1 ppm lead (7439-92-1), < 1 ppm arsenic (7440-38-2), < 1 ppm benzene (71-43-2) and 0.11% toluene (108-88-3).

##### B: Component Analysis - State



# Material Safety Data Sheet

Material Name: Lubriguard Dexron® III / Mercon® Automatic Transmission Fluid

ID: LBGD-005

Component	CAS #	CA	FL	MA	MN	NJ	PA
Diphenylamine	122-39-4	Yes	Yes	Yes	Yes	Yes	Yes
Petroleum Distillates, Hydrotreated Light Paraffinic	64742-55-8	No	No	Yes	No	No	No
Petroleum Distillates, Solvent Dewaxed Light Paraffinic	64742-56-9	No	No	Yes	No	No	No
Distillates (petroleum), Solvent Refined Light Naphthenic	64741-97-5	No	No	Yes	No	No	No

## Other Regulations

### A: General Product Information

No information available for the product.

### B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Polymer of Styrene and Maleic Dialkyl Esters	68910-21-4	Yes	Yes	Yes
Polyolefin Amide Alkeneamine Borate	84605-20-9	Yes	Yes	Yes
Diphenylamine	122-39-4	Yes	Yes	Yes
Petroleum Distillates, Hydrotreated Light Paraffinic	64742-55-8	Yes	Yes	Yes
Petroleum Distillates, Solvent Dewaxed Light Paraffinic	64742-56-9	Yes	Yes	Yes
Petroleum Distillates, Solvent Dewaxed Heavy Paraffinic	64742-65-0	Yes	Yes	Yes
Distillates (petroleum), Solvent Refined Light Naphthenic	64741-97-5	Yes	Yes	Yes
Petroleum Distillates, Hydrotreated Heavy Paraffinic	64742-54-7	Yes	Yes	Yes

### C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Diphenylamine	122-39-4	0.1% item 659 (778)

## \*\*\* 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 suitability and completeness of such information for his own particular use.

### Key/Legend

N = No; Y = Yes; ppm - parts per million; mg/m<sup>3</sup> = 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; EPA = Environmental Protection Agency.

### MSDS History

New MSDS 04/11/1997. Revision 2.0000: 11/24/1997.

Revision 2.0000: Section 2 was revised to indicate that the product contains a "blend" of petroleum distillates. Section 11 revised to indicate the nature of the product blend.

**Contact:** Vince Bernard, Corporate Safety Director

**Contact Phone:** (800) 562-5928

This is the end of MSDS # LBGD-005



# MATERIAL SAFETY DATA SHEET

## LUBRIMATIC MULTI-PURPOSE LITHIUM GREASE (11300-11302-11306-11315-11316-11328-11330-11332)

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<b>TRADE NAME</b>	LUBRIMATIC MULTI-PURPOSE LITHIUM GREASE
<b>PART No.</b>	329050
<b>PRODUCT USE</b>	Lubricating Grease
<b>SUPPLIER</b>	Chemtool Incorporated P.O. Box 538 8200 Ridgefield Road Crystal Lake, IL 60039-0538 USA Tel: (815) 459-1250 Fax: (815) 459-1955
<b>EMERGENCY TELEPHONE</b>	Infotrac U.S. and Canada - (800) 535-5053 Outside the U.S. and Canada - +01-352-323-3500

### 2. COMPOSITION, INFORMATION ON INGREDIENTS

INGREDIENT NAME	CAS No.	WEIGHT
LUBRICANT BASE OIL (PETROLEUM), HIGHLY REFINED**(2)	Mixture	70-90 %
*LITHIUM SOAP AND MIXED BASE THICKENERS	Proprietary	5-15 %
*PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	68649-42-3	<1 %
*BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT	26264-06-2	<0.5 %
*CARBON BLACK	1333-86-4	<0.2 %
*ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)	Proprietary	<0.1 %

\* This chemical(s) is hazardous according to OSHA/WHIMIS criteria

#### COMPOSITION COMMENTS

Refer to section eight for exposure limits on ingredients.  
Chemical ingredients not regulated by OSHA or SARA are treated confidentially.  
\*\*(2) The base oil for this product can be a mixture of any of the following highly refined petroleum streams:  
CAS 64741-88-4; CAS 64741-89-5; CAS 64741-96-4; CAS 64741-97-5; CAS 64742-01-4; CAS 64742-52-5; CAS 64742-53-6; CAS 64742-54-7; CAS 64742-55-8; CAS 64742-56-9; CAS 64742-57-0; CAS 64742-62-7; CAS 64742-63-8; CAS 64742-65-0; CAS 72623-83-7; CAS 72623-85-9; CAS 72623-86-0; CAS 72623-87-1.  
Carcinogenicity: The petroleum base oils contained in this product have been highly

refined by a variety of processes including solvent extraction, solvent dewaxing and hydrotreating to remove aromatics and improve performance characteristics. None of the oils used are listed as a carcinogen by NTP, IARC, or OSHA.

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### 3. HAZARDS IDENTIFICATION

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#### EMERGENCY OVERVIEW

<b>HEALTH HAZARDS, GENERAL</b>	Exposure to vapors generated at high temperatures may cause respiratory irritation.
<b>SENSITIZATION</b>	No known information.
<b>CARCINOGENICITY</b>	See Section 11 for carcinogenicity data of ingredients.
<b>HEALTH WARNINGS</b>	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. SKIN CONTACT. Repeated or prolonged contact can result in drying of the skin. EYE CONTACT. Irritating. INGESTION. Can cause stomach ache and vomiting. Main hazard, if ingested, is aspiration into the lungs and subsequent pneumonitis.
<b>ROUTE OF ENTRY</b>	Inhalation. Skin and/or eye contact. Ingestion.
<b>MEDICAL SYMPTOMS</b>	MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Not determined

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### 4. FIRST AID MEASURES

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<b>INHALATION</b>	Vapor inhalation under ambient conditions is normally not a problem. If overcome by vapor of hot product, immediately remove from source of exposure. Move the exposed person to fresh air at once. For breathing difficulties oxygen may be necessary. Get medical attention if any discomfort continues.
<b>EYES</b>	Rinse the eye with water immediately. Continue to rinse for at least 15 minutes. Contact physician if discomfort continues.
<b>SKIN</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
<b>INGESTION</b>	DO NOT INDUCE VOMITING! Get medical attention immediately!

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### 5. FIRE FIGHTING MEASURES

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<b>FLASH POINT (°C)</b>	224 (435°F) Cd OC (Cleveland open cup).
<b>FLAMMABILITY LIMIT - LOWER(%)</b>	N/D
<b>FLAMMABILITY LIMIT - UPPER(%)</b>	N/D
<b>EXTINGUISHING MEDIA</b>	Use: Carbon dioxide (CO <sub>2</sub> ). Dry chemicals, sand, dolomite etc. Alcohol resistant foam. Water spray, fog or mist.
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>	Use water to keep fire exposed containers cool and disperse vapors. Water spray may be used to flush spills away from exposures and dilute spills to non-flammable mixtures. Avoid water in straight hose stream; will scatter and spread fire. Keep run-off water out of sewers and water sources. Dike for water control.

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<b>UNUSUAL FIRE &amp; EXPLOSION HAZARDS</b>	Pressure will increase in over heated, closed containers.
<b>HAZARDOUS COMBUSTION PRODUCTS</b>	Oxides of: Carbon.
<b>PROTECTIVE MEASURES IN CASE OF FIRE</b>	Self-contained breathing equipment and chemical resistant clothing recommended.

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## 6. ACCIDENTAL RELEASE MEASURES

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<b>PERSONAL PRECAUTIONS</b>	Minimize skin contact.
<b>PRECAUTIONS TO PROTECT THE ENVIRONMENT</b>	Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas. Assure conformity with applicable government regulations.
<b>SPILL CLEAN-UP PROCEDURES</b>	Contain spill. Absorb small amounts. Collect and return large amounts to shipping container. Rinse area with water.

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## 7. HANDLING AND STORAGE

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<b>HANDLING PRECAUTIONS</b>	Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Do not reuse container. Keep lid closed when not in use. Do not store or mix with strong oxidizers. Avoid spilling, skin and eye contact. Eye wash and emergency shower must be available at the work place.
<b>STORAGE PRECAUTIONS</b>	Store separate from strong acids and oxidizers. Keep away from heat, sparks and open flame.
<b>STORAGE CRITERIA</b>	Chemical storage.

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## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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COMPONENT	STD	TWA	STEL	TWA	STEL
LUBRICANT BASE OIL (PETROLEUM), HIGHLY REFINED**(2)	OSHA			5 mg/m3 (oil mist)	
	ACGIH			5 mg/m3 (oil mist)	10 mg/m3 (oil mist)
CARBON BLACK	OSHA			3.5 mg/m3	
	ACGIH			3.5 mg/m3	**A4
	NIOSH	3.5 mg/m3	**Ca		
ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)	OSHA			0.5 mg/m3 as Sb	
	ACGIH			0.5 mg/m3 as Sb	

<b>INGREDIENT COMMENTS</b>	**ACGIH A4: Not Classifiable as a Human Carcinogen.
	**NIOSH Ca: Potential Occupational Carcinogen.

**PROTECTIVE EQUIPMENT**



<b>ENGINEERING CONTROLS</b>	Use engineering controls to reduce air contamination to permissible exposure level.
<b>VENTILATION</b>	No specific ventilation requirements noted, but forced ventilation may still be required if air contamination exceeds acceptable level.
<b>RESPIRATORS</b>	No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
<b>PROTECTIVE GLOVES</b>	Chemical resistant gloves recommended to prevent prolonged or repeated contact.
<b>EYE PROTECTION</b>	Wear splash-proof eye goggles to prevent any possibility of eye contact.
<b>PROTECTIVE CLOTHING</b>	Wear appropriate clothing to prevent repeated or prolonged skin contact.
<b>HYGIENIC WORK PRACTICES</b>	Wash at the end of each work shift and before eating, smoking and using the toilet.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>APPEARANCE/PHYSICAL STATE</b>	Grease.		
<b>COLOR</b>	Black.		
<b>ODOR</b>	Mild (or faint). Petroleum.		
<b>SOLUBILITY DESCRIPTION</b>	Insoluble in water.		
<b>DENSITY</b>	0.89	<b>Temperature (°C)</b>	15.6 (60°F)
<b>VAPOR DENSITY (air=1)</b>	> 5		
<b>VAPOR PRESSURE</b>	< 0.1 mmHg	<b>Temperature (°C)</b>	20 (68°F)
<b>EVAPORATION RATE</b>	< 0.01	<b>Reference</b>	BuAc=1
<b>pH-VALUE, CONC. SOLUTION</b>	N/A		

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## 10. STABILITY AND REACTIVITY

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<b>STABILITY</b>	Normally stable.
<b>CONDITIONS TO AVOID</b>	Avoid contact with acids and oxidizing substances.
<b>HAZARDOUS POLYMERIZATION</b>	Will not occur.
<b>POLYMERIZATION DESCRIPTION</b>	Not applicable
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	Oxides of: Carbon.

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## 11. TOXICOLOGICAL INFORMATION

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**TOXICOLOGICAL INFORMATION** No experimental toxicological data on the preparation as such is available.

**COMPONENT** LUBRICANT BASE OIL (PETROLEUM), HIGHLY REFINED\*\*(2)

**TOXICOLOGICAL DATA** Carcinogenicity. IP 346 <3%

**TOXIC DOSE - LD 50** > 5000 mg/kg (oral rat)

**TOXIC DOSE - LD 50 SKIN** > 2000 mg/kg (skn rbt)

**TOXIC CONC. - LC 50** N/A.

**COMPONENT** CARBON BLACK

**TOXICOLOGICAL DATA** Carcinogenicity. WHMIS (Canada) D2A

Acute toxicity. TCl<sub>0</sub> 6 hours. Inhalation. Rat. 7 mg/m<sup>3</sup>

**TOXIC DOSE - LD 50** > 15400 mg/kg (oral rat)

**TOXIC DOSE - LD 50 SKIN** > 3000 mg/kg (skn rbt)

**CARCINOGENICITY** NTP: Not listed. MAK-3 designation: Substances which cause concern that they could be carcinogenic for man. IARC-2B: The agent is possibly carcinogenic to humans (limited evidence of carcinogenicity in humans).

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## 12. ECOLOGICAL INFORMATION

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**ECOLOGICAL INFORMATION** There is no ecological data on the product itself.

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## 13. DISPOSAL CONSIDERATIONS

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**DISPOSAL METHODS** Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations.

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## 14. TRANSPORT INFORMATION

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**DOT HAZARD CLASS** Not regulated.

**TDGR CLASS** Not Regulated.

**SEA TRANSPORT NOTES** Not regulated per IMDG.

**AIR TRANSPORT NOTES** Not regulated per IATA.

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## 15. REGULATORY INFORMATION

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**US FEDERAL REGULATIONS**

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COMPONENT	SARA 302	CERCLA	SARA 313
LUBRICANT BASE OIL (PETROLEUM), HIGHLY REFINED**(2)	No	No	No
LITHIUM SOAP AND MIXED BASE THICKENERS	No	No	No
BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT	No	1 000 lbs	No
CARBON BLACK	No	No	No
ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)	No	***	N010 - Sb
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	No	***	N982 - Zn

**REGULATORY STATUS**

\*\*\* Indicates that no RQ is assigned to this generic or broad class, although the class is a CERCLA hazardous substance. See 50 Federal Register 13456 (April 4, 1985). Values in Section 313 column represent Category Codes for reporting under Section 313.

**CLEAN AIR ACT**

**SARA HAZARD CATEGORIES** None

**US STATE REGULATIONS**

COMPONENT	CA	MA	FL	MN	NJ	PA	RI
LUBRICANT BASE OIL (PETROLEUM), HIGHLY REFINED**(2)					Yes	Yes	
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS				Yes	Yes	EH	
BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT						EH	
CARBON BLACK	C	Yes			Yes	HS	
ANTIMONY DIALKYLDITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)				Yes		EH	

**STATE REGULATORY STATUS**

CALIFORNIA PROPOSITION 65: This product may contain the following chemical(s) considered by the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986 as causing cancer or reproductive toxicity, and for which warnings are now required:

Carbon black (airborne, unbound particles of respirable size), cancer hazard, CAS# 1333-86-4.

PENNSYLVANIA RIGHT-TO-KNOW: This product contains the following chemicals that the state of Pennsylvania has identified as Special Hazardous Substances (SHS), Environmental Hazards (EH), or both (ESHS). The PA regulations require that the MSDS identify all SHS or EH chemicals by chemical name, common name, and CAS Number if they comprise 0.01% or more.

Zinc compounds regulated under CERCLA and SARA 313, Environmental Hazard  
Antimony compounds regulated under CERCLA and SARA 313, Environmental Hazard

Benzenesulfonic acid, dodecyl-, sodium salt, Environmental Hazard, CAS# 25155-30-0

**WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM - WHMIS**

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.

**CONTROLLED PRODUCT  
CLASSIFICATION**

Not a controlled product.

COMPONENT	GLOBAL INVENTORIES							
	CAN	US	EU	AUS	JAP	KOR	PHLP	CHN
BENZENESULFONIC ACID, DODECYL-, CALCIUM SALT	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
CARBON BLACK	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
ANTIMONY DIALKYL DITHIOCARBAMATE (NJTSRN 800983-5015P OR CAS# 15890-25-2)	NPRI	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
LUBRICANT BASE OIL (PETROLEUM), HIGHLY REFINED**(2)	DSL	Yes	EINECS	Yes	Yes	Yes	Yes	Yes
LITHIUM SOAP AND MIXED BASE THICKENERS	DSL	Yes	EINECS	No	No	No	No	No
PHOSPHORODITHIOIC ACID, O,O-DI-C1-14-ALKYL ESTERS, ZINC SALTS	NPRI	Yes	EINECS	Yes	Yes	Yes	Yes	Yes

CANADA CEPA: All components of this product comply with new substance notification requirements under the Canadian Environmental Protection Act (CEPA).

**16. OTHER INFORMATION****NFPA-HMIS HAZARD RATING**

<b>HEALTH</b>	Irritation, minor residual injury (1) - HMIS/NFPA
<b>FLAMMABILITY</b>	Burns only if pre-heated (1) - HMIS/NFPA
<b>REACTIVITY</b>	Normally Stable (0) - HMIS/NFPA
<b>PERSONAL PROTECTION INDEX</b>	B - Safety Eyewear and Gloves
<b>REVISION COMMENTS</b>	Section 2: Ingredients Section 8: Exposure Limits. Section 11: Toxicological Information Section 15: WHMIS
<b>PREPARED BY</b>	John Dingess James W. Hermann
<b>Replacement MSDS of</b>	2003-09-03
<b>DATE</b>	2005-10-28
<b>PRINTING DATE:</b>	2006-01-03
<b>DISCLAIMER</b>	While the information and recommendations set forth herein are believed to be accurate as of the date thereof, the company makes no warranty with respect thereto and disclaims all liability from reliance therein.

\* Information revised since previous MSDS version





# LUBRIPLATE®

## MATERIAL SAFETY DATA SHEET

### Section 1

**PRODUCT NAME OR NUMBER**

LUBRIPLATE High-Temp

**GENERIC/CHEMICAL NAME:**

Petroleum Lubricating Grease

**Manufacturer's Name**

Fiske Brothers Refining Co.

**Address**

1500 Oakdale Ave., Toledo, Ohio 43605 - 129 Lockwood St., Newark, NJ 07105

**FORMULA**

Inorganic Thickener, Mineral Oil and Additives

**USDA AUTHORIZATION:**

H-2

**Emergency Telephone Number**

1-800-255-3924 - CHEM-TEL (24 hour)

**Telephone Number for Information**

419-691-2491 - Toledo Office

### Section 2 - Hazardous Ingredients/Identity Information

<u>Hazardous Components</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>Other Limits Recommended</u>	<u>% (optional)</u>
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Non-hazardous

**Hazardous Material Identification System (HMIS):**

Health - 1,

Flammability - 1,

Reactivity - 0

**Not a Controlled Product under (WHMIS) - Canada****Special Protection: See Section 9**

### Section 3 - Health Hazard Data

**Threshold Limit Value**5 mg/m<sup>3</sup> for oil mist in air. OSHA Regulation 29 CFR 1910.1000

**Effects of Overexposure** Prolonged or repeated skin contact may cause skin irritation. Product contacting the eyes may cause eye irritation. Human health risks vary from person to person. As a precaution, exposure to liquids, vapors, mists and fumes should be minimized. This product has a low order of acute oral toxicity, but minute amounts aspirated into the lungs during ingestion may cause mild to severe pulmonary injury.

**Carcinogenicity:**

NTP? No

IARC Monographs? No

OSHA Regulated? No

### Section 4 - Emergency and First Aid Procedures

**EYE CONTACT:** Flush with clear water for 15 minutes or until irritation subsides. If irritation persists, consult a physician.

**SKIN CONTACT:** Remove any contaminated clothing and wash with soap and warm water. If injected by high pressure under skin, regardless of the appearance or its size, contact a physician IMMEDIATELY. Delay may cause loss of affected part of the body.

**INHALATION:** Vapor pressure is very low and inhalation at room temperature is not a problem. If overcome by vapor from hot product, immediately remove from exposure and call a physician.

**INGESTION:** If ingested, call a physician immediately. Do not induce vomiting.

### Section 5 - Fire and Explosion Hazard Data

**Flash Point (Method Used)**

COC - 580°F

**Flammable Limits**

LEL 0.9%

UEL 7.0%

**Extinguishing Media**

Foam, Dry Chemical, Carbon Dioxide or Water Spray (Fog)

**Special Fire Fighting Procedures**

Cool exposed containers with water. Use air-supplied breathing equipment for enclosed or confined spaces.

**Unusual Fire and Explosion Hazards**

Do not store or mix with strong oxidants. Empty containers retain residue. Do not cut, drill, grind, or weld, as they may explode.

**PRODUCT NAME OR NUMBER - LUBRIPLATE High-Temp****Section 6 - Physical/Chemical Characteristics**

<b>Boiling Point</b>	>550°F	<b>Specific Gravity (H<sub>2</sub>O = 1)</b>	0.92
<b>Vapor Pressure (mm Hg.)</b>	<0.01	<b>Melting Point</b>	Semi-solid
<b>Vapor Density (AIR = 1)</b>	>5	<b>Evaporation Rate (Butyl Acetate = 1)</b>	<0.01
<b>Solubility in Water</b>	Negligible		
<b>Appearance and Odor</b>	Smooth, firm, off white grease with mineral oil odor.		

**Section 7 - Reactivity Data**

<b>Stability</b>	Unstable Stable X	<b>Conditions to Avoid</b>	N/A
<b>Incompatibility (Materials to Avoid)</b>	Avoid contact with strong oxidants like liquid chlorine, concentrated oxygen.		
<b>Hazardous Decomposition or Byproducts</b>	May form SO <sub>2</sub> . If incomplete combustion, Carbon Monoxide.		
<b>Hazardous Polymerization</b>	May Occur Will Not Occur X	<b>Conditions to Avoid</b>	N/A

**Section 8 - Spill or Leak Procedures****Steps to be taken in case material is released or spilled**

Scrape up grease, wash remainder with suitable petroleum solvent or add absorbent. Keep petroleum products out of sewers and water courses. Advise authorities if product has entered or may enter sewers and water courses.

**Waste disposal method**

Assure conformity with applicable disposal regulations. Dispose of absorbed material at an approved waste disposal facility or site.

**SARA/TITLE III, Section 313 Status - Zinc Compounds - <8%**

**Section 9 - Special Protection Information**

<b>Respiratory Protection (Specify type)</b>	Normally not needed		
<b>Ventilation</b>	<b>Local Exhaust</b> <b>Mechanical (General)</b>	Used to capture fumes and vapors	<b>Special</b> N/A <b>Other</b> N/A
<b>Protective Gloves</b>	Use oil-resistant gloves, if needed.		<b>Eye Protection</b> If chance of eye contact, wear goggles.
<b>Other Protective Equipment</b>	Use oil-resistant apron, if needed.		

**Section 10 - Special Precautions****Precautions to be taken in handling and storing**

Keep containers closed when not in use. Do not handle or store near heat, sparks, flame, or strong oxidants.

**Other Precautions**

Remove oil-soaked clothing and laundry before reuse. Cleanse skin thoroughly after contact.

The above information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Fiske Brothers Refining Company. The data on these sheets relates only to the specific material designated herein. Fiske Brothers Refining Company assumes no legal responsibility for use or reliance upon this data.

**Date Prepared:** January, 2003

**Prepared by:** James R. Kontak



# SAFETY DATA SHEET

No. 3000/No. 3000-W

## Section 1. Identification

**GHS product identifier** : No. 3000/No. 3000-W  
**Other means of identification** : Not available.  
**Product type** : Solid.

### Relevant identified uses of the substance or mixture and uses advised against

**Product use** : Petroleum lubricating grease  
**Area of application** : Industrial applications.

**Supplier/Manufacturer** : LUBRIPLATE® Lubricants Co.  
129 Lockwood St.  
Newark, NJ 07105  
Telephone no.: 1-973-589-9150

**e-mail address of person responsible for this SDS** : SDS@lubriplate.com

**Emergency telephone number (with hours of operation)** : CHEM-TEL 1-800-255-3924 (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 SENSITIZATION - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2  
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 19%

### GHS label elements

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : May cause an allergic skin reaction.  
May cause damage to organs through prolonged or repeated exposure.

### Precautionary statements

**Prevention** : Wear protective gloves. Do not breathe dust. Contaminated work clothing should not be allowed out of the workplace.

**Response** : Get medical attention if you feel unwell. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention.

**Storage** : Not applicable.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Date of issue/Date of revision**

: 12/03/2014

**Date of previous issue**

: No previous validation

**Version** : 1

1/13

## Section 2. Hazards identification

**Supplemental label elements** : Avoid contact with skin and clothing. Wash thoroughly after handling.

**Hazards not otherwise classified** : Prolonged or repeated contact may dry skin and cause irritation.

## 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** : Not available.

Ingredient name	Other names	%	CAS number
Distillates (petroleum), hydrotreated heavy naphthenic	Distillates (petroleum), hydrotreated heavy naphthenic	60-100	64742-52-5
Residual oils (petroleum), solvent-dewaxed	Residual oils (petroleum), solvent-dewaxed	5-10	64742-62-7
zinc oxide	zinc oxide	1-5	1314-13-2
antimony tris[O,O-dipropyl] tris (dithiophosphate)	antimony tris[O,O-dipropyl] tris(dithiophosphate)	1-5	15874-48-3
Synthetic graphite	Graphite	1-5	7782-42-5
zinc bis(dibutylthiocarbamate)	zinc bis (dibutylthiocarbamate)	0.1-1	136-23-2

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.**

## 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 following exposure or if feeling unwell. 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 skin thoroughly with soap and water or use recognized skin cleanser. 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** : 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 following exposure or if feeling unwell. Never give anything by mouth to an unconscious person.

## Section 4. First aid measures

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** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

#### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
dryness  
cracking
- 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. 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** : Do not use water jet.

- 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  
phosphorus 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. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. 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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. 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

## Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
Distillates (petroleum), hydrotreated heavy naphthenic	<b>ACGIH TLV (United States, 6/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction <b>NIOSH REL (United States, 10/2013).</b> TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.
Residual oils (petroleum), solvent-dewaxed	<b>ACGIH TLV (United States, 6/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction <b>NIOSH REL (United States, 10/2013).</b> TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.
zinc oxide	<b>NIOSH REL (United States, 10/2013).</b> CEIL: 15 mg/m <sup>3</sup> Form: Dust TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Dust and fumes STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Fume <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Fume STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Fume TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 10 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Fume TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction TWA: 15 mg/m <sup>3</sup> 8 hours. Form: Total dust <b>ACGIH TLV (United States, 6/2013).</b> TWA: 2 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Respirable fraction
antimony tris[O,O-dipropyl] tris(dithiophosphate)	<b>ACGIH TLV (United States, 6/2013).</b> TWA: 0.5 mg/m <sup>3</sup> , (as Sb) 8 hours. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 0.5 mg/m <sup>3</sup> , (as Sb) 8 hours. <b>OSHA PEL (United States, 2/2013).</b> TWA: 0.5 mg/m <sup>3</sup> , (as Sb) 8 hours. <b>NIOSH REL (United States, 10/2013).</b> TWA: 0.5 mg/m <sup>3</sup> , (as Sb) 10 hours.
Synthetic graphite	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 2.5 mg/m <sup>3</sup> 8 hours. Form: Respirable dust <b>ACGIH TLV (United States, 6/2013).</b> TWA: 2 mg/m <sup>3</sup> 8 hours. Form: Respirable fraction <b>NIOSH REL (United States, 10/2013).</b> TWA: 2.5 mg/m <sup>3</sup> 10 hours. Form: Respirable fraction <b>OSHA PEL Z3 (United States, 2/2013).</b> TWA: 15 mppcf 8 hours.

## Section 8. Exposure controls/personal protection

- 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. 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: 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, 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. [tacky / grease]
- Color** : Black.
- Odor** : Mineral oil.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : >288°C (>550.4°F)
- Flash point** : Open cup: 210°C (410°F) [Cleveland.]
- Evaporation rate** : <0.01 (butyl acetate = 1)
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 0.9%  
Upper: 7%



## Section 9. Physical and chemical properties

<b>Vapor pressure</b>	: <0.0013 kPa (<0.01 mm Hg) [room temperature]
<b>Vapor density</b>	: >5 [Air = 1]
<b>Relative density</b>	: 0.96 [Water = 1]
<b>Solubility</b>	: Insoluble in the following materials: cold water and hot water.
<b>Solubility in water</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>SADT</b>	: Not available.
<b>Viscosity</b>	: Kinematic (40°C (104°F)): 0.6 to 2.37 cm <sup>2</sup> /s (60 to 237 cSt)
<b>Physical/chemical properties comments</b>	: Kinematic viscosity (100 °C 212 °F): 7 to 19 mm <sup>2</sup> /s (7 to 19 cSt)

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.  Under normal conditions of storage and use, hazardous polymerization will not occur.
<b>Conditions to avoid</b>	: Keep away from heat, sparks and flame. Keep away from all sources of ignition.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials. Chlorine
<b>Hazardous decomposition products</b>	: 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
Distillates (petroleum), hydrotreated heavy naphthenic	LD50 Oral	Rat	>5000 mg/kg	-
zinc bis (dibutyldithiocarbamate)	LD50 Oral	Rat	>5000 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Distillates (petroleum), hydrotreated heavy naphthenic	Skin - Severe irritant	Rabbit	-	500 milligrams	-
zinc oxide	Eyes - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
zinc bis	Eyes - Mild irritant	Rabbit	-	39 milligrams	-

## Section 11. Toxicological information

(dibutylidithiocarbamate)	Skin - Mild irritant	Rabbit	-	0.5 Grams	-
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### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

**Conclusion/Summary** : The mineral oils in the product contain < 3% DMSO extract (IP 346).

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
antimony tris[O,O-dipropyl] tris(dithiophosphate)	Category 3	Not applicable.	Respiratory tract irritation
zinc bis(dibutylidithiocarbamate)	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
antimony tris[O,O-dipropyl] tris(dithiophosphate)	Category 2	Not determined	cardiovascular system
Synthetic graphite	Category 2	Inhalation	lungs

### Aspiration hazard

Name	Result
Distillates (petroleum), hydrotreated heavy naphthenic	ASPIRATION HAZARD - Category 1
Residual oils (petroleum), solvent-dewaxed	ASPIRATION HAZARD - Category 1

**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.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.  
**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.

## Section 11. Toxicological information

- Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
 dryness  
 cracking
- 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. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- 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	25009.1 mg/kg
Inhalation (dusts and mists)	75.03 mg/l

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
zinc oxide	Acute EC50 0.042 mg/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
	Chronic NOEC 0.017 mg/l Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
zinc bis (dibutylidithiocarbamate)	Acute EC50 0.74 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 520 mg/l	Fish - Oncorhynchus mykiss	96 hours

## Section 12. Ecological information

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Residual oils (petroleum), solvent-dewaxed	OECD 301B Ready Biodegradability - CO <sub>2</sub> Evolution Test	6 % - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Residual oils (petroleum), solvent-dewaxed	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
zinc oxide	-	60960	high

### Mobility in soil





Soil/water partition coefficient (K<sub>oc</sub>) : 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	IMDG	IATA
UN number	Not regulated.	UN3077	UN3077
UN proper shipping name	-	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc oxide). Marine pollutant (zinc oxide)	Environmentally hazardous substance, solid, n.o.s. (zinc oxide)
Transport hazard class(es)	-	9  	9  
Packing group	-	III	III

Date of issue/Date of revision : 12/03/2014 Date of previous issue : No previous validation Version : 1 10/13

## Section 14. Transport information

Environmental hazards	No.	Yes.	Yes.
Additional information	-	<p>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p><b><u>Emergency schedules (EmS)</u></b> F-A, S-F</p> <p><b><u>Special provisions</u></b> 274, 335, 966, 967</p>	<p>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p><b><u>Passenger and Cargo Aircraft</u></b> Quantity limitation: 400 kg Packaging instructions: 956</p> <p><b><u>Cargo Aircraft Only</u></b>Quantity limitation: 400 kg Packaging instructions: 956</p> <p><b><u>Limited Quantities - Passenger Aircraft</u></b>Quantity limitation: 30 kg Packaging instructions: Y956</p> <p><b><u>Special provisions</u></b> A97, A158, A179</p>

**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** : **United States inventory (TSCA 8b):** All components are listed or exempted.  
**Clean Water Act (CWA) 307:** zinc oxide; antimony tris[O,O-dipropyl] tris (dithiophosphate); zinc bis(dibutylidithiocarbamate)

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : 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  
Delayed (chronic) health hazard

#### Composition/information on ingredients

## Section 15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Distillates (petroleum), hydrotreated heavy naphthenic	60-100	No.	No.	No.	Yes.	No.
Residual oils (petroleum), solvent-dewaxed	5-10	No.	No.	No.	Yes.	No.
zinc oxide	1-5	No.	No.	No.	Yes.	No.
antimony tris[O,O-dipropyl] tris(dithiophosphate)	1-5	No.	No.	No.	Yes.	Yes.
Synthetic graphite	1-5	No.	No.	No.	No.	Yes.
zinc bis(dibutyldithiocarbamate)	0.1-1	Yes.	No.	No.	Yes.	No.

### SARA 313

	Product name	CAS number	%
<b>Form R - Reporting requirements</b>	zinc oxide	1314-13-2	1-5
	antimony tris[O,O-dipropyl] tris(dithiophosphate)	15874-48-3	1-5
<b>Supplier notification</b>	zinc oxide	1314-13-2	1-5
	antimony tris[O,O-dipropyl] tris(dithiophosphate)	15874-48-3	1-5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

- Massachusetts** : The following components are listed: ZINC OXIDE FUME; MOLYBDENUM DISULFIDE; GRAPHITE (NATURAL)DUST
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: MINERAL OIL (HIGHLY REFINED); OIL MIST, MINERAL; MINERAL OIL (HIGHLY REFINED); OIL MIST, MINERAL; ZINC OXIDE; ANTIMONY compounds; GRAPHITE (NATURAL); GRAPHITE
- Pennsylvania** : The following components are listed: ZINC OXIDE (ZNO); ANTIMONY COMPOUNDS; GRAPHITE

### California Prop. 65

**WARNING:** This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
carbon black non-respirable	Yes.	No.	No.	No.

## Section 16. Other information

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

Health	*	1
Flammability		1
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.

## Section 16. Other information

### 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.

### History

Date of issue/Date of revision	: 12/03/2014
Date of previous issue	: No previous validation
Version	: 1
Prepared by	: IHS
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	: HCS (U.S.A.)- Hazard Communication Standard International transport regulations

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.

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 413.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Iodine Solution, Lugol

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
Iodine	7553-56-2	I <sub>2</sub>	253.81	2%
Potassium iodide	7681-11-0	KI	166.01	2%
Water	7732-18-5	H <sub>2</sub> O	18.00	96%

### 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 the spill with sand or absorbent material and deposit in a 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. Store away from heat and direct light.

---

**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.

Exposure guidelines: (as iodine) Ceiling 0.1 ppm (OSHA); TLV 0.01 ppm (inhalable fraction and vapor) (ACGIH)

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

Deep brown liquid. Iodine odor.

Biological stain, Lugol's stain.

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Shelf life: Fair to poor. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Irritant.

ORL-HUM LD<sub>50</sub>: 2-4 g as iodine

Chronic effects: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: N.A.

SKN-RBT LD<sub>50</sub>: 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).

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

**Revision Date:** March 25, 2014

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 463.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Luminol

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
Luminol	521-31-3	C <sub>8</sub> H <sub>7</sub> N <sub>3</sub> O <sub>2</sub>	177.17	
Synonyms: 5-amino-2,3-dihydro-1,4-phthalazinedione; 3-aminophthalhydrazide				

### 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 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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides.  
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).

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Yellow odorless powder. Odorless.  
Soluble: Alcohol. Slightly in water.

Melting point: 319 °C

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong oxidizers, strong acids, strong bases, and strong reducers.  
Shelf life: Poor.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Eye, skin, and respiratory tract irritant.  
Chronic effects: N.A.  
Target organs: N.A.

ORL-RAT LD<sub>50</sub>: N.A.  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: 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 #5 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 (208-309-4).

---

**SECTION 16 — OTHER INFORMATION**

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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

# Safety Data Sheet

## acc. to OSHA HCS

Printing Date 03/09/2015

Revision Number 1

Revision Date 03/09/2015

### 1 Identification

- **Product identifier**
- **Trade name:** Beaulieu Luxury Vinyl Flooring & Plank Adhesive
- **Relevant identified uses of the substance or mixture.** Adhesive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Beaulieu  
1996 Highway 225 South  
Chatsworth, GA 30705  
Residential 800-944-2840 ext. 1885  
Commercial 800-451-1250 ext. 2659
- **Information department:** Environment protection department.
- **Emergency telephone number:**  
ChemTrec: Day or Night within USA and Canada: 1-800-424-9300.  
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

### 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product does not meet the criteria for classification as hazardous under the GHS and 29 CFR 1910.1200
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 1  
Fire = 0  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 1  
Fire = 0  
Physical Hazard = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Water Base Adhesive

(Contd. on page 2)

USA

# Safety Data Sheet

## acc. to OSHA HCS

Printing Date 03/09/2015

Revision Number 1

Revision Date 03/09/2015

Trade name: Beaulieu Luxury Vinyl Flooring &amp; Plank Adhesive

(Contd. of page 1)

· **Dangerous components:**

No hazardous/reportable components.

7732-18-5	water, distilled, conductivity or of similar purity
-----------	---

25-50%
--------

· **Additional information:**

All concentrations are in percent by weight unless the ingredient is a gas. Gas concentrations are in percent by volume. Any pigments or fillers in this product which may be considered "Hazardous" are potentially hazardous only if inhaled as an airborne dust. Exposure by these ingredients as used in sealants, putties, bedding compounds and non-sprayable products is highly unlikely. For the wording of the listed risk phrases refer to section 15.

### 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:**

Rinse opened eye for 20 minutes under running water. If eye becomes irritated, obtain medical treatment.

· **After swallowing:**

Rinse out mouth with water. Drink 1 - 2 glasses of water but **DO NOT** induce vomiting. Do not give liquids to a drowsy, convulsing or unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Seek medical treatment.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray.

Use fire fighting measures that suit the environment.

· **Special hazards arising from the substance or mixture** No further relevant information available.

· **Advice for firefighters**

· **Protective equipment:** Protective clothing and respiratory protective device.

### 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of contaminated material as waste in accordance with federal state and local regulations.

Ensure adequate ventilation.

(Contd. on page 3)

USA

# Safety Data Sheet

## acc. to OSHA HCS

Printing Date 03/09/2015

Revision Number 1

Revision Date 03/09/2015

**Trade name: Beaulieu Luxury Vinyl Flooring & Plank Adhesive**

(Contd. of page 2)

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Avoid prolonged or repeated contact with skin.

Avoid contact with eyes.

Wash thoroughly after handling.

Prevent formation of aerosols.

Open containers in a well ventilated area and avoid breathing headspace vapors.

· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** Store above 40F.

· **Information about storage in one common storage facility:** Store away from oxidizing agents.

· **Further information about storage conditions:**

Keep receptacle tightly sealed.

Protect product from freezing.

Freeze-thaw stable up to five cycles at 20F.

· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment (see listings below)**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

· **Breathing equipment:** Not necessary if room is well-ventilated.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

Nitrile rubber, NBR

Chloroprene rubber, CR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing Date 03/09/2015

Revision Number 1

Revision Date 03/09/2015

Trade name: Beaulieu Luxury Vinyl Flooring &amp; Plank Adhesive

(Contd. of page 3)

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

Safety glasses with side shields.

- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Paste

**Color:** White

- **Odor:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value at 20 °C (68 °F):** 7.5

- **Change in condition**

**Melting point:** Undetermined.

**Boiling point:** 100 °C (212 °F)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:**

**Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Flammable limits:**

**Lower:** % by volume = .9

**Upper:** % by volume = 6.7

- **Vapor pressure at 20 °C (68 °F):** 23 hPa (17 mm Hg)

- **Specific gravity at 20 °C (68 °F):** 1.17 g/cm<sup>3</sup> (9.764 lbs/gal)

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

**Water:** Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

**Dynamic:** Not determined.

**Kinematic:** Not determined.

(Contd. on page 5)

USA

# Safety Data Sheet

## acc. to OSHA HCS

Printing Date 03/09/2015

Revision Number 1

Revision Date 03/09/2015

Trade name: Beaulieu Luxury Vinyl Flooring &amp; Plank Adhesive

(Contd. of page 4)

- **Solvent content:**
  - Organic solvents:** 0.0 %
  - VOC (Per EPA 24)** not available GMS/L
- **Other information**
  - California VOC Compliance:
  - Solvent Free Product
  - SCAQMD Rule 1168: VOC Compliant
  - SCAQMD Rule 443.1: Grams per Liter of Material <1 gram/liter
  - Grams per Liter of Coating <1 gram/liter

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** Temperatures below 40F (4.4C)
- **Incompatible materials:** Reacts with oxidizing agents.
- **Hazardous decomposition products:**
  - Carbon monoxide and carbon dioxide
  - Nitrogen oxides
  - Hydrocarbons

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - on the skin:** May irritate the skin.
  - on the eye:** May irritate the eye.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
  - The product is not subject to classification according to internally approved calculation methods for preparations.
  - When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **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.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

(Contd. on page 6)



# Safety Data Sheet

## acc. to OSHA HCS

Printing Date 03/09/2015

Revision Number 1

Revision Date 03/09/2015

Trade name: Beaulieu Luxury Vinyl Flooring &amp; Plank Adhesive

(Contd. of page 5)

- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** At present there are no ecotoxicological assessments.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

### 14 Transport information

- |  |  |
|--|--|
| · <b>UN-Number</b>   |  |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | not regulated  |
| · <b>UN proper shipping name</b>   |  |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   | not regulated  |
| · <b>Transport hazard class(es)</b>  |  |
| · <b>DOT, ADR, ADN, IMDG, IATA</b>   |  |
| · <b>Class</b>   | not regulated  |
| · <b>Packing group</b>   |  |
| · <b>DOT, ADR, IMDG, IATA</b>  | not regulated  |
| · <b>Environmental hazards:</b>  | Not applicable.                                      |
| · <b>Special precautions for user</b>  | Not applicable.                                      |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                       | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>  | -  |

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

#### · Section 355 (extremely hazardous substances):

None of the ingredients is listed.

#### · Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

(Contd. on page 7)

USA

# Safety Data Sheet

## acc. to OSHA HCS

Printing Date 03/09/2015

Revision Number 1

Revision Date 03/09/2015

**Trade name: Beaulieu Luxury Vinyl Flooring & Plank Adhesive**

(Contd. of page 6)

**· TSCA (Toxic Substances Control Act):**
*All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.*
**· Proposition 65**
**· Chemicals known to cause cancer:**
*None of the ingredients is listed.*
**· Chemicals known to cause reproductive toxicity:**
*None of the ingredients is listed.*
**· (DSL) Canada Domestic Substance List**
*All components of this product are on the DSL(Canada Domestic Substance list) or are exempt from DSL requirements.*
**· Cancerogenicity categories**
**· EPA (Environmental Protection Agency)**
*None of the ingredients is listed.*
**· TLV (Threshold Limit Value established by ACGIH)**
*None of the ingredients listed.*
**· MAK (German Maximum Workplace Concentration)**
*None of the ingredients is listed.*
**· NIOSH-Ca (National Institute for Occupational Safety and Health)**
*None of the ingredients is listed.*
**· National regulations:**
**· Water hazard class:** *Generally not hazardous for water.*
**· Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

## 16 Other information

Although the information and recommendations set forth in this SDS are presented in good faith and are believed to be correct as of the date of this SDS, Royal Adhesives & Sealants makes no representations as to the completeness or accuracy thereof. Information is supplied on the condition that the persons receiving and using it will make their own determination as to the suitability for their purpose prior to use. In no event will Royal Adhesives & Sealants or any affiliate thereof be responsible for damages of any nature whatsoever resulting from the use or reliance on the information set forth in the SDS.

**· Department issuing SDS:** *Environment protection department.*
**· Creation Date:** *02/12/2014*
**· Date of preparation / last revision** *03/09/2015 / -*
**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 464.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Lycopodium

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 or 2). Flammable solid (H228). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

Be especially aware of the potential for a dust explosion. Avoid creating dust when using this material.

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Lycopodium	8023-70-9	Unspecified	Unspecified	
Synonyms: Club moss; Vegetable sulfur				

### 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

Flammable powder.

Fine powders such as this are easily combustible.

**In case of fire:** Use a tri-class dry chemical fire extinguisher (P370+P378).

NFPA CODE

None  
established

### 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**

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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, inside a Flinn Saf-Stor™ can. Ground or bond container and receiving equipment (P240). Use explosion-proof electrical and ventilating equipment (P241).

---

**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

---

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling. Be especially aware of the potential for a dust explosion. Avoid creating dust when using this material. Use only in a hood or in a well-ventilated area.

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Very fine yellow-brown powder. Odor of fresh cut wood.

Spores of *Lycopodium clavatum*.

Soluble: Generally insoluble in water and organic solvents.

---

**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid any source of flame near a fine powder because a fire or explosion may result.

Shelf life: Indefinite, if stored properly. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: N.A.

ORL-RAT LD<sub>50</sub>: N.A.

Chronic effects: Possible allergen.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: N.A.

SKN-RBT LD<sub>50</sub>: N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #26a is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Flammable Solid, Organic, N.O.S. (Lycopodium). Hazard class: 4.1, Flammable solid. UN number: UN1325.

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

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Not listed.

---

**SECTION 16 — OTHER INFORMATION**

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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

# SAFETY DATA SHEET



HEALTH • HYGIENE • HOME

Professional Lysol® Brand III Kills 99.9% of Viruses & Bacteria\*\* Disinfectant Spray,  
All Scents

## 1. Product and company identification

**Product name** : Professional Lysol® Brand III Kills 99.9% of Viruses & Bacteria\*\* Disinfectant Spray, All Scents

**Distributed by** : Reckitt Benckiser LLC.  
Morris Corporate Center IV  
399 Interpace Parkway (P.O. Box 225)  
Parsippany, New Jersey 07054-0225  
+1 973 404 2600

**Emergency telephone number (Medical)** : 1-800-338-6167

**Emergency telephone number (Transport)** : 1-800-424-9300 (U.S. & Canada) CHEMTREC  
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887

**Website:** : <http://www.rbnainfo.com>

**Product use** : Disinfectant.

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

**SDS #** : D0224478 v5.0

**Formulation #:** : 1338-022 (0175933) Original  
1544-106 (0175940) Fresh  
1338-019 (0175919) Country  
1178-172 (0175917) Crisp Linen / Crystal Waters  
1338-015 (0175918) Spring Waterfall  
1338-026 (0175929) Early Morning Breeze / Lavender

**EPA ID No.** : 777-99-675

**UPC Code / Sizes** : 19 oz. Aerosol Cans  
Original Scent, 36241-04650  
Fresh, 36241-04675  
Country Scent®, 36241-74276  
Crisp Linen®, 36241-74828  
Spring Waterfall®, 36241-76075  
Crystal Waters, 36241-84044  
Early Morning Breeze, 36241-81737  
Lavender, 36241-89097

D0224478 v5.0

## 2. Hazards identification

**Classification of the substance or mixture** : FLAMMABLE AEROSOLS - Category 2

### GHS label elements

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : Flammable aerosol.  
Pressurized container: may burst if heated.

### Precautionary statements

**General** : Keep out of reach of children. If medical advice is needed, have product container or label at hand.

**Prevention** : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Pressurized container: Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source.

**Response** : Not applicable.

**Storage** : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

**Disposal** : Not applicable.

**Supplemental label elements** : None known.

**Hazards not otherwise classified** : None known.

## 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	%	CAS number
Ethyl alcohol	30 - 60	64-17-5
butane	1 - 5	106-97-8
propane	< 2.5	74-98-6

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.**

## 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.

## 4. First aid measures

- 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. Get medical attention if symptoms occur. 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** : May cause eye irritation upon direct contact with eyes.
- 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** : Adverse symptoms may include the following:  
irritation  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- 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)

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## 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** : 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

**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.

## 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. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. 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.



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## 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.

## 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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.

- Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away 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. Use appropriate containment to avoid environmental contamination.

## 8. Exposure controls/personal protection

### Control

#### Occupational exposure limits

Ingredient name	Exposure limits
Ethyl alcohol	<b>ACGIH TLV (United States, 6/2013).</b> STEL: 1000 ppm 15 minutes. <b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2013).</b> TWA: 1000 ppm 10 hours. TWA: 1900 mg/m <sup>3</sup> 10 hours. <b>OSHA PEL (United States, 2/2013).</b> TWA: 1000 ppm 8 hours. TWA: 1900 mg/m <sup>3</sup> 8 hours.
butane	<b>OSHA PEL 1989 (United States, 3/1989).</b> TWA: 800 ppm 8 hours. TWA: 1900 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 10/2013).</b> TWA: 800 ppm 10 hours. TWA: 1900 mg/m <sup>3</sup> 10 hours. <b>ACGIH TLV (United States, 6/2013).</b> STEL: 1000 ppm 15 minutes.

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## 8. Exposure controls/personal protection

propane

**OSHA PEL 1989 (United States, 3/1989).**

TWA: 1000 ppm 8 hours.

TWA: 1800 mg/m<sup>3</sup> 8 hours.**NIOSH REL (United States, 10/2013).**

TWA: 1000 ppm 10 hours.

TWA: 1800 mg/m<sup>3</sup> 10 hours.**OSHA PEL (United States, 2/2013).**

TWA: 1000 ppm 8 hours.

TWA: 1800 mg/m<sup>3</sup> 8 hours.

### 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. 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.

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## 9. Physical and chemical properties

### Appearance

**Physical state** : Liquid. [Aerosol.]

**Color** : Clear.

**Odor** : Characteristic.

**Odor threshold** : Not available.

**pH** : 10.8 to 11.8 [Conc. (% w/w): 100%]

**Melting point** : Not available.

**Boiling point** : Not available.

**Flash point** : Closed cup: 25.6°C (78.1°F)

**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** : 0.8667 to 0.8967 g/cm<sup>3</sup> [20 to 25°C]

**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.

### Aerosol product

**Type of aerosol** : Spray

**Heat of combustion** : 17.99 kJ/g

**Ignition distance** : <45.72 cm

## 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).

**Incompatible materials** : Do not mix with household chemicals.

**Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

D0224478 v5.0

# 11. Toxicological information

## Information on toxicological effects

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ethyl alcohol	LC50 Inhalation Vapor	Rat	124700 mg/m <sup>3</sup>	4 hours
*Professional Lysol® Disinfectant Spray, All Scents (Aerosol)	LD50 Oral	Rat	7 g/kg	-
	LC50 Inhalation Vapor	Rat	>2.12 mg/l	4 hours
				Maximum attainable concentration

**Conclusion/Summary** : Not classified Harmful. \*Information is based on toxicity test result of the concentrate of a similar product.

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ethyl alcohol	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes 100 milligrams	-
*Professional Lysol® Disinfectant Spray, All Scents (Aerosol)	Eyes - Mild irritant	Rabbit	-	24 hours 500 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	-
	Eyes - Cornea opacity	Rabbit	< 1	72 hours	4 days
	Skin - Primary dermal irritation index (PDII)	Rabbit	0.3	4 hours	72 hours

### Conclusion/Summary

**Skin** : Slightly irritating to the skin. \*Information is based on toxicity test result of the concentrate of a similar product.

**Eyes** : Moderately irritating to eyes. \*Information is based on toxicity test result of the concentrate of a similar product.

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Classification

Product/ingredient name	OSHA	IARC	NTP
Ethyl alcohol	-	1	-

### Reproductive toxicity

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## 11. Toxicological information

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** : May cause eye irritation upon direct contact with eyes.  
**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** : Adverse symptoms may include the following:  
 irritation  
 redness  
**Inhalation** : Adverse symptoms may include the following:  
 respiratory tract irritation  
 coughing  
**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.

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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.

### Numerical measures of toxicity

#### Acute toxicity estimates

Not available.

## 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
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

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Ethyl alcohol	-0.35	-	low

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.






## 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. Do not puncture or incinerate container.

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## 13. Disposal considerations

## 14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>DOT Classification</b>	UN1950	Aerosols, flammable	2.1	-		Limited quantity
<b>TDG Classification</b>	UN1950	Aerosols, flammable	2.1	-		Limited quantity
<b>Mexico Classification</b>	UN1950	AEROSOL	2.1	-		Limited quantity
<b>IMDG Class</b>	UN1950	Aerosols, flammable	2.1	-		Limited quantity
<b>IATA-DGR Class</b>	UN1950	Aerosols, flammable	2.1	-		See DG List

PG\* : Packing group

## 15. Regulatory information

**U.S. Federal regulations** : TSCA 8(a) PAIR: 2-methylpropan-2-ol  
 TSCA 8(a) CDR Exempt/Partial exemption: Not determined  
 United States inventory (TSCA 8b): All components are listed or exempted.  
 Clean Water Act (CWA) 311: ammonia  
 Clean Air Act (CAA) 112 regulated flammable substances: butane; propane

Clean Air Act Section 112 : Not listed

(b) Hazardous Air Pollutants (HAPs)

Clean Air Act Section 602 : Not listed  
 Class I Substances

Clean Air Act Section 602 : Not listed  
 Class II Substances

DEA List I Chemicals : Not listed  
 (Precursor Chemicals)

DEA List II Chemicals : Not listed  
 (Essential Chemicals)

SARA 302/304

Composition/information on ingredients

No products were found.

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## 15. Regulatory information

SARA 304 RQ : Not applicable.

## SARA 311/312

Classification : Fire hazard

## Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Ethyl alcohol	30 - 60	Yes.	No.	No.	Yes.	No.

## State regulations

Massachusetts : The following components are listed: ETHYL ALCOHOL; BUTANE; PROPANE

New York : None of the components are listed.

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL; BUTANE; PROPANE

Pennsylvania : The following components are listed: DENATURED ALCOHOL; BUTANE; PROPANE

## Label elements

Signal word: : CAUTION

Hazard statements : Causes moderate eye irritation

Precautionary measures : Do not get in eyes, on skin or on clothing. Wash thoroughly after handling. Wash with soap and water.

Keep out of the reach of children.

CONTENTS UNDER PRESSURE. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120 °F. Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

Hazard statements :



Flammable

## 16. Other information

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

Health	1
Flammability	3
Physical hazards	0
Personal protection	B

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.

Code # : D0224478\_US  
Professional

SDS # : D0224478 v5.0

Date of issue : 26/06/2015.

12/14



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## 16. Other information

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



NFPA (30B) aerosol Flammability Level 1

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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.

**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

**Date of issue** : 26/06/2015.

**Date of previous issue** : 09/04/2015.

**Version** : 5

**Prepared by** : Reckitt Benckiser LLC.  
Product Safety Department  
1 Philips Parkway  
Montvale, New Jersey 07646-1810 USA.  
FAX: 201-476-7770

**Revision comments** : Revision as per US GHS. Correction to NFPA 30B level.

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.

D0224478 v5.0

## 16. Other information



RB is a member of the CSPA Product Care Product Stewardship Program.

## Section 1. Product and Company Identification

<b>Product Name</b>	<b>NEUTRA AIR® From the Makers of LYSOL® BRAND PRODUCTS, AIR TREATMENT, ALL SCENTS (AEROSOL)</b>	<b>MSDS#</b>	Not available.
<b>Product Description</b>	Eliminates odors in the air caused by germs.	<b>Validation Date</b>	<b>10/1/2003</b>
<b>Manufacturer</b>	Reckitt Benckiser Inc. 1655 Valley Road Wayne, N.J. 07474	<b>Print Date</b>	10/7/2003
<b>Product Identifier</b>	Not available.	<b>In case of Emergency:</b>	Telephone: 800-228-4722
<b>Item Number</b>	379826	<b>Transportation Emergencies:</b>	Chemtrec: 1-800-424-9300 (U.S. & Canada)
<b>Formula Number</b>	677-132A (F/F 379826) Fresh scent; 677-132B (F/F 379828) Citrus; 677-132C (F/F 379829) Floral scent; 926-038B (F/F 383141) Sparkling Waters.		
<b>UPC Number</b>	19200-76938 (10 oz. Aerosol can) Fresh scent; 19200-76940 (10 oz. Aerosol can) Citrus; 19200-76939 (10 oz. Aerosol can) Floral scent; 19200-77360 (10 oz. Aerosol can) Sparkling Waters scent.		

## Section 2. Composition and Information on Ingredients

Name	CAS #	% by Weight	Exposure Limits : TLV/PEL
1) N-BUTANE	106-97-8	16-20	TWA: 1900 (mg/m <sup>3</sup> ) from ACGIH (TLV) [United States] TWA: 800 (ppm) from ACGIH (TLV) [United States]
2) PROPANE	74-98-6	5-9	TWA: 1000 (ppm) from OSHA (PEL) [United States] TWA: 2500 from ACGIH (TLV) [United States] TWA: 1000 (ppm) from NIOSH (10 Hr. TWA) [United States]

## Section 3. Hazards Identification

<b>Emergency Overview</b>	CAUTION: CONTENTS UNDER PRESSURE. May cause eye irritation. Do not spray in eyes. Do not puncture or incinerate container. Do not expose to heat or store at temperature above 120°F (50°C), as container may burst.  KEEP OUT OF REACH OF CHILDREN.
---------------------------	--

## Section 4. First Aid Measures

<b>Eye Contact</b>	In case of eye contact, hold eyes open and IMMEDIATELY rinse eyes thoroughly with plenty of water. Remove any contact lenses and continue rinsing for at least 15 minutes. If irritation occurs, get medical attention.
<b>Skin Contact</b>	In keeping with good hygienic practices, wash exposed areas thoroughly with soap and water.
<b>Inhalation</b>	Remove to fresh air.  NOTE TO PARENTS: Intentional misuse by deliberately concentrating and inhaling aerosol products may be harmful or fatal. Help stop inhalation abuse; for information call 1-800228-4722.
<b>Ingestion</b>	Rinse mouth with water. Contact a physician or poison control center if symptoms develop. NEVER give an unconscious person anything to ingest.

### **Section 5. Fire and Explosion Data**

<b>Flammability</b>	See Section 14 for any Shipping Classifications.
<b>Flash Point</b>	Not applicable. Aerosol flame extension less than 18 inches or 45 cm.
<b>Explosive Limits in Air</b>	Not available.
<b>Products of Combustion</b>	Not available.
<b>Fire and Explosion Hazards</b>	CONTENTS UNDER PRESSURE. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120°F (50°C), as container may burst.
<b>Fire Fighting Media and Instructions</b>	Use water spray, foam, dry chemical or carbon dioxide, as suitable, for the surrounding fire.
<b>Special Fire Fighting Instructions</b>	Move containers away from fire, if possible and safe to do so. Use water spray to cool fire-exposed containers. Provide shielding for venting, rupturing or bursting containers. Wear self-contained breathing apparatus and full protective clothing appropriate for fighting a chemical fire.

### **Section 6. Accidental Release Measures**

<b>Accidental Spill</b>	Small spill of liquid or spray residue: Absorb with an inert material and place in an appropriate waste disposal container.  Large spills from ruptured containers: Eliminate all sources of ignition and ventilate the area with equipment rated for use in flammable environments. Collect liquid and store in metal containers for disposal according to local, state or federal regulations.
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### **Section 7. Handling and Storage**

<b>Handling and Storage</b>	CAUTION: CONTENTS UNDER PRESSURE. May cause eye irritation. Do not spray in eyes. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120°F (50°C), as container may burst.  Store containers in an upright position in a cool, dry place in areas inaccessible to children. KEEP OUT OF REACH OF CHILDREN.
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### **Section 8. Exposure Controls/Personal Protection**

<b>Ventilation Requirements</b>	None required under normal use conditions.
<b>Eye Protection</b>	Avoid contact with eyes. Eye irritation may result from direct contact with the spray. Emergency responders should wear full eye and face protection.
<b>Skin Protection</b>	None required. Emergency responders should wear impermeable gloves.
<b>Respiratory Protection</b>	None required.
<b>Other Protection</b>	None normally required. Emergency responders should wear impermeable clothing and footwear when responding to a situation where contact with the liquid is possible.
<b>Work/Hygienic Practices</b>	None required. Washing with soap and water after use is recommended as good hygienic practice to prevent possible eye irritation from hand contact.

**Section 9. Physical and Chemical Properties**

<b>Description</b>	Liquid. (Aerosol container.)	<b>Odor</b>	677-132A (Fresh), 677-123B (Citrus), 677-132C (Floral), 926-038B (Citrus, apple, jasmin, amber).
<b>pH</b>	Not available.	<b>Color</b>	Not applicable, colorless spray mist.
<b>Boiling/Condensation Point</b>	Not available.		
<b>Specific Gravity</b>	1.0 (concentrate)		
<b>Vapor Pressure</b>	Not available.		
<b>Vapor Density</b>	Not available.		
<b>Viscosity</b>	Not available.		
<b>Solubility</b>	Miscible in water.		
<b>Physical Chemical Comments</b>	Not available.		

**Section 10. Stability and Reactivity Data**

<b>Chemical Stability</b>	The product is stable at normal ambient temperatures.
<b>Conditions of Instability</b>	Temperatures above 120° F (50° C) which may cause aerosol container to rupture.
<b>Incompatibility with Various Substances</b>	None known.
<b>Hazardous Decomposition Products</b>	None known.
<b>Hazardous Polymerization</b>	Will not occur.

**Section 11. Toxicological Information**

**Exposure effects**

<b>Eye Contact</b>	May cause eye irritation upon direct contact with the eyes.
<b>Skin Contact</b>	None expected.
<b>Inhalation</b>	Avoid prolonged breathing of vapor. Intentional misuse by deliberately concentrating and inhaling contents can be harmful or fatal.
<b>Ingestion</b>	None expected.
<b>Carcinogenicity</b>	Not listed as carcinogenic by OSHA, NTP or IARC.

**Section 12. Ecological Information**

**Ecotoxicity** Not available.

**Section 13. Disposal Considerations**

**Waste Disposal** Discard individual empty container in trash. DO NOT PUNCTURE OR INCINERATE!

Large quantity disposal: Degas cans and discharge liquid contents to metal containers for evaluation and final disposal. Accumulate intact cans for transport to shredder, approved incinerator, or other facility in accord with local, state and federal regulations.

**Section 14. Transport Information**

**DOT Classification** Consumer Commodity, ORM-D

**Proper Shipping Name** Not applicable.

**DOT Identification Number** Not applicable.

**Packing Group** Not applicable.

**Maritime Transportation** Not applicable.

**Hazardous Substances  
Reportable Quantity** Not applicable.

**Special Provisions for  
Transport** Not applicable.

**TDG Classification** Consumer Commodity / Limited Quantity, Transborder Consignment.

**ADR Classification** Not applicable.

**IMDG Classification** Aerosols, Class 2, UN1950 - Limited Quantity.

**IATA Classification** Aerosols, Division 2.2, UN1950 - Limited Quantity.

**Section 15. Regulatory Information**

**Federal and State  
Regulations** SARA Title III, Section 313 Toxic Chemical Notification & Release Reporting:  
None  
  
California Proposition 65: This product contains the following ingredients which require a warning under the Safe Drinking Water & Toxic Enforcement Act:  
None

**Other Classifications** **WHMIS (Canada)** Not controlled under WHMIS (Canada).

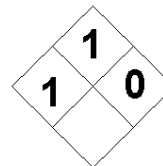
**Section 16. Other Information**

**HMIS (U.S.A.)**

Health Hazard	1
Fire Hazard	3
Reactivity	0
Personal Protection	B

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

Health



Fire Hazard

Reactivity

Specific hazard

**NFPA Aerosol Level**

1, per NFPA 30B

**Validated by Product Safety on 10/1/2003.**

**Printed 10/7/2003.**

**Notice to Reader**

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[Close this window](#)

SDS

**Common Name:** M-1 GLOSS REMOVER**Manufacturer:** SUNNYSIDE**SDS Revision Date:** 5/28/2015**SDS Format:** GHS-US**Grainger Item Number(s):** 44ZU16**Manufacturer Model Number(s):**

## SDS Table of Contents

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SAFETY DATA SHEET

PRODUCT NUMBER: 622

REVISION NUMBER: 3

ISSUING DATE: 05-MAY-2015

REVISION DATE: 05/28/15

UL

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## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE



COMPANY/UNDERTAKING

PRODUCT IDENTIFIER:



PRODUCT NAME: M-1 GLOSS REMOVER

OTHER MEANS OF IDENTIFICATION:

SYNONYMS: NONE

RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE:

RECOMMENDED USE: PAINT BRUSH CLEANER

USES ADVISED AGAINST: NO INFORMATION AVAILABLE

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:

SUPPLIER NAME: SUNNYSIDE CORPORATION

SUPPLIER ADDRESS:  
225 CARPENTER AVENUE  
WHEELING, IL 60090  
US

SUPPLIER PHONE NUMBER:  
PHONE: 8475415700  
FAX: 8475419043

SUPPLIER EMAIL: SSCONTACT@SUNNYSIDECORP.COM

EMERGENCY TELEPHONE NUMBER:  
CHEM TREC: 800-424-9300

## 2. HAZARDS IDENTIFICATION



CLASSIFICATION:  
THIS CHEMICAL IS CONSIDERED HAZARDOUS BY THE 2012 OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200)

SERIOUS EYE DAMAGE/EYE IRRITATION: CATEGORY 1

GHS LABEL ELEMENTS, INCLUDING PRECAUTIONARY STATEMENTS:

EMERGENCY OVERVIEW:

SIGNAL WORD: DANGER

HAZARD STATEMENTS: CAUSES SERIOUS EYE DAMAGE

CORROSION

APPEARANCE: CLEAR

PHYSICAL STATE: LIQUID

ODOR: MILD

PRECAUTIONARY STATEMENTS - PREVENTION:  
WEAR PROTECTIVE GLOVES/PROTECTIVE CLOTHING/EYE PROTECTION/FACE PROTECTION

PRECAUTIONARY STATEMENTS - RESPONSE:

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

PRECAUTIONARY STATEMENTS - STORAGE: NONE

PRECAUTIONARY STATEMENTS - DISPOSAL: NONE

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC): NOT APPLICABLE

UNKNOWN TOXICITY:

0% OF THE MIXTURE CONSISTS OF INGREDIENT(S) OF UNKNOWN TOXICITY

OTHER INFORMATION: HARMFUL TO AQUATIC LIFE WITH LONG LASTING EFFECTS

INTERACTIONS WITH OTHER CHEMICALS: NO INFORMATION AVAILABLE.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS



CHEMICAL NAME	CAS NO	WEIGHT-%	TRADE SECRET
TETRASODIUM ETHYLENEDIAMINETETRA ACETATE	64-02-8	1-5	
ALCOHOLS, ETHYOXYLATED, C9-C11	68439-46-3	1-5	
*THE EXACT PERCENTAGE (CONCENTRATION) OF COMPOSITION HAS BEEN WITHHELD AS A TRADE SECRET			

### 4. FIRST AID MEASURES



FIRST AID MEASURES:

GENERAL ADVICE:

IMMEDIATE MEDICAL ATTENTION IS REQUIRED. SHOW THIS SAFETY DATA SHEET TO THE DOCTOR IN ATTENDANCE.

EYE CONTACT:

RINSE IMMEDIATELY WITH PLENTY OF WATER, ALSO UNDER THE EYELIDS, FOR AT LEAST 15 MINUTES. KEEP EYE WIDE OPEN WHILE RINSING. DO NOT RUB AFFECTED AREA. SEEK IMMEDIATE MEDICAL ATTENTION/ADVICE.

SKIN CONTACT:

WASH OFF IMMEDIATELY WITH SOAP AND PLENTY OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION IF IRRITATION DEVELOPS AND PERSISTS.

INHALATION:

REMOVE TO FRESH AIR. GET MEDICAL ATTENTION IMMEDIATELY IF SYMPTOMS OCCUR.

INGESTION:

RINSE MOUTH IMMEDIATELY AND DRINK PLENTY OF WATER. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT INDUCE VOMITING. CALL A PHYSICIAN.

SELF-PROTECTION OF THE FIRST AIDER:

AVOID CONTACT WITH SKIN, EYES OR CLOTHING. USE PERSONAL PROTECTIVE EQUIPMENT AS REQUIRED. WEAR PERSONAL PROTECTIVE CLOTHING (SEE SECTION 8).

MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

MOST IMPORTANT SYMPTOMS AND EFFECTS: BURNING SENSATION.

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 SKIN, EYES OR CLOTHING. 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. PREVENT FURTHER LEAKAGE OR SPILLAGE IF SAFE TO DO SO.

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:  
SOAK UP WITH INERT ABSORBENT MATERIAL. 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 SKIN, EYES OR CLOTHING. DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

STORAGE:  
KEEP CONTAINERS TIGHTLY CLOSED IN A DRY, COOL AND WELL-VENTILATED PLACE.  
STORE LOCKED UP. KEEP OUT OF THE REACH OF CHILDREN.

INCOMPATIBLE PRODUCTS:  
STRONG OXIDIZING AGENTS. STRONG ACIDS. STRONG BASES.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION



## CONTROL PARAMETERS:

## 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 MEASURES:

SHOWERS  
EYEWASH STATIONS  
VENTILATION SYSTEMS

## INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: TIGHT SEALING SAFETY GOGGLES.

SKIN AND BODY PROTECTION: WEAR PROTECTIVE GLOVES AND PROTECTIVE CLOTHING.

## 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.  
AVOID CONTACT WITH SKIN, EYES OR CLOTHING. WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION. DO NOT EAT, DRINK OR SMOKE WHEN USING THIS PRODUCT.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

## PHYSICAL AND CHEMICAL PROPERTIES:

PHYSICAL STATE: LIQUID

APPEARANCE: CLEAR

ODOR: MILD

COLOR: NO INFORMATION AVAILABLE

ODOR THRESHOLD: NO INFORMATION AVAILABLE

PROPERTY	VALUES	REMARKS METHOD
PH	11	NONE KNOWN
MELTING / FREEZING POINT	NO DATA AVAILABLE	NONE KNOWN
BOILING POINT / BOILING RANGE	100 DEG. C / 212 DEG. F	NONE KNOWN
FLASH POINT	NONE	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	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
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:  
STRONG OXIDIZING AGENTS. STRONG ACIDS. STRONG BASES.

HAZARDOUS DECOMPOSITION PRODUCTS: CARBON OXIDES.

## 11. TOXICOLOGICAL INFORMATION



INFORMATION ON LIKELY ROUTES OF EXPOSURE:

PRODUCT INFORMATION:

INHALATION:  
SPECIFIC TEST DATA FOR THE SUBSTANCE OR MIXTURE IS NOT AVAILABLE. MAY CAUSE IRRITATION OF RESPIRATORY TRACT.

EYE CONTACT:  
SPECIFIC TEST DATA FOR THE SUBSTANCE OR MIXTURE IS NOT AVAILABLE. SEVERELY IRRITATING TO EYES. CAUSES SERIOUS EYE DAMAGE. MAY CAUSE BURNS. MAY CAUSE IRREVERSIBLE DAMAGE TO EYES.

SKIN CONTACT:

SPECIFIC TEST DATA FOR THE SUBSTANCE OR MIXTURE IS NOT AVAILABLE. MAY CAUSE IRRITATION. PROLONGED CONTACT MAY CAUSE REDNESS AND IRRITATION.

INGESTION:

SPECIFIC TEST DATA FOR THE SUBSTANCE OR MIXTURE IS NOT AVAILABLE. INGESTION MAY CAUSE IRRITATION TO MUCOUS MEMBRANES. INGESTION MAY CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING AND DIARRHEA.

COMPONENT INFORMATION:

INFORMATION ON TOXICOLOGICAL EFFECTS:

SYMPTOMS: ERYTHEMA (SKIN REDNESS). MAY CAUSE BLINDNESS. BURNING.

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: CONTAINS NO INGREDIENT LISTED AS A CARCINOGEN.

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.

TARGET ORGAN EFFECTS: EYES. SYSTEMIC TOXICITY.

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): 16,667.00 MG/KG

## 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)
TETRASODIUM ETHYLENE-DIAMINETETRA ACETATE	72H EC50: = 1.01 MG/L (DESMODESMUS SUBSPICATUS)	96H LC50: = 41 MG/L (LEPOMIS MACROCHIRUS) 96H LC50: = 59.8 MG/L (PIMEPHALES PROMELAS)		24H EC50: = 610 MG/L

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.

**14. TRANSPORT INFORMATION**

DOT: 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: YES

CHRONIC HEALTH HAZARD: NO

FIRE HAZARD: NO  
REACTIVE HAZARD: NO  
SUDDEN RELEASE OF PRESSURE 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:  
THIS PRODUCT DOES NOT CONTAIN ANY SUBSTANCES REGULATED BY STATE  
RIGHT-TO-KNOW REGULATIONS.

INTERNATIONAL REGULATIONS:

CANADA:  
WHMIS HAZARD CLASS: D2B - TOXIC MATERIALS

D2 - MATERIALS CAUSING OTHER TOXIC EFFECTS

## 16. OTHER INFORMATION



NFPA:  
HEALTH HAZARDS 3  
FLAMMABILITY 0  
INSTABILITY 0  
PHYSICAL AND CHEMICAL HAZARDS

HMIS:  
HEALTH HAZARDS 3  
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: 05-MAY-2015

REVISION DATE: 05-MAY-2015

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





## JOMAPS INC -- M-1 HOUSE WASH -- 6810-00N047946

## ===== Product Identification =====

Product ID:M-1 HOUSE WASH  
 MSDS Date:11/12/1987  
 FSC:6810  
 NIIN:00N047946  
 MSDS Number: BVBYT  
 === Responsible Party ===  
 Company Name:JOMAPS INC  
 Address:6500 INDUSTRIAL WAY  
 City:ALPHARETTA  
 State:GA  
 ZIP:30201  
 Country:US  
 Info Phone Num:404-396-0547  
 Emergency Phone Num:404-396-0547  
 Preparer's Name:FRED CONNELL  
 CAGE:3W844  
 === Contractor Identification ===  
 Company Name:JOMAPS INC  
 Address:6500 INDUSTRIAL WAY  
 Box:City:ALPHARETTA  
 State:GA  
 ZIP:30201  
 Country:US  
 Phone:404-396-0547  
 CAGE:3W844

## ===== Composition/Information on Ingredients =====

Ingrid Name:SODIUM HYDROXIDE (SARA III)  
 CAS:1310-73-2  
 RTECS #:WB4900000  
 Fraction by Wt: 1%  
 OSHA PEL:2 MG/M3  
 ACGIH TLV:2 MG/M3, C  
 EPA Rpt Qty:1000 LBS  
 DOT Rpt Qty:1000 LBS

## ===== 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:NO LONG TERM HAZARD. INHAL:CONCENTRATE  
 NOT VOLATILE SO NO INHAL SHOULD BE POSSIBLE. AVOID BREATHING SPRAY  
 MIST. SKIN:CONCENTRATE MAY IRRITATE OR BURN AFTER RPTD/PRLNG  
 CONTACT DUE TO HIGH ALKALINITY. I NGEST:CONCENTRATE WILL BE HARMFUL  
 IF SWALLOWED DUE TO ALKALINITY. WILL IRRITATE OR BURN MUCOUS  
 MEMBRANE TISSUE.  
 Explanation of Carcinogenicity:NOT RELEVANT  
 Effects of Overexposure:IRRITATION, STINGING, BURNING SENSATION.  
 Medical Cond Aggravated by Exposure:NONE KNOWN

## ===== First Aid Measures =====

First Aid:SKIN:WASH W/SOAP & WATER. EYES:FLUSH W/WATER FOR AT LEAST 15

MINUTES. CONTACT MD. INHAL:MOVE TO FRESH AIR. INGEST:DO NOT INDUCE VOMITING. GIVE LARGE QUANTITIES OF WATER. CONTACT MD AT ONCE.

===== Fire Fighting Measures =====

Flash Point:NONE

Extinguishing Media:MEDIA SUITABLE FOR SURROUNDING FIRE .

Fire Fighting Procedures:USE NIOSH/MSHA APPROVED SCBA & FULL PROTECTIVE EQUIPMENT .

Unusual Fire/Explosion Hazard:FIRE & HEAT MAY DRIVE OFF WATER LEAVING A CHEMICAL WHICH MAY BURN.

===== Accidental Release Measures =====

Spill Release Procedures:SOAK UP W/ABSORBENT MATERIAL.

Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

===== Handling and Storage =====

Handling and Storage Precautions:KEEP DRUMS & CONTAINERS OF CONCENTRATE CLOSED WHEN NOT IN USE. ALLOW TO WARM TO ROOM TEMPERATURES BEFORE DILUTION.

Other Precautions:NONE KNOWN

===== Exposure Controls/Personal Protection =====

Respiratory Protection:IF NECESSARY USE ONLY NIOSH/MSHA APPROVED AIR SUPPLIED RESPIRATOR.

Ventilation:LOCAL EXHAUST SUFFICIENT. MECHANICAL (GENERAL): USE IF LOCAL EXHAUST NOT AVAILABLE.

Protective Gloves:IMPERVIOUS GLOVES (SUCH AS (SUPP DATA)

Eye Protection:ANSI APPROVED CHEM WORK GOGGLES .

Other Protective Equipment:ANSI APPROVED EMERGENCY EYE WASH & DELUGE SHOWER . APPROPRIATE CLOTHING TO AVOID SKIN CONTACT.

Work Hygienic Practices:GOOD INDUSTRIAL HYGIENE PRACTICES RECOMMENDED.

Supplemental Safety and Health

BP:APPROX WATER. VP:APPROX WATER. VAP DENS:APPROX WATER. PROT GLOVES:RUBBER, NEOPRENE, POLYETHYLENE).

===== Physical/Chemical Properties =====

Boiling Pt:B.P. Text:SUPP DATA

Vapor Pres:SUPP DATA

Vapor Density:SUPP DATA

Spec Gravity:1.2 (H\*20=1)

Evaporation Rate & Reference:1 (BUTYL ACETATE=1)

Solubility in Water:COMPLETE

Appearance and Odor:YELLOW-GREEN LIQUID; MILD ODOR.

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

CONTACT W/STRONG ACIDS; CONTACT OF CONCENTRATE W/ACTIVE METAL FINES SUCH AS ALUMINUM. STORE AWAY FROM OXIDIZERS.

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:HYDROCARBON DECOMPOSITION PRODUCTS AT ELEVATED TEMPERATURES.

===== Disposal Considerations =====

Waste Disposal Methods:DISPOSE OF I/A/W LOCAL, STATE & FEDERAL  
REGULATIONS.

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

## FOR COATINGS, RESINS AND RELATED MATERIALS

DATE OF PREPARATION: September 19, 2005

### SECTION I - MANUFACTURER

NAME: M. A. BRUDER & SONS, INCORPORATED.  
ADDRESS: 600 REED ROAD  
CITY: BROOMALL STATE: PA ZIP CODE: 19008  
EMERGENCY TELEPHONE NO. DAY: 610-353-5100  
EMERGENCY TELEPHONE NO. NIGHTS & WEEKENDS: 610-359-3635

PRODUCT CODE: 410150  
PRODUCT NAME: FR KOTE LTX SG CLASSIC WH  
PRODUCT DESCRIPTION: FR KOTE LTX SG CLASSIC WHT  
PRODUCT CLASS:

### SECTION II - INGREDIENTS

MATERIAL DESCRIPTION	HAZARDOUS INGREDIENTS % BY WT.	EXPOSURE DATA
TITANIUM DIOXIDE CAS # 13463-67-7 LEL = NOT APPLICABLE VP (mm Hg @ 25 C) NOT APPLICABLE	11.0 - 30.0	TLV/TWA = 10 mg/m3 (1) TLV/STEL = NOT ESTABLISHED OSHA/PEL = 15 mg/m3 (1) SARA 313 NO
ETHYLENE GLYCOL CAS # 107-21-1 LEL = 3.2 VP (mm Hg @ 25 C) 0.1	1.0 - 10.0	TLV/TWA = 50 ppm (3) TLV/STEL = NOT ESTABLISHED OSHA/PEL = 50 ppm (3) SARA 313 YES
AROMATIC ESTER CAS # 84-74-2 LEL = NOT APPLICABLE VP (mm Hg @ 25 C) 2.0	1.0 - 10.0	TLV/TWA = 5 mg/m3 (1) TLV/STEL = NOT ESTABLISHED OSHA/PEL = 5 mg/m3 (1) SARA 313 YES
ALUMINUM SILICATE CAS # 1332-58-7 LEL = NOT APPLICABLE VP (mm Hg @ 25 C) NOT APPLICABLE	1.0 - 10.0	TLV/TWA = 2 mg/m3 (2) TLV/STEL = NOT ESTABLISHED OSHA/PEL = 5 mg/m3 (2) SARA 313 NO

CAS # - Chemical Abstract Number

LEL - Lower Exposure Limit

VP - Vapor Pressure

SARA 313 - SARA TITLE III (Superfund Amendments and Reauthorization Act)

TLV/TWA - Threshold Limit Value/Time Weighted Average

TLV/STEL - Threshold Limit Value/Short Term Exposure Limit

OSHA/PEL - Occupational Safety Health Administration/Permissible Exposure Limit

(1) - Dust Hazard does not apply to liquid paint

(2) - Respirable Dust

(3) - Ceiling Limit

### NON-HAZARDOUS INGREDIENTS - 3% OR MORE BY WEIGHT

INGREDIENT NAME	CAS NUMBER
WATER	7732-18-5
VINYL ACRYLIC POLYMER	UNKNOWN
ACRYLIC POLYMER	28377-44-8

### SECTION III - PHYSICAL DATA

BOILING RANGE: 202 - 644°F WEIGHT PER GALLON: 10.57 - 10.97 LBS  
VAPOR DENSITY: HEAVIER THAN AIR % VOLATILE BY VOLUME: 64.13 - 68.13 %  
EVAPORATION RATE: SLOWER THAN ETHYL ETHER

---

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

---

**Flash Point:** Non-Flammable  
**Method Used:** Not Applicable

**Flammability Classification:**  
OSHA Not Regulated  
DOT Not Regulated

**Extinguishing Media:** Dry Chemical or Foam.

**Special Fire Fighting Procedures:** Non-Flammable. Water may be used to cool and protect exposed containers.

**Unusual Fire and Explosion Hazards:** Closed containers may burst when exposed to extreme heat or fire.

---

**SECTION V - HEALTH HAZARD DATA**

---

**Primary Route(s) of Exposure:** Inhalation, Skin Contact

**Effects of Overexposure:**

Inhalation: Irritation of respiratory tract. Prolonged inhalation may lead to fatigue, drowsiness, dizziness and/or light-headedness, headache, nausea.

Skin Contact: Irritation of skin. Prolonged or repeated contact can cause dermatitis.

Eye Contact: Irritation of eyes. Prolonged or repeated contact can cause blurred vision, eye irritation, possible corneal injury.

Ingestion: Amounts ingested incidental to consumer and industrial handling are not likely to cause injury; however, ingestion of larger amounts may cause serious injury.

**Emergency and First Aid Procedures:**

Inhalation: Remove to fresh air. Restore and support continued breathing. Have trained person give oxygen if necessary. Get emergency medical attention.

Skin Contact: Wash off quickly with plenty of water, then soap and water; remove contaminated clothing. Wash contaminated clothing before reuse.

Eye Contact: Flush immediately with large amounts of water, especially under lids, for at least 15 minutes. Obtain emergency medical treatment.

Ingestion: If swallowed, obtain medical treatment immediately

---

**SECTION VI - REACTIVITY DATA**

---

**Stability:** Stable

**Incompatibility:** Materials to avoid: Oxidizers, Acids, Bases, Amines.

**Conditions to Avoid:** Elevated temperatures. Contact with oxidizing agents.

**Hazardous Decomposition Products:** If involved in fire from other causes, could conceivably result in release of 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:**

Collect in container for disposal, according to applicable health and environmental regulations. Clean up with water before allowing to dry.

**Waste Disposal Method:** Dispose in accordance with local, state and federal regulations. Avoid discharge to natural waters.

---

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

---

**Respiratory protection:** Control environmental concentrations below applicable standards. Approved chemical mechanical filter respirator designed to remove a combination of particulate and vapors (NIOSH/MSHA TC23C OR EQUIVALENT)

**Ventilation:** Maintain adequate ventilation to ensure air entry during application and drying, to prevent build-up of vapors.

**Personal Protective Equipment:** Eye wash, safety shower, safety glasses or goggles, impervious gloves, skin cream (if needed).

---

**NOTE:** The above information concerns this product as currently formulated and is based on information available at this time. The addition of thinners, reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are beyond our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

---

**SECTION IX - SPECIAL PRECAUTIONS**

---

**Precautions to be taken in handling and storing:** Do not store in sun or above 100 degree F. Keep from freezing.

**OSHA Storage Category:** Not regulated.

**Other Precautions:** Do not take internally. Keep out of the reach of children.

---

**NOTE:** The above information concerns this product as currently formulated and is based on information available at this time. The addition of thinners, reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are beyond 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

## FOR COATINGS, RESINS AND RELATED MATERIALS

DATE OF PREPARATION: March 1, 2005

### SECTION I - MANUFACTURER

NAME: M. A. BRUDER & SONS, INCORPORATED.  
ADDRESS: 600 REED ROAD  
CITY: BROOMALL STATE: PA ZIP CODE: 19008  
EMERGENCY TELEPHONE NO. DAY: 610-353-5100  
EMERGENCY TELEPHONE NO. NIGHTS & WEEKENDS: 610-359-3635  
  
PRODUCT CODE: 043150  
PRODUCT NAME: ROL ACRYLIC DTM GL WHITE  
PRODUCT DESCRIPTION: ROL ACRYLIC DTM GLOSS WHITE  
PRODUCT CLASS:

### SECTION II - INGREDIENTS

MATERIAL DESCRIPTION	HAZARDOUS INGREDIENTS	
	% BY WT.	EXPOSURE DATA
TITANIUM DIOXIDE	11.0 - 30.0	TLV/TWA = 10 mg/m3 (1)
CAS # 13463-67-7		TLV/STEL = NOT ESTABLISHED
LEL = NOT APPLICABLE		OSHA/PEL = 15 mg/m3 (1)
VP (mm Hg @ 25 C) NOT APPLICABLE		SARA 313 NO
PETROLEUM DISTILLATE	1.0 - 10.0	TLV/TWA = 100 ppm (4)
CAS # 8052-41-3		TLV/STEL = NOT ESTABLISHED
LEL = 1.1		OSHA/PEL = 100 ppm (4)
VP (mm Hg @ 25 C) 2.0		SARA 313 NO
2-BUTOXYETHANOL	1.0 - 10.0	TLV/TWA = 25 ppm
CAS # 111-76-2		TLV/STEL = NOT ESTABLISHED
LEL = 1.1		OSHA/PEL = 25 ppm
VP (mm Hg @ 25 C) 0.6		SARA 313 YES
2-(2-BUTOXYETHOXY) ETHANOL	1.0 - 10.0	TLV/TWA = NOT ESTABLISHED
CAS # 112-34-5		TLV/STEL = NOT ESTABLISHED
LEL = 0.9		OSHA/PEL = NOT ESTABLISHED
VP (mm Hg @ 25 C) 0.1		SARA 313 YES

CAS # - Chemical Abstract Number

LEL - Lower Exposure Limit

VP - Vapor Pressure

SARA 313 - SARA TITLE III (Superfund Amendments and Reauthorization Act)

TLV/TWA - Threshold Limit Value/Time Weighted Average

TLV/STEL - Threshold Limit Value/Short Term Exposure Limit

OSHA/PEL - Occupational Safety Health Administration/Permissible Exposure Limit

(1) - Dust Hazard does not apply to liquid paint

(4) - As Stoddard Solvent

### NON-HAZARDOUS INGREDIENTS - 3% OR MORE BY WEIGHT

INGREDIENT NAME	CAS NUMBER
WATER	7732-18-5
STYRENE ACRYLIC POLYMER	UNKNOWN

### SECTION III - PHYSICAL DATA

BOILING RANGE: 94 - 446 F WEIGHT PER GALLON: 9.80 - 10.20 LBS  
VAPOR DENSITY: HEAVIER THAN AIR % VOLATILE BY VOLUME: 59.83 - 63.83 %  
EVAPORATION RATE: SLOWER THAN ETHYL ETHER

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 168 F  
Method Used: E

Flammability Classification:  
OSHA Combustible Liquid  
Class IIIA  
DOT Combustible Liquid



**Extinguishing Media:** Dry Chemical or Foam.

**Special Fire Fighting Procedures:** Water may be used to cool and protect exposed containers.

**Unusual Fire and Explosion Hazards:** Closed containers may explode when exposed to extreme heat or fire. Vapors can form explosive mixtures in air at elevated temperatures. May decompose under fire conditions emitting irritant and/or toxic gases.

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#### SECTION V - HEALTH HAZARD DATA

---

**Primary Route(s) of Exposure:** Inhalation, Skin Contact

**Effects of Overexposure:**

Inhalation: Irritation of respiratory tract. Prolonged inhalation may lead to fatigue, drowsiness, dizziness and/or light-headedness, headache, lack of coordination, nausea, vomiting, central nervous system depression, anesthetic effect or narcosis.

Skin Contact: Irritation of skin. Prolonged or repeated contact can cause dermatitis, defatting.

Eye Contact: Irritation of eyes. Prolonged or repeated contact can cause blurred vision, redness of eyes, tearing of eyes, severe eye irritation.

Ingestion: Amounts ingested incidental to consumer and industrial handling are not likely to cause injury; however, ingestion of larger amounts may cause lung inflammation and damage due to aspiration of material into lungs.

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 may be harmful or fatal.

**Emergency and First Aid Procedures:**

Inhalation: Remove to fresh air. Restore and support continued breathing. Have trained person give oxygen if necessary. Get emergency medical attention.

Skin Contact: Wash off quickly with plenty of water, then soap and water; remove contaminated clothing. Wash contaminated clothing before reuse.

Eye Contact: Flush immediately with large amounts of water, especially under lids, for at least 15 minutes. Obtain emergency medical treatment.

Ingestion: If swallowed, obtain medical treatment immediately

---

#### SECTION VI - REACTIVITY DATA

---

**Stability:** Stable

**Incompatibility:** Materials to avoid: Oxidizers, Acids, Bases, Amines.

**Conditions to Avoid:** Elevated temperatures. Contact with oxidizing agents.

**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:** Remove all sources of ignition (flame, hot surfaces, and electrical, static sparks). Ventilate area and avoid breathing vapors. Contain and remove with inert absorbent material using non sparking tools.

**Waste Disposal Method:** Dispose in accordance with local, state and federal regulations. Avoid discharge to natural waters.

---

#### SECTION VIII - SPECIAL PROTECTION INFORMATION

---

**Respiratory protection:** Control environmental concentrations below applicable standards. Approved chemical mechanical filter respirator designed to remove a combination of particulate and vapors (NIOSH/MSHA TC23C OR EQUIVALENT)

**Ventilation:** All application areas should be ventilated in accordance with OSHA 29 CFR 1910 during use and until area is free of vapors.

**Personal Protective Equipment:** Eye wash, safety shower, safety glasses or goggles, impervious gloves.

---

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---

## SECTION IX - SPECIAL PRECAUTIONS

---

**Precautions to be taken in handling and storing:** Do not store in sun or above 100 degree F.

**OSHA Storage Category:** Store large quantities in buildings designed for storage of flammable or combustible liquids.

**Other Precautions:** Do not take internally. Do not weld or flame cut without proper ventilation to insure the area is free of flammable vapors. Do not cut, puncture or weld on or near the container.

Entrance into closed storage tanks - Use appropriate respirator or airline for possible exposure to solvent or chemical fumes. Rags or waste containing oil base paint or varnish that present large air-to-oil interface will oxidize and may ignite spontaneously and should be placed in metal container. Keep out of the reach of children.

---

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# MATERIAL SAFETY DATA SHEET

## FOR COATINGS, RESINS AND RELATED MATERIALS

DATE OF PREPARATION: March 1, 2005

### SECTION I - MANUFACTURER

NAME: M. A. BRUDER & SONS, INCORPORATED.  
ADDRESS: 600 REED ROAD  
CITY: BROOMALL STATE: PA ZIP CODE: 19008  
EMERGENCY TELEPHONE NO. DAY: 610-353-5100  
EMERGENCY TELEPHONE NO. NIGHTS & WEEKENDS: 610-359-3635  
  
PRODUCT CODE: 074165  
PRODUCT NAME: ROL FNSH WHITE  
PRODUCT DESCRIPTION: ROL FNSH WHITE  
PRODUCT CLASS:

### SECTION II - INGREDIENTS

MATERIAL DESCRIPTION	HAZARDOUS INGREDIENTS % BY WT.	EXPOSURE DATA
TITANIUM DIOXIDE	11.0 - 30.0	TLV/TWA = 10 mg/m3 (1)
CAS # 13463-67-7		TLV/STEL = NOT ESTABLISHED
LEL = NOT APPLICABLE		OSHA/PEL = 15 mg/m3 (1)
VP (mm Hg @ 25 C) NOT APPLICABLE		SARA 313 NO
PETROLEUM DISTILLATE-MEDIUM	11.0 - 30.0	TLV/TWA = 100 ppm (4)
CAS # 64742-48-9		TLV/STEL = NOT ESTABLISHED
LEL = 1.1		OSHA/PEL = 100 ppm (4)
VP (mm Hg @ 25 C) 10.0		SARA 313 NO
PETROLEUM DISTILLATE	1.0 - 10.0	TLV/TWA = 100 ppm (4)
CAS # MIXTURE		TLV/STEL = NOT ESTABLISHED
LEL = 1.1		OSHA/PEL = 100 ppm (4)
VP (mm Hg @ 25 C) 2.8		SARA 313 NO
ORGANOCLAY	1.0 - 10.0	TLV/TWA = 10 mg/m3
CAS # 68911-87-5		TLV/STEL = NOT ESTABLISHED
LEL = 0		OSHA/PEL = 15 mg/m3
VP (mm Hg @ 25 C) NOT APPLICABLE		SARA 313 NO
NA-K-AL SILICATE	1.0 - 10.0	TLV/TWA = 10 mg/m3 (1)
CAS # 37244-96-5		TLV/STEL = NOT ESTABLISHED
LEL = NOT APPLICABLE		OSHA/PEL = 15 mg/m3 (1)
VP (mm Hg @ 25 C) NOT APPLICABLE		SARA 313 NO

CAS # - Chemical Abstract Number

LEL - Lower Exposure Limit

VP - Vapor Pressure

SARA 313 - SARA TITLE III (Superfund Amendments and Reauthorization Act)

TLV/TWA - Threshold Limit Value/Time Weighted Average

TLV/STEL - Threshold Limit Value/Short Term Exposure Limit

OSHA/PEL - Occupational Safety Health Administration/Permissible Exposure Limit

(1) - Dust Hazard does not apply to liquid paint

(4) - As Stoddard Solvent

### NON-HAZARDOUS INGREDIENTS - 3% OR MORE BY WEIGHT

INGREDIENT NAME	CAS NUMBER
ALKYD RESIN	UNKNOWN

### SECTION III - PHYSICAL DATA

BOILING RANGE: 0 - 390 F WEIGHT PER GALLON: 9.55 - 9.95 LBS  
VAPOR DENSITY: HEAVIER THAN AIR % VOLATILE BY VOLUME: 47.18 - 51.18 %  
EVAPORATION RATE: SLOWER THAN ETHYL ETHER

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#### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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**Flash Point:**134 F  
**Method Used:** F

**Flammability Classification:**  
OSHA Combustible Liquid  
Class II  
DOT Flammable Liquid

**Extinguishing Media:** Dry Chemical or Foam.

**Special Fire Fighting Procedures:** Water may be used to cool and protect exposed containers.

**Unusual Fire and Explosion Hazards:** Closed containers may explode when exposed to extreme heat or fire. Vapors can form explosive mixtures in air at elevated temperatures. May decompose under fire conditions emitting irritant and/or toxic gases.

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#### SECTION V - HEALTH HAZARD DATA

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**Primary Route(s) of Exposure:** Inhalation, Skin Contact

**Effects of Overexposure:**

Inhalation: Irritation of respiratory tract. Prolonged inhalation may lead to fatigue, drowsiness, dizziness and/or light-headedness, headache, lack of coordination, nausea, vomiting, central nervous system depression, anesthetic effect or narcosis.

Skin Contact: Irritation of skin. Prolonged or repeated contact can cause dermatitis, defatting.

Eye Contact: Irritation of eyes. Prolonged or repeated contact can cause blurred vision, redness of eyes, tearing of eyes, severe eye irritation.

Ingestion: Amounts ingested incidental to consumer and industrial handling are not likely to cause injury; however, ingestion of larger amounts may cause lung inflammation and damage due to aspiration of material into lungs.

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 may be harmful or fatal.

**Emergency and First Aid Procedures:**

Inhalation: Remove to fresh air. Restore and support continued breathing. Have trained person give oxygen if necessary. Get emergency medical attention.

Skin Contact: Wash off quickly with plenty of water, then soap and water; remove contaminated clothing. Wash contaminated clothing before reuse.

Eye Contact: Flush immediately with large amounts of water, especially under lids, for at least 15 minutes. Obtain emergency medical treatment.

Ingestion: If swallowed, obtain medical treatment immediately

---

#### SECTION VI - REACTIVITY DATA

---

**Stability:** Stable

**Incompatibility:** Materials to avoid: Oxidizers, Acids, Bases, Amines.

**Conditions to Avoid:** Elevated temperatures. Contact with oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

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#### SECTION VII - SPILL OR LEAK PROCEDURES

---

**Steps to be taken in case material is released or spilled:** Remove all sources of ignition (flame, hot surfaces, and electrical, static sparks). Ventilate area and avoid breathing vapors. Contain and remove with inert absorbent material using non sparking tools.

**Waste Disposal Method:** Dispose in accordance with local, state and federal regulations. Avoid discharge to natural waters.

---

**NOTE:** The above information concerns this product as currently formulated and is based on information available at this time. The addition of thinners, reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are beyond our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

---

## SECTION VIII - SPECIAL PROTECTION INFORMATION

---

**Respiratory protection:** Control environmental concentrations below applicable standards. Approved chemical mechanical filter respirator designed to remove a combination of particulate and vapors (NIOSH/MSHA TC23C OR EQUIVALENT)

**Ventilation:** All application areas should be ventilated in accordance with OSHA 29 CFR 1910 during use and until area is free of vapors.

**Personal Protective Equipment:** Eye wash, safety shower, safety glasses or goggles, impervious gloves.

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## SECTION IX - SPECIAL PRECAUTIONS

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**Precautions to be taken in handling and storing:** Do not store in sun or above 100 degree F.

**OSHA Storage Category:** Store large quantities in buildings designed for storage of flammable or combustible liquids.

**Other Precautions:** Do not take internally. Do not weld or flame cut without proper ventilation to insure the area is free of flammable vapors. Do not cut, puncture or weld on or near the container.

Entrance into closed storage tanks - Use appropriate respirator or airline for possible exposure to solvent or chemical fumes. Rags or waste containing oil base paint or varnish that present large air-to-oil interface will oxidize and may ignite spontaneously and should be placed in metal container. Keep out of the reach of children.

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# MATERIAL SAFETY DATA SHEET

## FOR COATINGS, RESINS AND RELATED MATERIALS

DATE OF PREPARATION: March 1, 2005

### SECTION I - MANUFACTURER

NAME: M. A. BRUDER & SONS, INCORPORATED.  
ADDRESS: 600 REED ROAD  
CITY: BROOMALL STATE: PA ZIP CODE: 19008  
EMERGENCY TELEPHONE NO. DAY: 610-353-5100  
EMERGENCY TELEPHONE NO. NIGHTS & WEEKENDS: 610-359-3635

PRODUCT CODE: 036158  
PRODUCT NAME: SUPER BOND PRIMER  
PRODUCT DESCRIPTION: SUPER BOND PRIMER  
PRODUCT CLASS:

### SECTION II - INGREDIENTS

MATERIAL DESCRIPTION	HAZARDOUS INGREDIENTS % BY WT.	EXPOSURE DATA
ZINC OXIDE CAS # 1314-13-2 LEL = NOT APPLICABLE VP (mm Hg @ 25 C) NOT APPLICABLE	1.0 - 10.0	TLV/TWA = 10 mg/m3 (1) TLV/STEL = NOT ESTABLISHED OSHA/PEL = 10 mg/m3 (1) SARA 313 YES
TRIMETHYLPENTANEDIOL ISOBUTYRATE CAS # 25265-77-4 LEL = 0.6 VP (mm Hg @ 25 C) 1.0	1.0 - 10.0	TLV/TWA = NOT ESTABLISHED TLV/STEL = NOT ESTABLISHED OSHA/PEL = NOT ESTABLISHED SARA 313 NO
TITANIUM DIOXIDE CAS # 13463-67-7 LEL = NOT APPLICABLE VP (mm Hg @ 25 C) NOT APPLICABLE	11.0 - 30.0	TLV/TWA = 10 mg/m3 (1) TLV/STEL = NOT ESTABLISHED OSHA/PEL = 15 mg/m3 (1) SARA 313 NO
TALC CAS # 14807-96-6 LEL = NOT APPLICABLE VP (mm Hg @ 25 C) NOT APPLICABLE	1.0 - 10.0	TLV/TWA = 2 mg/m3 (2) TLV/STEL = NOT ESTABLISHED OSHA/PEL = 2 mg/m3 (2) SARA 313 NO
PROPYLENE GLYCOL CAS # 57-55-6 LEL = 2.6 VP (mm Hg @ 25 C) 0.2	1.0 - 10.0	TLV/TWA = NOT ESTABLISHED (1) TLV/STEL = NOT ESTABLISHED OSHA/PEL = NOT ESTABLISHED (1) SARA 313 NO
CRYSTALLINE SILICA CAS # 14808-60-7 LEL = NOT APPLICABLE VP (mm Hg @ 25 C) NOT APPLICABLE	1.0 - 10.0	TLV/TWA = 0.1 mg/m3 (2) TLV/STEL = NOT ESTABLISHED OSHA/PEL = 0.1 mg/m3 (2) SARA 313 NO
AROMATIC ESTER CAS # 84-74-2 LEL = NOT APPLICABLE VP (mm Hg @ 25 C) 2.0	1.0 - 10.0	TLV/TWA = 5 mg/m3 (1) TLV/STEL = NOT ESTABLISHED OSHA/PEL = 5 mg/m3 (1) SARA 313 YES

CAS # - Chemical Abstract Number

LEL - Lower Exposure Limit

VP - Vapor Pressure

SARA 313 - SARA TITLE III (Superfund Amendments and Reauthorization Act)

TLV/TWA - Threshold Limit Value/Time Weighted Average

TLV/STEL - Threshold Limit Value/Short Term Exposure Limit

OSHA/PEL - Occupational Safety Health Administration/Permissible Exposure Limit

(1) - Dust Hazard does not apply to liquid paint

(2) - Respirable Dust

### NON-HAZARDOUS INGREDIENTS - 3% OR MORE BY WEIGHT

INGREDIENT NAME	CAS NUMBER
WATER	7732-18-5
ACRYLIC POLYMER	28377-44-8

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**SECTION III - PHYSICAL DATA**

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**BOILING RANGE:** 212 - 644°F      **WEIGHT PER GALLON:** 10.29 - 10.69 LBS  
**VAPOR DENSITY:** HEAVIER THAN AIR      **% VOLATILE BY VOLUME:** 61.80 - 65.80 %  
**EVAPORATION RATE:** SLOWER THAN ETHYL ETHER

---

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

---

**Flash Point:** Non-Flammable  
**Method Used:** Not Applicable

**Flammability Classification:**  
**OSHA** Not Regulated  
**DOT** Not Regulated

**Extinguishing Media:** Dry Chemical or Foam.

**Special Fire Fighting Procedures:** Non-Flammable. Water may be used to cool and protect exposed containers.

**Unusual Fire and Explosion Hazards:** Closed containers may burst when exposed to extreme heat or fire.

---

**SECTION V - HEALTH HAZARD DATA**

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**Primary Route(s) of Exposure:** Inhalation, Skin Contact

**Effects of Overexposure:**

**Inhalation:** Irritation of respiratory tract. Prolonged inhalation may lead to fatigue, drowsiness, dizziness and/or light-headedness, headache, nausea.

**Skin Contact:** Irritation of skin. Prolonged or repeated contact can cause dermatitis.

**Eye Contact:** Irritation of eyes. Prolonged or repeated contact can cause blurred vision, eye irritation, possible corneal injury.

**Ingestion:** Amounts ingested incidental to consumer and industrial handling are not likely to cause injury; however, ingestion of larger amounts may cause serious injury.

**Emergency and First Aid Procedures:**

**Inhalation:** Remove to fresh air. Restore and support continued breathing. Have trained person give oxygen if necessary. Get emergency medical attention.

**Skin Contact:** Wash off quickly with plenty of water, then soap and water; remove contaminated clothing. Wash contaminated clothing before reuse.

**Eye Contact:** Flush immediately with large amounts of water, especially under lids, for at least 15 minutes. Obtain emergency medical treatment.

**Ingestion:** If swallowed, obtain medical treatment immediately

---

**SECTION VI - REACTIVITY DATA**

---

**Stability:** Stable

**Incompatibility:** Materials to avoid: Oxidizers, Acids, Bases, Amines.

**Conditions to Avoid:** Elevated temperatures. Contact with oxidizing agents.

**Hazardous Decomposition Products:** If involved in fire from other causes, could conceivably result in release of 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:**

Collect in container for disposal, according to applicable health and environmental regulations. Clean up with water before allowing to dry.

**Waste Disposal Method:** Dispose in accordance with local, state and federal regulations. Avoid discharge to natural waters.

---

**NOTE:** The above information concerns this product as currently formulated and is based on information available at this time. The addition of thinners, reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are beyond our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

---

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

---

**Respiratory protection:** Control environmental concentrations below applicable standards. Approved chemical mechanical filter respirator designed to remove a combination of particulate and vapors (NIOSH/MSHA TC23C OR EQUIVALENT)

**Ventilation:** Maintain adequate ventilation to ensure air entry during application and drying, to prevent build-up of vapors.

**Personal Protective Equipment:** Eye wash, safety shower, safety glasses or goggles, impervious gloves, skin cream (if needed).

---

**SECTION IX - SPECIAL PRECAUTIONS**

---

**Precautions to be taken in handling and storing:** Do not store in sun or above 100 degree F. Keep from freezing.

**OSHA Storage Category:** Not regulated.

**Other Precautions:** Do not take internally. Keep out of the reach of children.

---

**NOTE:** The above information concerns this product as currently formulated and is based on information available at this time. The addition of thinners, reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are beyond 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

## FOR COATINGS, RESINS AND RELATED MATERIALS

DATE OF PREPARATION: March 1, 2005

### SECTION I - MANUFACTURER

NAME: M. A. BRUDER & SONS, INCORPORATED.  
ADDRESS: 600 REED ROAD  
CITY: BROOMALL STATE: PA ZIP CODE: 19008  
EMERGENCY TELEPHONE NO. DAY: 610-353-5100  
EMERGENCY TELEPHONE NO. NIGHTS & WEEKENDS: 610-359-3635

PRODUCT CODE: 072176  
PRODUCT NAME: LATEX TRAFFIC PT WHITE  
PRODUCT DESCRIPTION: LATEX TRAFFIC PT WHITE  
PRODUCT CLASS:

### SECTION II - INGREDIENTS

MATERIAL DESCRIPTION	HAZARDOUS INGREDIENTS % BY WT.	EXPOSURE DATA
TITANIUM DIOXIDE	1.0 - 10.0	TLV/TWA = 10 mg/m3 (1)
CAS # 13463-67-7		TLV/STEL = NOT ESTABLISHED
LEL = NOT APPLICABLE		OSHA/PEL = 15 mg/m3 (1)
VP (mm Hg @ 25 C) NOT APPLICABLE		SARA 313 NO
ETHYLENE GLYCOL	1.0 - 10.0	TLV/TWA = 50 ppm (3)
CAS # 107-21-1		TLV/STEL = NOT ESTABLISHED
LEL = 3.2		OSHA/PEL = 50 ppm (3)
VP (mm Hg @ 25 C) 0.1		SARA 313 YES
CRYSTALLINE SILICA	11.0 - 30.0	TLV/TWA = 0.1 mg/m3 (2)
CAS # 14808-60-7		TLV/STEL = NOT ESTABLISHED
LEL = NOT APPLICABLE		OSHA/PEL = 0.1 mg/m3 (2)
VP (mm Hg @ 25 C) NOT APPLICABLE		SARA 313 NO

CAS # - Chemical Abstract Number

LEL - Lower Exposure Limit

VP - Vapor Pressure

SARA 313 - SARA TITLE III (Superfund Amendments and Reauthorization Act)

TLV/TWA - Threshold Limit Value/Time Weighted Average

TLV/STEL - Threshold Limit Value/Short Term Exposure Limit

OSHA/PEL - Occupational Safety Health Administration/Permissible Exposure Limit

(1) - Dust Hazard does not apply to liquid paint

(2) - Respirable Dust

(3) - Ceiling Limit

### NON-HAZARDOUS INGREDIENTS - 3% OR MORE BY WEIGHT

INGREDIENT NAME	CAS NUMBER
WATER	7732-18-5
VINYL ACRYLIC POLYMER	UNKNOWN
ACRYLIC POLYMER	UNKNOWN

### SECTION III - PHYSICAL DATA

BOILING RANGE: 212 - 401°F WEIGHT PER GALLON: 10.99 - 11.39 LBS  
VAPOR DENSITY: HEAVIER THAN AIR % VOLATILE BY VOLUME: 61.25 - 65.25 %  
EVAPORATION RATE: SLOWER THAN ETHYL ETHER

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Non-Flammable  
Method Used: Not Applicable

Flammability Classification:  
OSHA Not Regulated  
DOT Not Regulated

Extinguishing Media: Dry Chemical or Foam.

Special Fire Fighting Procedures: Non-Flammable. Water may be used to cool and protect exposed containers.

**Unusual Fire and Explosion Hazards:** Closed containers may burst when exposed to extreme heat or fire.

---

**SECTION V - HEALTH HAZARD DATA**

---

**Primary Route(s) of Exposure:** Inhalation, Skin Contact

**Effects of Overexposure:**

Inhalation: Irritation of respiratory tract. Prolonged inhalation may lead to fatigue, drowsiness, dizziness and/or light-headedness, headache, nausea.

Skin Contact: Irritation of skin. Prolonged or repeated contact can cause dermatitis.

Eye Contact: Irritation of eyes. Prolonged or repeated contact can cause blurred vision, eye irritation, possible corneal injury.

Ingestion: Amounts ingested incidental to consumer and industrial handling are not likely to cause injury; however, ingestion of larger amounts may cause serious injury.

**Emergency and First Aid Procedures:**

Inhalation: Remove to fresh air. Restore and support continued breathing. Have trained person give oxygen if necessary. Get emergency medical attention.

Skin Contact: Wash off quickly with plenty of water, then soap and water; remove contaminated clothing. Wash contaminated clothing before reuse.

Eye Contact: Flush immediately with large amounts of water, especially under lids, for at least 15 minutes. Obtain emergency medical treatment.

Ingestion: If swallowed, obtain medical treatment immediately

---

**SECTION VI - REACTIVITY DATA**

---

**Stability:** Stable

**Incompatibility:** Materials to avoid: Oxidizers, Acids, Bases, Amines.

**Conditions to Avoid:** Elevated temperatures. Contact with oxidizing agents.

**Hazardous Decomposition Products:** If involved in fire from other causes, could conceivably result in release of 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:**

Collect in container for disposal, according to applicable health and environmental regulations. Clean up with water before allowing to dry.

**Waste Disposal Method:** Dispose in accordance with local, state and federal regulations. Avoid discharge to natural waters.

---

**SECTION VIII - SPECIAL PROTECTION INFORMATION**

---

**Respiratory protection:** Control environmental concentrations below applicable standards. Approved chemical mechanical filter respirator designed to remove a combination of particulate and vapors (NIOSH/MSHA TC23C OR EQUIVALENT)

**Ventilation:** Maintain adequate ventilation to ensure air entry during application and drying, to prevent build-up of vapors.

**Personal Protective Equipment:** Eye wash, safety shower, safety glasses or goggles, impervious gloves, skin cream (if needed).

---

**SECTION IX - SPECIAL PRECAUTIONS**

---

**Precautions to be taken in handling and storing:** Do not store in sun or above 100 degree F. Keep from freezing.

**OSHA Storage Category:** Not regulated.

**Other Precautions:** Do not take internally. Keep out of the reach of children.

---

**NOTE:** The above information concerns this product as currently formulated and is based on information available at this time. The addition of thinners, reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are beyond our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

# SAFETY DATA SHEET

This document is not intended for general distribution.  
It can be used as the basis for a general distribution document if appropriate changes are made to the identification section.

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: MAG 1 SILICONE SPRAY #440

Product Code:2923123

MANUFACTURER'S NAME: CHICAGO AEROSOL - BRIDGEVIEW FACILITY

ADDRESS : 8407 S. 77th Avenue  
Bridgeview, IL 60455

EMERGENCY PHONE : 708-598-7100

INFORMATION PHONE : 708-598-7100

Product Use: Multi-purpose silicone lubricant

## 2. HAZARDS IDENTIFICATION

### CLASSIFICATION

Flammable aerosol	1
Gas under pressure	Liquefied gas
Skin Corrosion/Irritation	3
Eye Damage/Irritation	2B
Sensitization - Respiratory	1B
Aspiration hazard	1



**SIGNAL WORD:** Danger

### Hazard Statements

Extremely flammable aerosol  
Contains gas under pressure; may explode if heated  
May be fatal if swallowed and enters airways  
Causes mild skin irritation  
Causes eye irritation  
May cause allergy or asthma symptoms or breathing difficulties if inhaled

### Precautionary Statements

Keep away from heat/sparks/open flames/hot surfaces – No smoking  
Do not spray on an open flame or other ignition source  
Pressurized container – Do not pierce or burn, even after use  
Wash hands thoroughly after handling  
Do NOT induce vomiting  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
If skin irritation occurs: Get medical advice/attention  
If eye irritation persists: Get medical advice/attention  
Store locked up  
Protect from sunlight. Store in a well ventilated place  
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Percent
ACETONE	67-64-1	55.00
PROPANE	74-98-6	20.00
NAPHTHA (PETROLEUM), HYDROTREATED LIGHT	64742-49-0	20.00
POLYDIMETHYLSILOXANE	63148-62-9	5.00

### 4. FIRST AID MEASURES

**INHALATION:** Remove to fresh air. Administer oxygen if needed. Apply artificial respiration if breathing has stopped. Get medical attention.

**EYE CONTACT:** Wash immediately with large volumes of fresh water for at least 15 minutes. Get medical attention.

**SKIN CONTACT:** Wipe off with a towel. Wash with soap and water. Get medical attention if irritation persists.

**INGESTION:** Not a likely route of exposure.

**Most important symptoms/effects, acute and delayed:** Repeated exposure may cause skin dryness or cracking. May cause drowsiness or dizziness.

**Indication of immediate medical attention and special treatment needed:** None known.

### 5. FIRE FIGHTING MEASURES

**Suitable and unsuitable extinguishing media:** Foam, Alcohol foam, CO2, Dry chemical, Water fog. Water spray may be ineffective.

**Specific hazards arising from the chemical:** Closed containers may explode from internal pressure build-up when exposed to extreme heat and discharge contents. Liquid content of container will support combustion. Overexposure to decomposition products may cause a health hazard. Symptoms may not be readily apparent. Obtain medical attention. Hazardous decomposition products include carbon dioxide, carbon monoxide, and other toxic fumes.

**Special equipment and precautions for fire-fighters:** Water may be used to cool containers to prevent pressure build-up and explosion when exposed to extreme heat. Wear goggles and use self-contained breathing apparatus. If water is used, fog nozzles are preferred.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment, and emergency procedures:** Avoid breathing vapors. Ventilate area. Remove all sources of ignition.

**Methods and materials for containment and cleaning up:** Clean up with absorbent material and place in closed containers for disposal.

### 7. HANDLING AND STORAGE

**Precautions for safe handling:** Do not puncture or incinerate (burn) cans. Do not stick pins, nails, or any other sharp objects into opening on top of can. Do not spray in eyes. Do not take internally. See product label for additional information.

**Conditions for safe storage, including any incompatibilities:** Store and use in cool, dry, well-ventilated areas.  
Do not store above 120 F.

#### 8. EXPOSURE CONTROL/PERSONAL PROTECTION

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
ACETONE 67-64-1	PEL-TWA: 750 ppm	TLV-TWA 500 ppm (NIC 200 ppm)  TLV-STEL 750 ppm (NIC 500 ppm)	
PROPANE 74-98-6	Not established	TWA: 1000 ppm	
NAPHTHA (PETROLEUM), HYDROTREATED LIGHT 64742-49-0	TWA: 500 ppm; PEL-CEILING: not determined	TLV-TWA: 400 ppm TLV-STEL: 500 ppm	
POLYDIMETHYLSILOXANE 63148-62-9	Not established	Not established	

**Appropriate engineering controls:** Ventilation should be sufficient to prevent inhalation of any vapors. General dilution and/or local exhaust ventilation in volume to keep PEL/TLV of most hazardous ingredient below acceptable limit and IEL below stated limit.

**Individual protection measures:**

**Respiratory protection:** None under normal use. Avoid breathing vapors. In restricted areas, use approved chemical/mechanical filters designed to remove a combination of particles and vapor. In confined areas, use an approved air line respirator or hood. Self-contained breathing apparatus is required for vapor concentrations above PEL/TLV limits.

**Protective gloves:** None under normal use. Use solvent-resistant for prolonged or repeated contact.

**Eye protection:** None under normal use. However, use of safety glasses with splash guards or full face shield should be used if indicated.

**Other protective clothing or equipment:** None under normal use. However, use of solvent-resistant aprons or other clothing is recommended. Eye washes and safety showers in the workplace are recommended.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b> Aerosol product <b>Vapor Pressure:</b> Not determined <b>Vapor Density:</b> Heavier than air <b>Density:</b> 0.696220831 <b>Freezing point:</b> Not determined <b>Boiling point:</b> 56°C <b>Evaporation rate:</b> Slower than ether <b>Explosive Limits:</b> Not applicable  <b>Autoignition temperature:</b> Not determined <b>Viscosity:</b> Not determined	<b>Odor:</b> Solvent <b>Odor threshold:</b> Not determined <b>pH:</b> Not applicable <b>Melting point:</b> Not determined <b>Solubility:</b> Not determined <b>Flash point:</b> Not determined <b>Flammability:</b> Level 3 Aerosol <b>Partition coefficient (n-octanol/water):</b> Not determined <b>Decomposition temperature:</b> Not determined
---	---

## 10. STABILITY AND REACTIVITY

**Reactivity:** Not reactive under normal conditions of use.

**Chemical stability:** Stable under normal storage and handling conditions.

**Possibility of hazardous reactions:** None known.

**Incompatible materials:**

Acids, Bases, Strong oxidizing agents

**Hazardous decomposition products:**

Carbon dioxide, carbon monoxide, smoke, fumes, and other products of incomplete combustion.

## 11. TOXICOLOGICAL INFORMATION

Long-term toxicological studies have not been conducted for this product.

## 12. ECOLOGICAL INFORMATION

Long-term ecological studies have not been conducted for this product.

## 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, and federal regulations. Before attempting clean up, refer to other sections of this document for hazard cautionary information.

## 14. TRANSPORT INFORMATION

By land: DOT Proper Shipping Name: None required per 49 CFR 173.306(i) for products that conform to the Limited Quantity provisions. Commodity shipping description: Lubricant, NOI

By water: DOT & IMDG Proper Shipping Name: UN1950, Aerosols, 2.1, LTD QTY

By air: DOT & IATA Proper Shipping Name: UN1950, Aerosols, flammable, 2.1, LTD QTY (packing instruction Y203 applies)

## 15. REGULATORY INFORMATION

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

## 16. OTHER INFORMATION

Date revised: 2015-06-04

Revision 0

Date Printed: 2015-06-04

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE 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 #: 472.00

Revision Date: February 6, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Magnesium Carbonate

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
Magnesium carbonate, basic	56378-72-4	$4\text{Mg}(\text{CO}_3) \cdot \text{Mg}(\text{OH})_2 \cdot 5\text{H}_2\text{O}$	485.74	
Synonym: Magnesium carbonate hydroxide pentahydrate				

### 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

Ventilate area and sweep 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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.  
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**

---

Light, bulky white powder. Odorless.	Decomposes at 350 °C.
Soluble: Acids. Slightly in water. Insoluble in alcohol.	Specific gravity: ~3.0

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong oxidizers and acids.  
Shelf life: Indefinite, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: N.A.	ORL-RAT LD <sub>50</sub> : N.A.
Chronic effects: N.A.	IHL-RAT LC <sub>50</sub> : N.A.
Target organs: N.A.	SKN-RBT LD <sub>50</sub> : 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:** February 6, 2014



# Material Safety Data Sheet

## Magnesium chloride hexahydrate

ACC# 13365

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Magnesium chloride hexahydrate**Catalog Numbers:** AC197530010, AC197530050, AC413415000, S80063, S800631, S93291, S93292, S99098, BP214-500, BP2638, M33-3, M33-500, M33J500, M35-12, M35-212, M35-500, M3512LC, M35SAM1, M35SAM2, M35SAM3, M36212, M36SAM1, M36SAM2, M36SAM3**Synonyms:** Magnesium dichloride hexahydrate.**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7791-18-6	Magnesium chloride hexahydrate	99	unlisted

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: white to gray white solid.

**Caution!** May cause eye irritation. Hygroscopic (absorbs moisture from the air).**Target Organs:** No data found.**Potential Health Effects****Eye:** May cause mild eye irritation.**Skin:** May cause skin irritation.**Ingestion:** Causes gastrointestinal irritation with nausea, vomiting and diarrhea.**Inhalation:** May cause respiratory tract irritation. Inhalation of fumes may cause metal fume fever, which is characterized by flu-like symptoms with metallic taste, fever, chills, cough, weakness, chest pain, muscle pain and increased white blood cell count.**Chronic:** May cause kidney damage.

### Section 4 - First Aid Measures

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting

the upper and lower eyelids. Get medical aid.

**Skin:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation.

**Notes to Physician:** Treat symptomatically and supportively.

## 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. Material will not burn.

**Extinguishing Media:** Use extinguishing media most appropriate for the surrounding fire.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**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:** Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing.

**Storage:** Store in a cool, dry place. Store protected from moisture.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Good general ventilation should be sufficient to control airborne levels. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Magnesium chloride hexahydrate	none listed	none listed	none listed
Magnesium chloride	none listed	none listed	none listed

**OSHA Vacated PELs:** Magnesium chloride hexahydrate: No OSHA Vacated PELs are listed for this chemical. Magnesium chloride: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**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:** Solid

**Appearance:** white to gray white

**Odor:** none reported

**pH:** 7.0 (aq solution)

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 117 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Freely Soluble.

**Specific Gravity/Density:** 1.56

**Molecular Formula:**  $\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$

**Molecular Weight:** 203.31

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. Deliquescent (tending to absorb atmospheric water vapor and become liquid).

**Conditions to Avoid:** Dust generation, moisture.

**Incompatibilities with Other Materials:** Attacks metals in the presence of moisture.

**Hazardous Decomposition Products:** Hydrogen chloride, chlorine.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 7791-18-6: OM2975000

**CAS#** 7786-30-3: OM2800000

**LD50/LC50:**

**CAS#** 7791-18-6:

Oral, mouse: LD50 = 7600 mg/kg;

Oral, rat: LD50 = 8100 mg/kg;

CAS# 7786-30-3:

Oral, mouse: LD50 = 4700 mg/kg;

Oral, rat: LD50 = 2800 mg/kg;

**Carcinogenicity:**

CAS# 7791-18-6: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7786-30-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information found

**Teratogenicity:** No information found

**Reproductive Effects:** No information found

**Mutagenicity:** No information found

**Neurotoxicity:** No information found

**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	Not Regulated	Not Regulated
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 7791-18-6 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

CAS# 7786-30-3 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### **Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

#### **Section 12b**

None of the chemicals are listed under TSCA Section 12b.

#### **TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

#### **CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

#### **SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

#### **SARA Codes**

CAS # 7786-30-3: immediate.

#### **Section 313** No chemicals are reportable under Section 313.

#### **Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

#### **Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

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.

#### **OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

#### **STATE**

CAS# 7791-18-6 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7786-30-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

#### **California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

### **European/International Regulations**

#### **European Labeling in Accordance with EC Directives**

##### **Hazard Symbols:**

Not available.

##### **Risk Phrases:**

##### **Safety Phrases:**

S 24/25 Avoid contact with skin and eyes.

#### **WGK (Water Danger/Protection)**

CAS# 7791-18-6: 0

CAS# 7786-30-3: 0

#### **Canada - DSL/NDSL**

CAS# 7786-30-3 is listed on Canada's DSL List.

#### **Canada - WHMIS**

This product has a WHMIS classification of D2B.

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.

#### **Canadian Ingredient Disclosure List**

## Section 16 - Additional Information

**MSDS Creation Date:** 9/02/1997

**Revision #7 Date:** 9/07/2005

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 Fisher 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 Fisher has been advised of the possibility of such damages.*

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 475.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

## Magnesium Hydroxide

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
Magnesium hydroxide	1309-42-8	Mg(OH) <sub>2</sub>	58.34	
Synonym: Magnesium hydrate				

### 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

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

Ventilate area and sweep 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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. 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 powder. Odorless.

Specific gravity: 2.36

Soluble: Solutions of ammonium salts and dilute acids. Almost insoluble in water and alcohol.

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong acids.

Shelf life: Indefinite, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Dust may be irritant.

ORL-RAT LD<sub>50</sub>: N.A.

Chronic effects: Diarrhea, abdominal pain.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: N.A.

SKN-RBT LD<sub>50</sub>: 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 (215-170-3).

---

**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



# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 476.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Magnesium 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, 3). 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, 2B). Causes skin and eye irritation (H315+H320).

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
Magnesium nitrate hexahydrate	13446-18-9	Mg(NO <sub>3</sub> ) <sub>2</sub> ·6H <sub>2</sub> O	256.43	

### 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:** 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.

Strong oxidizer; fire 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. Take any precautions to avoid mixing with combustibles (P221+P370+P378).

NFPA CODE

None  
established

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Ventilate area and sweep 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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.

Deliquescent. 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). Use only in a hood or well-ventilated area (P271).

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

White crystals. Odorless.

Soluble: Water and alcohol

Decomposes at 330 °C.

Melting point: 95 - 100 °C

Specific gravity: 1.45

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong reducers and strong acids.

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-RAT LD<sub>50</sub>: 5440 mg/kg

IHL-RAT LC<sub>50</sub>: N.A.

SKN-RBT LD<sub>50</sub>: 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 #26n is one option.

---

**SECTION 14 — TRANSPORT INFORMATION**

---

Shipping name: Magnesium Nitrate; Hazard class: 5.1, Oxidizer; UN number: UN1474

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

---

TSCA-listed, EINECS-listed (233-826-7), 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: March 21, 2014

---

### Section 1 — Chemical Product and Company Identification

---

## Magnesium 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

---

Magnesium Nitrate (13446-18-9) 2.5% - 25%, and Water (7732-18-5) 75%-97.5%.

CAS#: None Established

---

### Section 3 — Hazards Identification

---

Clear colorless solution. Odorless.  
Body tissue irritant. Avoid all body tissue contact.

---

#### FLINN AT-A-GLANCE

Health-0  
Flammability-0  
Reactivity-0  
Exposure-1  
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. 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 #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.

## Material Safety Data Sheet (MSDS)

### Section 9 — Physical and Chemical Properties

Clear, colorless solution. Odorless.  
Mixture of magnesium nitrate and water.  
Concentration: 0.1 to 1.0 Molar

### 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 LD50: 5440 mg/kg as magnesium nitrate  
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.

**FLINN SCIENTIFIC INC.**

"Your Safer Source for Science Supplies"

*Questions on Chemical Disposal  
or Storage?--Call Flinn*

flinn@flinnsci.com www.flinnsci.com  
P.O. Box 219 Batavia IL 60510  
(800) 452-1261 Fax (866) 452-1436

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 478.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Magnesium Oxide

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
Magnesium oxide	1309-48-4	MgO	40.32	
Synonym: Magnesia				

### 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

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

Ventilate area and sweep 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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates. Air and moisture sensitive. Store in a Flinn Chem-Saf<sup>TM</sup> bag. 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. Exposure guidelines: PEL 15 mg/m<sup>3</sup> (as total fume) (OSHA); 10 mg/m<sup>3</sup> (inhalable fraction)(ACGIH)

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

White powder. Odorless.

Soluble: Acids and ammonium salts solutions. Slightly in water.

Boiling point: 3600 °C

Melting point: 2800 °C

Specific gravity: 2.4 (varies)

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong oxidizers and acids.

Shelf life: Fair to poor. Sensitive to air and moisture. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Irritant, laxative effect.

Chronic effects: N.A.

Target organs: N.A.

ORL-RAT LD<sub>50</sub>: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

SKN-RBT LD<sub>50</sub>: 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 (215-171-9).

---

**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

# FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

## Material Safety Data Sheet (MSDS)

MSDS #: 480.00

Revision Date: November 25, 2002

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### Section 1 — Chemical Product and Company Identification

---

## Magnesium Sulfate

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

---

Magnesium Sulfate anhydrous or heptahydrate

Synonym: epsom salts

CAS#: 7487-88-9 (anhydrous), 10034-99-8 (heptahydrate)

---

### Section 3 — Hazards Identification

---

White, odorless powder.

Avoid inhalation. May irritate eyes and respiratory tract.

Avoid body tissue contact.

#### FLINN AT-A-GLANCE

Health-0

Flammability-0

Reactivity-0

Exposure-1

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 solid.

#### 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.

---

### 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.

### Section 9 — Physical and Chemical Properties

White, odorless powder.

Solubility: Very soluble in water. Soluble in glycerol.

Anhydrous decomposes at 1124 C.

Formula:  $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$  or  $\text{MgSO}_4$  (Anhydrous)

Formula Weight: 246.50 or 120.37

Specific Gravity: 2.65 (for anhydrous)  
1.678 (for hydrous).

### Section 10 — Stability and Reactivity

Shelf Life: Poor; substance hygroscopic.

### Section 11 — Toxicological Information

Acute effects: Irritant, abdominal pain

Chronic effects: N.A.

Target organs: Central nervous system, GI 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 #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 (231-298-2).

### 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.

## FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

*Flinn Chemicals--Your Best Choice*

flinn@flinnsci.com www.flinnsci.com  
P.O. Box 219 Batavia IL 60510  
(800) 452-1261 Fax (866) 452-1436



# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 480.00

Revision Date: February 6, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Magnesium Sulfate Heptahydrate

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
Magnesium sulfate heptahydrate	10034-99-8	MgSO <sub>4</sub> ·7H <sub>2</sub> O	246.50	
Synonym: Epsom salts				

### 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

Ventilate area and sweep 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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Slightly 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 powder. Odorless.

Specific gravity: 1.678

Soluble: Water and glycerol

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Shelf life: Poor, hygroscopic. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Irritant, abdominal pain.

ORL-RAT LD<sub>50</sub>: N.A.

Chronic effects: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: Central nervous system, GI system.

SKN-RBT LD<sub>50</sub>: 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 (231-298-2).

---

**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

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 468.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Magnesium

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). Flammable solid (H228). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Magnesium	7439-95-4	Mg	24.31	

### 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

Flammable solid.

Water reactive metal; avoid contact with acids or water. When heated to decomposition, may emit toxic fumes.

**In case of fire:** Use a Class D or dry sand as a fire extinguisher. Avoid water contact, violent reaction with water.

NFPA CODE

H-0

F-1

R-1

No Water

### 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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.  
Store in a Flinn Saf-Stor™ can.

---

**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**

---

Silvery-white metal turnings or ribbon. Odorless.  
Soluble: Acids. Insoluble in water.

Melting point: 651 °C  
Specific gravity: 1.74

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with water, acids, acid chlorides, strong oxidizers, halogens, and chlorinated solvents.  
Shelf life: Indefinite, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

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

ORL-RAT LD<sub>50</sub>: N.A.  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: 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: Magnesium. Hazard class: 4.1, Flammable solid. UN number: UN1869.

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

---

TSCA-listed, EINECS-listed (231-104-6), 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

Maid-o-Metal  
Liver of Sulphur

SUPPLIER: MILLER CHEMICAL & FERTZ. CORP.

(717) 632-8921

EMERGENCY PHONE: (717) 637-4422

PROPER NAME AND CLASSIFICATION Calcium Polysulfide

Chemical Name & Synonyms

Calcium Polysulfide

Chemical Family

Polysulfide

Trade Name & Synonyms

Lime Sulfur, <sup>if ur</sup> LIVER OF SULPHUR

TYPICAL PROPERTIES:

Physical Form Liquid

Vapor Pres. (22°C) \_\_\_\_\_ mm Hg\*

Lbs./Gal. (68°F) 10.7

Vapor Density (Air-1) \_\_\_\_\_

\*Methylene Chloride

Odor Rotten Eggs

Color Orange

Boiling Pt., ° 200 °F

Specific Grav. (20°C) 1.28

Solubility in Water Miscible

Ph: 10.6

HAZARD CLASSIFICATION:

☐ FIRE ☒ TOXICITY ☒ ODOR ☒ REACTIVITY ☒ CORROSIVENESS

Hazard Rating Code: 0 - None, 1-Slight, 2-Moderate, 3-High, U-Unknown

FIRE & EXPLOSION HAZARD DATA

Flash Point (Method Used)	Flammable Limits (% by weight)	Lel	Vel
<u>Non Combustible</u>			
Extinguishing Media			
Special Fire Fighting Procedures			
Unusual Fire & Explosion Hazards			

HEALTH HAZARD DATA

Threshold Limit Value		Toxicity (Species)
Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
Effects of Overexposure <u>Irritating to eyes, nose and skin.</u> <u>A burning tendency when contact is made with the skin,</u> <u>also a discoloring effect. Nausea can be experienced due</u> <u>to offensive odor.</u>		
Emergency & First Aid Procedures		
<u>For odor exposure remove patient to fresh air area -</u>		

Stability	Unstable	Conditions to Avoid
Very Stable	Stable	
Incompatibility (Materials to Avoid)		
Decomposed by acids		
Hazardous Decomposition Products		
None Known		
Hazardous Polymerization	May Occur	Conditions to Avoid
	Will Not Occur	

SPILL OR LEAK PROCEDURES:

Steps to be taken in case material is released or spilled

Wash immediately with generous amount of water.

Waste Disposal Method

Bury sweepings and wash area with water

Container Disposal Method

Bury containers in acceptable disposal area

SPECIAL PROTECTION INFORMATION:

Respiratory Protection (Specify Type)

Self contained respirators recommended\*

Protective Gloves

Eye Protection

Rubber

Goggles of general safety type

Other Protective Equipment

None Required

SPECIAL PRECAUTIONS:

Precautions to be taken in handling and storing

No special precaution required. Avoid breathing material and

contact in case of spillage.

Other Precautions

NOTE: Under no circumstances should personnel enter confined spaces, particularly storage tanks, without self contained breathing apparatus.



ST. LOUIS CRAFTS, INC.

Memorandum from -  
ED NUSSBAUMER

7606 IDAHO AVE  
ST. LOUIS, MO. 63105  
(314) 638-0038 FAX (314) 638-0039

5-13-

In response to your recent request...enclosed is a Material Safety Data Sheet for our "H-57 Liver of Sulphur".

Also, the following is a list of its' ingredient

Calcium Polysulfide	29-31%
Calcium Thiosulfate	4-5%
Baume' reading at 60 degrees F	32 d
Sulfur	26-30%
Calcium	6-10%

FORMS

TM D-4236

St. Louis Crafts, Inc.

*Ed. Nussbaumer*

Maid-o'-Metal and Crafts-Maid craft supplies



# GHS SAFETY DATA SHEET

MAINLINE® Purple Low VOC Primer for PVC and CPVC

Date Revised: JAN 2011

Supersedes:

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** MAINLINE® Purple Low VOC Primer for PVC and CPVC

**PRODUCT USE:** Low VOC Primer for PVC and CPVC Plastic Pipe

**DISTRIBUTOR:** Hajoca Corporation  
127 Coulter Avenue  
Ardmore, PA 19003  
Tel. 225-295-4212

**MANUFACTURER:** IPS Corporation  
17109 South Main Street, Carson, CA 90248-3127  
P.O. Box 379, Gardena, CA 90247-0379  
Tel. 310-898-3300

**EMERGENCY:** Transportation: CHEMTEL Tel. 800-255-3924, 813-248-0585 (International)

**Medical:** Tel. 800-451-8346, 760-602-8703 3E Company (International)

## SECTION 2 - HAZARDS IDENTIFICATION

### GHS CLASSIFICATION:

Health	Environmental	Physical
Acute Toxicity: Category 4 Skin Irritation: Category 3 Skin Sensitization: NO Eye: Category 2B	Acute Toxicity: None Known Chronic Toxicity: None Known	Flammable Liquid Category 2

**GHS LABEL:**



OR



**Signal Word:**  
Danger

**WHMIS CLASSIFICATION:** CLASS B, DIVISION 2

### Hazard Statements

H225: Highly flammable liquid and vapor  
H319: Causes serious eye irritation  
H332: Harmful if inhaled  
H335: May cause respiratory irritation  
H336: May cause drowsiness or dizziness  
EUH019: May form explosive peroxides

### Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking  
P261: Avoid breathing dust/fume/gas/mist/vapors/spray  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P403+P233: Store in a well ventilated place. Keep container tightly closed  
P501: Dispose of contents/container in accordance with local regulation

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

	CAS#	EINECS #	REACH Pre-registration Number	CONCENTRATION % by Weight
Tetrahydrofuran (THF)	109-99-9	203-726-8	05-2116297729-22-0000	15 - 25
Methyl Ethyl Ketone (MEK)	78-93-3	201-159-0	05-2116297728-24-0000	15 - 25
Acetone	67-64-1	200-662-2	05-2116297713-35-0000	10 - 30
Cyclohexanone	108-94-1	203-631-1	05-2116297718-25-0000	25 - 40

All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

\* Indicates this chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

# indicates that this chemical is found on Proposition 65's List of chemicals known to the State of California to cause cancer or reproductive toxicity.

## SECTION 4 - FIRST AID MEASURES

**Contact with eyes:** Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.  
**Skin contact:** Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.  
**Inhalation:** Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.  
**Ingestion:** Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

## SECTION 5 - FIREFIGHTING MEASURES

**Suitable Extinguishing Media:** Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.  
**Unsuitable Extinguishing Media:** Water spray or stream.  
**Exposure Hazards:** Inhalation and dermal contact  
**Combustion Products:** Oxides of carbon and smoke

Health	2	2	0-Minimal
Flammability	3	3	1-Slight
Reactivity	0	0	2-Moderate
PPE	B		3-Serious
			4-Severe

**Protection for Firefighters:** Self-contained breathing apparatus or full-face positive pressure airline masks.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Keep away from heat, sparks and open flame.  
Provide sufficient ventilation, use explosion-proof exhaust ventilation equipment or wear suitable respiratory protective equipment.  
Prevent contact with skin or eyes (see section 8).  
**Environmental Precautions:** Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.  
**Methods for Cleaning up:** Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.  
**Materials not to be used for clean up:** Aluminum or plastic containers

## SECTION 7 - HANDLING AND STORAGE

**Handling:** Avoid breathing of vapor, avoid contact with eyes, skin and clothing.  
Keep away from ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.  
Do not eat, drink or smoke while handling.  
**Storage:** Store in ventilated room or shade below 27 °C (80 °F) and away from direct sunlight.  
Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.  
Follow all precautionary information on container label, product bulletins and solvent cementing literature.

## SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION

EXPOSURE LIMITS:	Component	ACGIH TLV	ACGIH STEL	OSHA PEL	OSHA STEL:
	Tetrahydrofuran (THF)	50 ppm	100 ppm	200 ppm	
	Methyl Ethyl Ketone (MEK)	200 ppm	300 ppm	200 ppm	
	Cyclohexanone	20 ppm	50 ppm	50 ppm	
	Acetone	500 ppm	750 ppm	1000 ppm	

**Engineering Controls:** Use local exhaust as needed.

**Monitoring:** Maintain breathing zone airborne concentrations below exposure limits.

**Personal Protective Equipment (PPE):**

**Eye Protection:** Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.

**Skin Protection:** Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.  
Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

**Respiratory Protection:** Prevent inhalation of the solvents. Use in a well-ventilated room. 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 above.  
With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.





# GHS SAFETY DATA SHEET

MAINLINE® Purple Low VOC Primer for PVC and CPVC

Date Revised: JAN 2011

Supersedes:

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Purple, thin liquid	<b>Odor Threshold:</b>	0.88 ppm (Cyclohexanone)
<b>Odor:</b>	Ethereal	<b>Boiling Range:</b>	56 °C (133 °F) to 156 °C (313 °F)
<b>pH:</b>	Not Applicable	<b>Evaporation Rate:</b>	> 1.0 (BUAC = 1)
<b>Melting/Freezing Point:</b>	-108 °C (-162 °F) Based on first melting component: THF	<b>Flammability:</b>	Category 2
<b>Boiling Point:</b>	56 °C (133 °F) Based on first boiling component: Acetone	<b>Flammability Limits:</b>	<b>LEL:</b> 1.1% based on Cyclohexanone
<b>Flash Point:</b>	-20 °C (-4 °F) TCC based on Acetone		<b>UEL:</b> 12.8% based on Acetone
<b>Specific Gravity:</b>	0.842 @23 °C ( 73 °F)	<b>Vapor Pressure:</b>	190 mm Hg @ 20 °C (68 °F) Acetone
<b>Solubility:</b>	Solvent portion soluble in water. Resin portion separates out.	<b>Vapor Density:</b>	>2.0 (Air = 1)
<b>Partition Coefficient n-octanol/water:</b>	Not Available	<b>Other Data: Viscosity:</b>	Water-thin
<b>Auto-ignition Temperature:</b>	321 °C (609.8 °F) based on THF		
<b>Decomposition Temperature:</b>	Not Applicable		
<b>VOC Content:</b>	When applied as directed, per SCAQMD Rule 1168, Test Method 316A, VOC content is: ≤550 g/l.		

## SECTION 10 - STABILITY AND REACTIVITY

<b>Stability:</b>	Stable
<b>Hazardous decomposition products:</b>	None in normal use. When forced to burn, this product gives off oxides of carbon and smoke.
<b>Conditions to avoid:</b>	Keep away from heat, sparks, open flame and other ignition sources.
<b>Incompatible Materials:</b>	Oxidizers, strong acids and bases, amines, ammonia

## SECTION 11 - TOXICOLOGICAL INFORMATION

**Likely Routes of Exposure:** Inhalation, Eye and Skin Contact

### Acute symptoms and effects:

<b>Inhalation:</b>	Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
<b>Eye Contact:</b>	Vapors slightly uncomfortable. Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid.
<b>Skin Contact:</b>	Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
<b>Ingestion:</b>	May cause nausea, vomiting, diarrhea and mental sluggishness.

**Chronic (long-term) effects:** None known to humans

<b>Toxicity:</b>	LD <sub>50</sub>	LC <sub>50</sub>
Tetrahydrofuran (THF)	Oral: 2842 mg/kg (rat)	Inhalation 3 hrs. 21,000 mg/m <sup>3</sup> (rat)
Methyl Ethyl Ketone (MEK)	Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit)	Inhalation 8 hrs. 23,500 mg/m <sup>3</sup> (rat)
Cyclohexanone	Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit)	Inhalation 4 hrs. 8,000 PPM (rat)
Acetone	Oral: 5800 mg/kg (rat)	Inhalation 50,100 mg/m <sup>3</sup> (rat)

<b>Reproductive Effects</b>	<b>Teratogenicity</b>	<b>Mutagenicity</b>	<b>Embryotoxicity</b>	<b>Sensitization to Product</b>	<b>Synergistic Products</b>
Not Established	Not Established	Not Established	Not Established	Not Established	Not Established

## SECTION 12 - ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	None Known
<b>Mobility:</b>	In normal use, emission of volatile organic compounds (VOC's) to the air takes place. Typically at a rate of ≤550 g/l.
<b>Degradability:</b>	Biodegradable
<b>Bioaccumulation:</b>	Minimal to none.

## SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

## SECTION 14 - TRANSPORT INFORMATION

### DOT, IATA, ADR, IMO/MDG SHIPPING INFORMATION

<b>Proper Shipping Name:</b>	Flammable Liquid, n.o.s.	<b>EXEMPTION:</b>	Case quantities in containers of less than one liter may be shipped as LIMITED QUANTITY or CONSUMER COMMODITY, ORM-D
<b>Hazard Class:</b>	3		
<b>Secondary Risk:</b>	None		
<b>Identification Number:</b>	UN 1993	<b>TDG INFORMATION</b>	
<b>Packing Group:</b>	PG II	<b>TDG CLASS:</b>	FLAMMABLE LIQUID 3
<b>Label Required:</b>	Flammable Liquid	<b>SHIPPING NAME:</b>	FLAMMABLE LIQUID, n.o.s. (ACETONE)
<b>Marine Pollutant:</b>	NO	<b>UN NUMBER/PACKING GROUP:</b>	1993, PG II

## SECTION 15 - REGULATORY INFORMATION

<b>Precautionary Label Information:</b>	Highly Flammable, Irritant	<b>Ingredient Listings:</b>	USA TSCA, Europe EINECS, Canada DSL, Australia
<b>Symbols:</b>	F, Xn		AICS, Korea ECL/TCCL, Japan MITI (ENCS)
<b>Risk Phrases:</b>	R11: Highly flammable. R20: Harmful by inhalation. R36/37: Irritating to eyes and respiratory system.	<b>R66:</b>	Repeated exposure may cause skin dryness or cracking
<b>Safety Phrases:</b>	S9: Keep container in a well-ventilated place. S16: Keep away from sources of ignition - No smoking. S25: Avoid contact with eyes.	<b>R67:</b>	Vapors may cause drowsiness and dizziness
		<b>S26:</b>	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
		<b>S33:</b>	Take precautionary measures against static discharges.
		<b>S46:</b>	If swallowed, seek medical advice immediately and show this container or label.

## SECTION 16 - OTHER INFORMATION

<b>Specification Information:</b>		
<b>Department issuing data sheet:</b>	IPS, Safety Health & Environmental Affairs	All ingredients are compliant with the requirements of the European
<b>E-mail address:</b>	<EHSinfo@ipscorp.com>	Directive on RoHS (Restriction of Hazardous Substances).
<b>Training necessary:</b>	Yes, training in practices and procedures contained in product literature.	
<b>Reissue date / reason for reissue:</b>	1/5/2012 / Updated GHS Standard Format	
<b>Intended Use of Product:</b>	Primer for PVC and CPVC Plastic Pipe	

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. 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

## Malachite Green

ACC# 13533

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Malachite Green**Catalog Numbers:** AC611255000, A779-500**Synonyms:** Acryl Brilliant Green; Aniline Green; China Green; Fast Green; Victoria Green; C.I. 42000; Malachite Green Chloride; Tetramethyl-di-p-aminotriphenylcarbinol chloride; Methanaminium,**Company Identification:**Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410**For information, call:** 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
569-64-2	Malachite Green	100	209-322-8

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: green to violet solid.

**Danger!** May cause severe eye irritation and possible injury. Harmful if swallowed. May be harmful if absorbed through skin or if inhaled. May cause skin and respiratory tract irritation. Possible risk of harm to the unborn child.**Target Organs:** Eyes.**Potential Health Effects****Eye:** May cause severe eye irritation. This product contains a cationic dye. Similar dyes have caused permanent injury to the cornea and conjunctiva in documented exposure cases with human or rabbit eyes.**Skin:** May cause skin irritation. May be harmful if absorbed through the skin.**Ingestion:** Harmful if swallowed. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.**Inhalation:** Dust is irritating to the respiratory tract. May be harmful if inhaled.**Chronic:** Possible risk of harm to the unborn child.

### 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, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

**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 aid.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

## 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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust from this material can form explosive organic dust cloud.

**Extinguishing Media:** For small fires, use water spray, dry chemical, carbon dioxide or chemical foam.

**Flash Point:** Not available.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** N/A

**Upper:** N/A

**NFPA Rating:** (estimated) Health: 2; Flammability: 1; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Provide ventilation. Do not let this chemical enter the environment.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not breathe dust.

**Storage:** Store in a cool, dry place.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**Exposure Limits**

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Malachite Green	none listed	none listed	none listed

**OSHA Vacated PELs:** Malachite Green: No OSHA Vacated PELs are listed for this chemical.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**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:** Solid

**Appearance:** green to violet

**Odor:** none reported

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not applicable.

**Viscosity:** Not available.

**Boiling Point:** Not applicable.

**Freezing/Melting Point:** Not available.

**Decomposition Temperature:** Not available.

**Solubility:** Freely Soluble.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** C<sub>23</sub>H<sub>25</sub>N<sub>2</sub>Cl

**Molecular Weight:** 364.92

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Dust generation, excess heat.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide, oxides of nitrogen, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**CAS#** 569-64-2: BQ1180000

**LD50/LC50:**

CAS# 569-64-2:

Oral, mouse: LD50 = 80 mg/kg;

.

**Carcinogenicity:**

CAS# 569-64-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** One 1983 study found Malachite Green to be teratogenic in trout and rabbits. Abnormalities involved the skeleton, heart, liver and kidneys.

**Reproductive Effects:** No information available.

**Mutagenicity:** No information available.

**Neurotoxicity:** No information available.

**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	Not Regulated	Not Regulated
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 15 - Regulatory Information

### US FEDERAL

#### TSCA

CAS# 569-64-2 is listed on the TSCA inventory.

#### Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

#### Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

#### Section 12b

None of the chemicals are listed under TSCA Section 12b.

#### TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

#### CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

**SARA Section 302 Extremely Hazardous Substances**

None of the chemicals in this product have a TPQ.

**SARA Codes**

CAS # 569-64-2: immediate.

**Section 313**

This material contains Malachite Green (CAS# 569-64-2, 100%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

**Clean Air Act:**

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

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.

**OSHA:**

None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**

CAS# 569-64-2 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations****European Labeling in Accordance with EC Directives****Hazard Symbols:**

XN N

**Risk Phrases:**

R 22 Harmful if swallowed.

R 41 Risk of serious damage to eyes.

R 63 Possible risk of harm to the unborn child.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Safety Phrases:**

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37 Wear suitable protective clothing and gloves.

S 39 Wear eye/face protection.

S 46 If swallowed, seek medical advice immediately and show this container or label.

S 60 This material and its container must be disposed of as hazardous waste.

S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

**WGK (Water Danger/Protection)**

CAS# 569-64-2: No information available.

**Canada - DSL/NDSL**

CAS# 569-64-2 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of D2B, D2A, D1B.

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.

**Canadian Ingredient Disclosure List**

CAS# 569-64-2 is listed on the Canadian Ingredient Disclosure List.

<b>Section 16 - Additional Information</b>
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**MSDS Creation Date:** 9/02/1997

**Revision #4 Date:** 3/16/2007

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 Fisher 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 Fisher has been advised of the possibility of such damages.*

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 486.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Malonic 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: Acute toxicity, inhalation (Category 5). May be harmful if inhaled (H333).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Malonic acid	141-82-2	CH <sub>2</sub> (CO <sub>2</sub> H) <sub>2</sub>	104.07	
Synonym: Propanedioic acid				

### 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 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

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

Wipe 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**

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Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids.  
Store in a cool, dry place.

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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White crystals. Faint beef bouillon odor.

Soluble: Water, alcohol, and ether

Boiling point: sublimes

Melting point: 135 °C (decomposes)

Specific gravity: 1.619

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with bases, oxidizers, and reducers.

Shelf life: Indefinite, if stored properly.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Severe eye irritant, mild skin irritant, respiratory irritant, gastrointestinal disturbances.

Chronic effects: N.A.

Target organs: Skin, eyes, respiratory tract.

ORL-RAT LD<sub>50</sub>: 1310 mg/kg

IHL-RAT LC<sub>50</sub>: N.A.

EYE-RBT LD<sub>50</sub>: 100 mg

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #24a is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (205-503-0).

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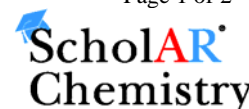
**SECTION 16 — OTHER INFORMATION**

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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

**Maltose, Monohydrate**

MSDS # 439.00

**Section 1: Product and Company Identification****Maltose, Monohydrate****Synonyms/General Names:** Malt sugar, (D+) Maltose**Product Use:** For educational use only**Manufacturer:** Columbus Chemical Industries, Inc., Columbus, WI 53925.**24 Hour Emergency Information Telephone Numbers****CHEMTREC (USA): 800-424-9300****CANUTEC (Canada): 613-424-6666**

Scholar Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

**Section 2: Hazards Identification***Yellow powder, no odor.***HMIS (0 to 4)**

<b>Health</b>	<b>0</b>
<b>Fire Hazard</b>	<b>0</b>
<b>Reactivity</b>	<b>0</b>

This material is not considered hazardous.

Target organs: None known.

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) if used properly.

**Section 3: Composition / Information on Ingredients**

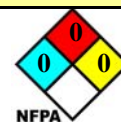
Maltose (6363-53-7), &gt;99%

**Section 4: First Aid Measures***Always seek professional medical attention after first aid measures are provided.***Eyes:** Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.**Skin:** Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.**Ingestion:** Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration.**Section 5: Fire Fighting Measures**

When heated to decomposition, emits acrid fumes.

**Protective equipment and precautions for firefighters:** Use foam or dry chemical to extinguish fire.

Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.

**Section 6: Accidental Release Measures**

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Sweep up spill and place in sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

**Section 7: Handling and Storage****Green****Handling:** Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.**Storage:** Store in General Storage Area [Green Storage] with other items with no specific storage hazards. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.**Section 8: Exposure Controls / Personal Protection**

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with an dust cartridge. Exposure guidelines: Maltose: OSHA PEL: N/A, ACGIH: TLV: N/A, STEL: N/A.

## Section 9: Physical and Chemical Properties

<b>Molecular formula</b>	C <sub>12</sub> H <sub>22</sub> O <sub>11</sub> .	<b>Appearance</b>	Yellow powder.
<b>Molecular weight</b>	360.32.	<b>Odor</b>	None.
<b>Specific Gravity</b>	N/A.	<b>Odor Threshold</b>	N/A.
<b>Vapor Density (air=1)</b>	12.4.	<b>Solubility</b>	Soluble in water and alcohol.
<b>Melting Point</b>	102-103°C.	<b>Evaporation rate</b>	N/A. ( <i>Butyl acetate</i> = 1).
<b>Boiling Point/Range</b>	Decomposes.	<b>Partition Coefficient</b>	N/A. ( <i>log P<sub>OW</sub></i> ).
<b>Vapor Pressure (20°C)</b>	N/A.	<b>pH</b>	N/A.
<b>Flash Point:</b>	N/A.	<b>LEL</b>	N/A.
<b>Autoignition Temp.:</b>	N/A.	<b>UEL</b>	N/A.

N/A = Not available or applicable

## Section 10: Stability and Reactivity

Avoid heat and moisture.

**Stability:** Stable under normal conditions of use and storage.

**Incompatibility:** Strong oxidizers,

**Shelf life:** Indefinite if stored properly.

## Section 11: Toxicology Information

**Acute Symptoms/Signs of exposure:** *Eyes:* Redness, tearing, itching, burning, conjunctivitis. *Skin:* Redness, itching.

**Ingestion:** Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. **Inhalation:** Irritation of mucous membranes, coughing, wheezing, shortness of breath,

**Chronic Effects:** No information found.

**Sensitization:** none expected

*Maltose:* LD50 [oral, rat]; 34,800 mg/kg; LC50 [rat]; N/A; LD50 Dermal [rabbit]; N/A

*Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.*

## Section 12: Ecological Information

**Ecotoxicity (aquatic and terrestrial):** Not considered an environmental hazard.

## Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

## Section 14: Transport Information

**DOT Shipping Name:** Not controlled by DOT.

**Canada TDG:** Not controlled by TDG.

**DOT Hazard Class:**

**Hazard Class:**

**Identification Number:**

**UN Number:**

## Section 15: Regulatory Information

**EINECS:** Listed (200-716-5).

**WHMIS Canada:** Not WHMIS Controlled.

**TSCA:** All components are listed or are exempt.

**California Proposition 65:** Not listed.

*The 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.*

## Section 16: Other Information

**Current Issue Date:** January 23, 2009

*Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.*

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 489.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Manganese Dioxide

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: Acute toxicity, oral (Category 4). Harmful if inhaled (H332). Avoid breathing dust (P261).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Manganese dioxide	1313-13-9	MnO <sub>2</sub>	86.94	

### 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.

**If swallowed:** Call a POISON CENTER or physician if you feel unwell (P312).

### SECTION 5 — FIRE FIGHTING MEASURES

Nonflammable, noncombustible 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

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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #4. Store with hydroxides, oxides, silicates and carbonates.  
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.  
Exposure guidelines: Ceiling 5 mg/m<sup>3</sup> (OSHA); 0.1 mg/m<sup>3</sup> (inhalable fraction) (ACGIH)

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

Black or silver crystals or powder. Odorless.	Melting point: 535 °C (decomposes)
Soluble: Hydrochloric acid. Insoluble in water.	Specific gravity: 5.026

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

May ignite organic materials, and is a strong oxidant that reacts violently with combustible and reducing agents. Avoid contact with other oxidizing agents.  
Shelf life: Indefinite, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Irritating dust.	ORL-RAT LD <sub>50</sub> : 3478 mg/kg
Chronic effects: N.A.	IHL-RAT LC <sub>50</sub> : N.A.
Target organs: Nerves, lungs.	SKN-RBT LD <sub>50</sub> : 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 (215-202-6), 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

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 490.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Manganese(II) 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 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
Manganese(II) chloride tetrahydrate	13446-34-9	MnCl <sub>2</sub> •4H <sub>2</sub> O	197.91	
Synonyms: Manganese dichloride; Manganous chloride				

### 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 (P301+P330+P312).

### 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 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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #2. Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Very 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 (P264).  
Exposure guidelines: Ceiling 5 mg/m<sup>3</sup> (OSHA); 0.1 mg/m<sup>3</sup> (inhalable fraction) (ACGIH)

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

Deliquescent, light pink crystals. Odorless.  
Soluble: Water and alcohol. Insoluble in ether.

Boiling point: 1225 °C  
Dehydration point: 58 °C  
Melting point: 87.5 °C  
Specific gravity: 2.01

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong acids, sodium, potassium, and zinc.  
Shelf life: Fair to poor, very deliquescent. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Irritating to eyes, skin, and mucous membranes.  
Chronic effects: Possible mutagen. Nerve damage  
Target organs: Nerves, lungs.

ORL-RAT LD<sub>50</sub>: 1484 mg/kg  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: 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 #27f 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 (231-869-6).

---

**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 25, 2014

## SAFETY DATA SHEET

Version 4.5  
Revision Date 06/13/2014  
Print Date 06/17/2014

---

1. PRODUCT AND COMPANY IDENTIFICATION

## 1.1 Product identifiers

Product name : Manganese(IV) oxide

Product Number : 203750  
Brand : Aldrich  
Index-No. : 025-001-00-3

CAS-No. : 1313-13-9

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances

## 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832  
Fax : +1 800-325-5052

## 1.4 Emergency telephone number

Emergency Phone # : (314) 776-6555

---

2. HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Inhalation (Category 4), H332

For the full text of the H-Statements mentioned in this Section, see Section 16.

## 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Warning

Hazard statement(s)  
H332 : Harmful if inhaled.

Precautionary statement(s)  
P261 : Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P271 : Use only outdoors or in a well-ventilated area.  
P304 + P340 : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P312 : Call a POISON CENTER or doctor/ physician if you feel unwell.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

---

3. COMPOSITION/INFORMATION ON INGREDIENTS

## 3.1 Substances

Synonyms : Manganese dioxide



Formula : MnO<sub>2</sub>  
Molecular Weight : 86.94 g/mol  
CAS-No. : 1313-13-9  
EC-No. : 215-202-6  
Index-No. : 025-001-00-3

#### Hazardous components

Component	Classification	Concentration
<b>Manganese dioxide</b>		
	Acute Tox. 4; H332	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

---

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

---

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

### 5.2 Special hazards arising from the substance or mixture

Nature of decomposition products not known.

Nature of decomposition products not known.

Manganese/manganese oxides

### 5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

### 5.4 Further information

no data available

---

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

---

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.  
Provide appropriate exhaust ventilation at places where dust is formed.  
For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Manganese dioxide	1313-13-9	C	5 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
	Remarks	Ceiling limit is to be determined from breathing-zone air samples.		
		TWA	0.2 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Adopted values or notations enclosed are those for which changes are proposed in the NIC See Notice of Intended Changes (NIC) varies		
		C	5 mg/m <sup>3</sup>	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		ST	3 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### **Body Protection**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **Respiratory protection**

For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### **Control of environmental exposure**

Do not let product enter drains.

---

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 Information on basic physical and chemical properties**

- |   |   |
|---|---|
| a) Appearance                                   | Form: solid                                 |
| b) Odour  | no data available                           |
| c) Odour Threshold                              | no data available                           |
| d) pH   | no data available                           |
| e) Melting point/freezing point                 | Melting point/range: 535 °C (995 °F) - dec. |
| f) Initial boiling point and boiling range      | no data available                           |
| g) Flash point                                  | no data available                           |
| h) Evaporation rate                             | no data available                           |
| i) Flammability (solid, gas)                    | no data available                           |
| j) Upper/lower flammability or explosive limits | no data available                           |
| k) Vapour pressure                              | no data available                           |
| l) Vapour density                               | no data available                           |
| m) Relative density                             | 5.026 g/cm <sup>3</sup>                     |
| n) Water solubility                             | no data available                           |
| o) Partition coefficient: n-octanol/water       | no data available                           |
| p) Auto-ignition temperature                    | no data available                           |
| q) Decomposition temperature                    | no data available                           |
| r) Viscosity                                    | no data available                           |

s) Explosive properties      no data available

t) Oxidizing properties      no data available

## **9.2 Other safety information**

no data available

---

## **10. STABILITY AND REACTIVITY**

### **10.1 Reactivity**

no data available

### **10.2 Chemical stability**

Stable under recommended storage conditions.

### **10.3 Possibility of hazardous reactions**

no data available

### **10.4 Conditions to avoid**

no data available

### **10.5 Incompatible materials**

Strong acids, Strong reducing agents, Organic materials

### **10.6 Hazardous decomposition products**

Other decomposition products - no data available

In the event of fire: see section 5

---

## **11. TOXICOLOGICAL INFORMATION**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

LD50 Oral - rat - > 3,478 mg/kg

Inhalation: no data available

Dermal: no data available

no data available

#### **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**

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.

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.

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.

#### **Reproductive toxicity**

no data available

no data available

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

no data available

**Aspiration hazard**

no data available

**Additional Information**

RTECS: OP0350000

Men exposed to manganese dusts showed a decrease in fertility. Chronic manganese poisoning primarily involves the central nervous system. Early symptoms include languor, sleepiness and weakness in the legs. A stolid mask-like appearance of the face, emotional disturbances such as uncontrollable laughter and a spastic gait with tendency to fall in walking are findings in more advanced cases. High incidence of pneumonia has been found in workers exposed to the dust or fume of some manganese compounds.

Liver - Irregularities - Based on Human Evidence

Liver - Irregularities - Based on Human Evidence

---

**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

no data available

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

no data available

---

**13. DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

---

**14. TRANSPORT INFORMATION****DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

---

**15. REGULATORY INFORMATION****SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

Manganese dioxide

CAS-No.  
1313-13-9Revision Date  
2007-07-01**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

Manganese dioxide

CAS-No.  
1313-13-9Revision Date  
2007-07-01**New Jersey Right To Know Components**

Manganese dioxide

CAS-No.  
1313-13-9Revision Date  
2007-07-01**California Prop. 65 Components**

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

---

**16. OTHER INFORMATION****Full text of H-Statements referred to under sections 2 and 3.**

Acute Tox.	Acute toxicity
H332	Harmful if inhaled.

**HMIS Rating**

Health hazard:	1
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

**NFPA Rating**

Health hazard:	0
Fire Hazard:	0
Reactivity Hazard:	0

**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

Version: 4.5

Revision Date: 06/13/2014

Print Date: 06/17/2014

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 492.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Manganese(II) 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: Specific target organ toxicity, repeated exposure (Category 2). May cause damage to organs through prolonged or repeated exposure (H373). 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
Manganese(II) sulfate, monohydrate	10034-96-5	MnSO <sub>4</sub> •H <sub>2</sub> O	169.01	
Synonyms: Manganese sulfate; Manganous sulfate				

### 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

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 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.

---

**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. Do not breathe dust or fumes (P260).

---

**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

---

Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling.  
Exposure guidelines: Ceiling 5 mg/m<sup>3</sup> (OSHA); 0.1 mg/m<sup>3</sup> (inhalable fraction) (ACGIH)

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Pink, crystalline powder or chunks. Odorless.  
Soluble: Water. Insoluble in alcohol.

Melting point: 30 °C  
Specific gravity: 2.1

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with strong acids.  
Shelf life: Poor, hygroscopic. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Irritant  
Chronic effects: Possible mutagen  
Target organs: Central nervous system, lungs

ORL-RAT LD<sub>50</sub>: N.A.  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.  
Flinn Suggested Disposal Method #27f is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (232-089-9).

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**SECTION 16 — OTHER INFORMATION**

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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



# Material Safety Data Sheet: MANZYME COMPLETE

Supersedes Date 12/07/2011

Issuing Date 12/20/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** MANZYME COMPLETE  
**Recommended use** Cleaning agent  
**Information on Manufacturer**  
MANTEK, DIVISION OF NCH CORP.  
BOX 152170  
IRVING, TEXAS 75015

**Product Code** 4403  
**Chemical nature** bacteria mixture  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

#### WARNING

May cause skin irritation  
Causes eye irritation  
May cause respiratory tract irritation  
May be harmful if swallowed

**Color** Tan

**Physical State** Solid

**Odor** Mild Earthy

**Potential Health Effects**

**Principle Route of Exposure**

Skin contact, Eye contact, Inhalation.

**Primary Routes of Entry**

Inhalation

**Acute Effects**

**Eyes**

Causes eye irritation.

**Skin**

May cause skin irritation. Repeated exposure may cause skin dryness or cracking.

**Inhalation**

May cause irritation of respiratory tract.

**Ingestion**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Toxicity**

Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough. Lung edema. Cyanosis. Risk of infection of the lung after prolonged inhalation of dust particles.

**Target Organ Effects**

Central nervous system, Lungs, Heart, Kidney.

**Aggravated Medical Conditions**

Skin disorders, Respiratory disorders, Kidney disorders, Neurological disorders, Heart disease.

**Potential Environmental Effects**

See Section 12 for additional Ecological information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Sodium bicarbonate	144-55-8
Disodium phosphate, anhydrous	7558-79-4
Urea	57-13-6
Monosodium phosphate, anhydrous	7558-80-7
Sodium chloride	7647-14-5
Sodium thiosulfate pentahydrate	10102-17-7
Bacillus species	NOT APPLICABLE
Lipase, triacylglycerol	9001-62-1

## 4. FIRST AID MEASURES

**General advice**

Avoid contact with skin, eyes and clothing. Avoid breathing dust.

**Eye Contact**

Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

**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. Remove and 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 irritation develops and persists.

**Notes to physician**

Treat symptomatically

## 5. FIRE-FIGHTING MEASURES

**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

**Suitable Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. Foam. Water spray. 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** 1**Flammability** 1**Instability** 0**HMIS****Health** 1**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**

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**

Not applicable.

**7. HANDLING AND STORAGE****Handling**

Avoid contact with skin, eyes and clothing. Avoid breathing dust.

**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** 100 °F / 38 °C

**Storage Conditions**

**Indoor** X

**Outdoor**

**Heated**

**Refrigerated**

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH
Sodium bicarbonate	No data available	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Disodium phosphate, anhydrous	No data available	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Urea	No data available	No data available	No data available
Monosodium phosphate, anhydrous	No data available	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Sodium chloride	No data available	5 mg/m <sup>3</sup> PNOR (as solid)	No data available
Sodium thiosulfate pentahydrate	No data available	No data available	No data available
Bacillus species	No data available	No data available	No data available
Lipase, triacylglycerol	No data available	No data available	No data available

**Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment****Eye/Face Protection**

Safety glasses with side-shields.

**Skin Protection**

For prolonged or repeated contact, use protective gloves with appropriate chemical resistance.

**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**

Solid

**Viscosity**

Granular

**Color**

Tan

**Odor**

Mild Earthy

**Appearance**

Opaque

**pH**

Not applicable

**Specific Gravity**

0.49

**Evaporation Rate**

0 (Butyl acetate=1)

**Percent Volatile (Volume)**

0

**VOC Content (%)**

0

**VOC Content (g/L)**

0

**Vapor Pressure**

0 mmHg @ 70°F

**Vapor Density**

0 (Air = 1.0)

**Solubility**

Appreciable

**Boiling Point/Range**

Not applicable

**10. STABILITY AND REACTIVITY****Chemical Stability**

Stable. Hazardous polymerization does not occur.

**Conditions to Avoid**

None known

**Incompatible Products**

Strong oxidizing agents, Strong acids, Strong bases.

**Hazardous Decomposition Products**

Carbon oxides, Nitrogen oxides (NO<sub>x</sub>), Ammonia, Sulfur oxides, Sodium 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
Sodium bicarbonate	= 4220 mg/kg ( Rat )	no data available	no data available	no data available	no data available
Disodium phosphate, anhydrous	no data available	no data available	no data available	no data available	no data available
Urea	14,300-15,000 mg/kg (rat)	no data available	no data available	no data available	no data available
Monosodium phosphate, anhydrous	= 8290 mg/kg ( Rat )	> 7940 mg/kg ( Rabbit )	no data available	no data available	no data available
Sodium chloride	= 3 g/kg ( Rat )	no data available	> 42 g/m <sup>3</sup> ( Rat ) 1 h	no data available	no data available
Sodium thiosulfate pentahydrate	no data available	no data available	no data available	no data available	no data available
Bacillus species	no data available	no data available	no data available	no data available	no data available
Lipase, triacylglycerol	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 bicarbonate	no data available	no data available	no data available	no data available	no data available
Disodium phosphate, anhydrous	no data available	no data available	no data available	no data available	no data available
Urea	no data available	no data available	no data available	no data available	no data available
Monosodium phosphate, anhydrous	no data available	no data available	no data available	no data available	CNS, heart, kidney
Sodium chloride	no data available	no data available	no data available	no data available	kidney
Sodium thiosulfate pentahydrate	no data available	no data available	no data available	no data available	no data available
Bacillus species	no data available	no data available	no data available	no data available	no data available
Lipase, triacylglycerol	no data available	Respiratory sensitizer	no data available	no data available	Lungs

## Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Sodium bicarbonate	not applicable	not applicable	not applicable	not applicable	not applicable
Disodium phosphate, anhydrous	not applicable	not applicable	not applicable	not applicable	not applicable
Urea	not applicable	not applicable	not applicable	not applicable	not applicable
Monosodium phosphate, anhydrous	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium chloride	not applicable	not applicable	not applicable	not applicable	not applicable
Sodium thiosulfate pentahydrate	not applicable	not applicable	not applicable	not applicable	not applicable
Bacillus species	not applicable	not applicable	not applicable	not applicable	not applicable
Lipase, triacylglycerol	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 bicarbonate	EC50 = 650 mg/L Nitzschia linearis 120 h	LC50 8250 - 9000 mg/L Lepomis macrochirus 96 h	no data available	EC50= 2350 mg/L 48 h	N/A
Disodium phosphate, anhydrous	no data available	no data available	no data available	no data available	N/A
Urea	no data available	LC50 16200 - 18300 mg/L Poecilia reticulata 96 h	EC50 = 23914 mg/L 5 min	EC50> 10000 mg/L 24 h EC50= 3910 mg/L 48 h	-1.59
Monosodium phosphate, anhydrous	no data available	no data available	no data available	no data available	N/A
Sodium chloride	no data available	LC50 5560 - 6080 mg/L Lepomis macrochirus 96 h LC50 = 12946 mg/L Lepomis macrochirus 96 h LC50 6020 - 7070 mg/L Pimephales promelas 96 h LC50 = 7050 mg/L Pimephales promelas 96 h LC50 6420 - 6700 mg/L Pimephales promelas 96 h LC50 4747 - 7824 mg/L Oncorhynchus mykiss 96 h	no data available	EC50= 1000 mg/L 48 h EC50 340.7 - 469.2 mg/L 48 h	N/A
Sodium thiosulfate pentahydrate	no data available	no data available	no data available	no data available	N/A
Bacillus species	no data available	no data available	no data available	no data available	N/A
Lipase, triacylglycerol	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** Does not Comply  
**DSL** Does not Comply

#### 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 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	Yes	No	No	No

#### CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Sodium bicarbonate	Not applicable	Not applicable
Disodium phosphate, anhydrous	5000 lb	Not applicable
Urea	Not applicable	Not applicable
Monosodium phosphate, anhydrous	Not applicable	Not applicable
Sodium chloride	Not applicable	Not applicable
Sodium thiosulfate pentahydrate	Not applicable	Not applicable
Bacillus species	Not applicable	Not applicable
Lipase, triacylglycerol	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** Ana Santiago  
**Supersedes Date** 12/07/2011  
**Issuing Date** 12/20/2013  
**Reason for Revision** No information available.  
**Glossary** No information available.  
**List of References.** No information available.

**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. 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



# MARBLE CHIPS

**Revised:** 07/13/2010  
**Replaces:** 05/09/2010  
**Printed:** 08/02/2010

**Carolina Biological Supply Company**

2700 York Rd | Burlington, NC 27215 • to order: 800.334.5551 • for support: 800.227.1150

**CAROLINA**  
www.carolina.com

### Section 1 - Product Description

**Product Name:** Marble Chips, Technical

**Product Code(s):** 87-4050, 87-4052, 20-2220

**Size:** 500 g; 2.5 kg

**Chemical Name:** Calcium Carbonate

**CAS Number:** 1317-65-3

**Formula:** CaCO<sub>3</sub>

**Synonyms:** Chalk; Calcium Carbonate; Agstone; Limestone

**Distributor:** Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215

**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F) **Chemtrec** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 - Hazard Identification

**Emergency Overview:** Non-Hazardous under normal use.

**Potential Health Effects:**

**Eyes:** May cause irritation.

**Skin:** May cause irritation to skin.

**Ingestion:** May cause gastrointestinal discomfort.

**Inhalation:** May cause irritation to respiratory tract.

### Section 3 - Composition / Information on Ingredients

**Principal Hazardous Components:** Marble Chips (CAS#1317-65-3) 100%

**TLV units:** ACGIH-TLV 10 mg/m<sup>3</sup> (total dust) (TWA)

**PEL units:** OSHA-PEL 15 mg/m<sup>3</sup> (total dust) (TWA)

### Section 4 - First Aid Measures

**Emergency and First Aid Procedures:**

**Eyes** - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin** - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of ... (Water, unless specified as a water reactive material).

**Ingestion** - If swallowed, rinse mouth with water (only if the person is conscious). If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

**Inhalation** - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

## Section 5 - Firefighting Procedures

**Flash Point (Method Used):** Non-flammable solid

**NFPA Rating:**

**Health:** 0

**Fire:** 0

**Reactivity:** 0

**Extinguisher Media:** Use dry chemical, CO2 or appropriate foam.

**Flammable Limits in Air % by Volume:** N/A

**Autoignition Temperature:** N/A

**Special Firefighting Procedures:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

**Unusual Fire and Explosion Hazards:** Keep away from ... (incompatible materials to be indicated by the manufacturer). Flammable.

## Section 6 - Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

## Section 7 - Special Precautions

**Precautions to Take in Handling or Storing:** Avoid contact with skin and eyes.

Do not breathe dust.

Keep away from ... (incompatible materials to be indicated by the manufacturer).

Keep container tightly closed in a cool, well-ventilated place.

## Section 8 - Protection Information

**Respiratory Protection (Specify Type):** None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.

**Ventilation:**

**Local Exhaust:** Yes

**Mechanical(General):** Yes

**Special:** No

**Other:** No

**Protective Gloves:** Natural rubber, Neoprene, PVC or equivalent.

**Eye Protection:** Splash proof chemical safety goggles should be worn.

**Other Protective Clothing or Equipment:** Lab coat, apron, eye wash, safety shower.

## Section 9 - Physical Data

**Molecular Weight:** 100.09

**Boiling Point:** N/A

**Vapor Density(Air=1):** N/A

**Percent Volatile by Volume:** Non-volatile

**Solubility in Water:** Practically Insoluble

**Melting Point:** Decomposes at 825 °C

**Vapor Pressure:** N/A

**Specific Gravity (H2O=1):** 2.83

**Evaporation Rate (BuAc=1):** N/A

**Appearance and Odor:** White, odorless crystals.

## Section 10 - Reactivity Data

**Stability:** Stable

**Conditions to Avoid:** Contact with acids liberates toxic gas.

**Incompatibility (Materials to Avoid):** Ammonium Salts, Alum, Acids, Halogens,  
**Hazardous Decomposition Products:** CO<sub>x</sub>, CaO,  
**Hazardous Polymerization:** Will not occur

## Section 11 - Toxicity Data

**Toxicity Data:** orl-rat LD50 6450 mg/kg

**Effects of Overexposure:**

**Acute:** See Section 2

**Chronic:** Not listed as a carcinogen by IARC, NTP or OSHA.

**Conditions Aggravated by Overexposure:** N/A

**Target Organs:** Respiratory system,

**Primary Route(s) of Entry:** Inhalation.

## Section 12 - Ecological Data

**EPA Waste Numbers:** N/A

## Section 13 - Disposal Information

**Waste Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

## Section 14 - Transport Information

**DOT Proper Shipping Name:** N/A

## Section 15 - Regulatory Information

**EPA TSCA Status:** On TSCA Inventory

**Hazard Category for SARA Section 311/312 Reporting:** Chronic Acute

**Name List:**

No

**Chemical Category:**

No

**CERCLA Section 103 RQ(lb.):** No

**RCRA Section 261.33:** No

## Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH American Conference of Governmental Industrial Hygienists

CAS Number Chemical Services Abstract Number

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

DOT U.S. Department of Transportation

IARC International Agency of Research on Cancer



N/A	Not Available
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act

## SAFETY DATA SHEET

### SECTION 1 – IDENTIFICATION AND COMPANY DETAILS

**PRODUCT NAME:** **BLICK MATTE ACRYLIC EXTENDER**  
(All information the same for all sizes.)

**COMPANY NAME:** **DICK BLICK ART MATERIALS**  
**ADDRESS:** 695 US Hwy 150 E; P.O. Box 1267  
Galesburg, IL 61401 USA

**PHONE:** 800-828-4548  
**INTERNATIONAL PHONE:** +1-309-343-6181  
**FAX:** 800-621-8293  
**WEBSITE:** www.dickblick.com

**DATE PREPARED:** November 19, 2015

**EMERGENCY:** If swallowed, call your poison control center at 1-800-222-1222.  
Seek medical assistance for further treatment, observation and support, if necessary.

### SECTION 2 – HAZARDS IDENTIFICATION

**Hazardous Ingredients:** NONE

Primary Routes of Entry:	NOT HAZARDOUS
Carcinogen Listing:	NOT LISTED
Health Hazards Acute:	NONE
Health Hazards Chronic:	NONE
Signs & Symptoms of Exposure:	NONE
Medical Conditions Generally Aggravated by Exposure:	NONE

**Health Effects:**

Acute: Eye	DIRECT CONTACT MAY CAUSE SLIGHT IRRITATION
Skin	PROLONGED OR REPEATED CONTACT MAY CAUSE SLIGHT SKIN IRRITATION
Inhaled	NON ALLOCATED
Chronic	NONE ALLOCATED AIRBORNE PARTICLES CONTAIN A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS AND OTHER REPRODUCTIVE HARM.

### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration
PROPYLENE GLYCOL	57-55-6	PROPRIETARY

All Sizes – Blick Matte Acrylic Extender

Page 1 of 4 SDS Date 11/15

While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data is not to be taken as a warranty or representation for which we assume legal responsibility. It is offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, State, and Local laws and regulations.

**SECTION 4 – FIRST AID MEASURES**

Skin	WASH SKIN WITH SOAP AND WATER OR USE A PRODUCT SPECIFICALLY FORMULATED FOR WATER BASED ACRYLIC REMOVAL. IF IRRITATION PERSISTS SEEK MEDICAL HELP.
Eye	CHECK FOR AND REMOVE ANY CONTACT LENSES. FLUSH EYES UP TO 15 MINUTES WITH WATER, HOLDING EYE LIDS OPEN. IF IRRITATION PERSISTS SEEK MEDICAL HELP.
Inhaled	IF PERSON IS SHOWING ADVERSE EFFECTS, REMOVE PERSON TO FRESH AIR. SEEK MEDICAL HELP IF SYMPTOMS OCCUR.
Ingestion	TREAT SYMPTOMATICALLY. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEEK MEDICAL HELP IF SYMPTOMS OCCUR. IF SWALLOWED, CALL YOUR POISON CONTROL CENTER AT 1-800-222-1222.

**SEEK MEDICAL ASSISTANCE FOR FURTHER TREATMENT, OBSERVATION AND SUPPORT, IF NECESSARY.**

**Advice to Doctor:**

THIS PRODUCT CARRIES THE A.P. SEAL, CONFORMS TO ASTM D4236, AND IS CERTIFIED NON-TOXIC BY A TOXICOLOGIST IN ASSOCIATION WITH THE ART & CRAFT MATERIALS INSTITUTE, HANSON, MA 02341 USA.

**SECTION 5 – FIRE FIGHTING MEASURES**

Fire / Explosion Hazard:	NONE
Flash Point (Method):	N/A
Auto-Ignition Temperature:	N/A
Flammability Limits In Air (% by Volume):	N/A
LOWER EXPLOSIVE LIMIT (LEL):	UNKNOWN
UPPER EXPLOSIVE LIMIT (UEL):	UNKNOWN
Extinguisher Media:	N/A
Special Fire Fighting Procedures:	N/A
Unusual Fire & Explosion Hazards:	N/A

**Extinguishing Media:**

THIS PRODUCT IS NOT FLAMMABLE. USE FIRE-EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING MATERIALS.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES****Leak & Spill Procedures:**

TAKE CARE FLOOR SURFACE WILL BE SLIPPERY AT SITE OF SPILLAGE.

FOR MINOR SPILLS, MOP-UP WITH RAGS AND DISPOSE OF.

FOR LARGER QUANTITIES, CONTAIN ANY SPILLS WITH INERT MATERIALS (SAND, SAWDUST, ETC.) AND TRANSFER TO CONTAINERS FOR DISPOSAL.

DO NOT CONTAMINATE WATER SOURCES OR SEWER.

**SECTION 7 – HANDLING AND STORAGE****Handling Procedures & Equipment:**

AVOID SKIN AND EYE CONTACT.

WASH HANDS AFTER USE.

**Storage Requirements:**

STORE AT ROOM TEMPERATURE.

KEEP FROM FREEZING.

RECOMMENDED STORAGE CONDITIONS ARE BETWEEN 34° F AND 122 °F (1° C AND 50 °C).

**SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION****Protective Equipment:**

Respiratory Protection (Specific Type):	NONE NEEDED UNDER NORMAL CONDITIONS OF USE
Protective Gloves:	NOT REQUIRED
Eye Protection:	NOT REQUIRED
Other Protective Equipment:	NOT REQUIRED
Hygienic Work Practices:	AS WITH ANY WATER BASED PRODUCT

**Ventilation To Be Used:**

Local Exhaust:	N/A
Mechanical (General):	N/A
Special:	N/A
Other (Specify):	N/A

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point: 215°-275°F  
Vapor Pressure: NOT KNOWN  
Specific Vapor Density (AIR=1): LIGHTER THAN AIR  
Solubility in Water: COMPLETELY SOLUBLE

Specific Gravity (H2O=1): NOT KNOWN  
Melting Point: NOT KNOWN  
Evaporation Rate: SLOWER THAN ETHER  
Reactivity in Water: NOT KNOWN

**Appearance & Odor:** CLEAR IN COLOR. NO ODOR.

All Sizes – Blick Matte Acrylic Extender

Page 3 of 4 SDS Date 11/15

While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data is not to be taken as a warranty or representation for which we assume legal responsibility. It is offered solely for your consideration and verification. Any use of this data and information must be determined by the user to be in accordance with applicable Federal, State, and Local laws and regulations.

**SECTION 10 – STABILITY AND REACTIVITY**

Stability:	STABLE
Conditions To Avoid:	N/A
Incompatibility (Materials to Avoid):	NONE
Hazardous Decomposition Products:	NONE
Hazardous Polymerization Products:	NONE
Conditions To Avoid:	N/A

**SECTION 11 – TOXICOLOGICAL INFORMATION**

**The toxicological information for the components is:** NON-TOXIC

THIS PRODUCT CARRIES THE A.P. SEAL, CONFORMS TO ASTM D4236, AND IS CERTIFIED NON-TOXIC BY A TOXICOLOGIST IN ASSOCIATION WITH THE ART & CRAFT MATERIALS INSTITUTE, HANSON, MA 02341 USA.

**SECTION 12 – ECOLOGICAL INFORMATION**

NOT REGARDED AS DANGEROUS FOR THE ENVIRONMENT.

**SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods:**  
DISPOSE OF IN ACCORDANCE WITH LOCAL AND NATIONAL REGULATIONS FOR INERT NON-HAZARDOUS WASTE MATERIAL.

**SECTION 14 – TRANSPORT INFORMATION**

NON-HAZARDOUS FOR RAIL, ROAD, SEA AND AIR TRANSPORT.

**SECTION 15 – REGULATORY INFORMATION**

NONE

**SECTION 16 – OTHER INFORMATION**

USE: SLOWS DRYING TIME OF ARTIST PAINT.

THIS PRODUCT DOES NOT CONTAIN EGG, DAIRY, WHEAT, GLUTEN, SOY OR PEANUT PRODUCTS, BY-PRODUCTS OR DERIVATIVES.

THIS PRODUCT DOES NOT CONTAIN LATEX MATERIALS OR ANIMAL DERIVED INGREDIENTS.

All Sizes – Blick Matte Acrylic Extender

Page 4 of 4      SDS Date 11/15

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**MATERIAL SAFETY DATA SHEET****SECTION 1 – IDENTIFICATION AND COMPANY DETAILS**

**PRODUCT NAME:** **BLICK MATTE ACRYLIC GLOSS VARNISH**  
(All information the same for all sizes.)

**COMPANY NAME:** **DICK BLICK ART MATERIALS**  
**ADDRESS:** 695 US Hwy 150 E; P.O. Box 1267  
Galesburg, IL 61401 USA

**PHONE:** 800-828-4548  
**INTERNATIONAL PHONE:** +1-309-343-6181  
**FAX:** 800-621-8293  
**WEBSITE:** www.dickblick.com

**DATE PREPARED:** March 13, 2015

**EMERGENCY:** If swallowed, call your poison control center at 1-800-222-1222.  
Seek medical assistance for further treatment, observation and support, if necessary.

**SECTION 2 – COMPOSITION / INFORMATION ON INGREDIENTS**

Chemical Name	CAS No.	Concentration
ACRYLIC EMULSION		PROPRIETARY
PRESERVATIVE		PROPRIETARY
COALESCENT		PROPRIETARY
AMMONIA	1336-21-6	PROPRIETARY

**SECTION 3 – HAZARDS IDENTIFICATION**

**Hazardous Ingredients:** NONE

Primary Routes of Entry:	NOT HAZARDOUS
Carcinogen Listing:	NOT LISTED
Health Hazards Acute:	NONE
Health Hazards Chronic:	NONE
Signs & Symptoms of Exposure:	NONE
Medical Conditions Generally Aggravated by Exposure:	NONE

**Health Effects:**

Acute: Eye	DIRECT CONTACT MAY CAUSE SLIGHT IRRITATION
Skin	PROLONGED OR REPEATED CONTACT MAY CAUSE SLIGHT SKIN IRRITATION
Inhaled	INHALATION OF VAPOR MAY CAUSE IRRITATION
Chronic	NONE ALLOCATED

All Sizes – Blick Matte Acrylic Gloss Varnish

Page 1 of 4 MSDS Date 03/15

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**SECTION 4 – FIRST AID MEASURES**

Skin	WASH SKIN WITH SOAP AND WATER OR USE A PRODUCT SPECIFICALLY FORMULATED FOR WATER BASED ACRYLIC REMOVAL. IF IRRITATION PERSISTS SEEK MEDICAL HELP.
Eye	CHECK FOR AND REMOVE ANY CONTACT LENSES. FLUSH EYES UP TO 15 MINUTES WITH WATER, HOLDING EYE LIDS OPEN. IF IRRITATION PERSISTS SEEK MEDICAL HELP.
Inhaled	IF PERSON IS SHOWING ADVERSE EFFECTS, REMOVE PERSON TO FRESH AIR. SEEK MEDICAL HELP IF SYMPTOMS OCCUR.
Ingestion	TREAT SYMPTOMATICALLY. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEEK MEDICAL HELP IF SYMPTOMS OCCUR. IF SWALLOWED, CALL YOUR POISON CONTROL CENTER AT 1-800-222-1222.

**SEEK MEDICAL ASSISTANCE FOR FURTHER TREATMENT, OBSERVATION AND SUPPORT, IF NECESSARY.**

**Advice to Doctor:**

THIS PRODUCT CARRIES THE A.P. SEAL, CONFORMS TO ASTM D4236, AND IS CERTIFIED NON-TOXIC BY A TOXICOLOGIST IN ASSOCIATION WITH THE ART & CRAFT MATERIALS INSTITUTE, HANSON, MA 02341 USA.

**SECTION 5 – FIRE FIGHTING MEASURES**

Fire / Explosion Hazard:	NONE
Flash Point (Method):	N/A
Auto-Ignition Temperature:	N/A
Flammability Limits In Air (% by Volume):	N/A
LOWER EXPLOSIVE LIMIT (LEL):	UNKNOWN
UPPER EXPLOSIVE LIMIT (UEL):	UNKNOWN
Extinguisher Media:	N/A
Special Fire Fighting Procedures:	N/A
Unusual Fire & Explosion Hazards:	N/A

**Extinguishing Media:**

THIS PRODUCT IS NOT FLAMMABLE. USE FIRE-EXTINGUISHING MEDIA APPROPRIATE FOR SURROUNDING MATERIALS.

**SECTION 6 – ACCIDENTAL RELEASE MEASURES****Leak & Spill Procedures:**

TAKE CARE FLOOR SURFACE WILL BE SLIPPERY AT SITE OF SPILLAGE.

FOR MINOR SPILLS, MOP-UP WITH RAGS AND DISPOSE OF.

FOR LARGER QUANTITIES, CONTAIN ANY SPILLS WITH INERT MATERIALS (SAND, SAWDUST, ETC.) AND TRANSFER TO CONTAINERS FOR DISPOSAL.

DO NOT CONTAMINATE WATER SOURCES OR SEWER.

**SECTION 7 – HANDLING AND STORAGE****Handling Procedures & Equipment:**

AVOID SKIN AND EYE CONTACT.

WASH HANDS AFTER USE.

**Storage Requirements:**

STORE AT ROOM TEMPERATURE.

KEEP FROM FREEZING.

RECOMMENDED STORAGE CONDITIONS ARE BETWEEN 34° F AND 122 °F (1° C AND 50 °C).

**SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION****Protective Equipment:**

Respiratory Protection (Specific Type):	NONE NEEDED UNDER NORMAL CONDITIONS OF USE
Protective Gloves:	NOT REQUIRED
Eye Protection:	NOT REQUIRED
Other Protective Equipment:	NOT REQUIRED
Hygienic Work Practices:	AS WITH ANY WATER BASED PRODUCT

**Ventilation To Be Used:**

Local Exhaust:	N/A
Mechanical (General):	N/A
Special:	N/A
Other (Specify):	N/A

**SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point: 215°-275°F	Specific Gravity (H <sub>2</sub> O=1): APPROX 1 g / ml
Vapor Pressure: NOT KNOWN	Melting Point: NOT KNOWN
Specific Vapor Density (AIR=1): LIGHTER THAN AIR	Evaporation Rate: SLOWER THAN ETHER
Solubility in Water: COMPLETELY SOLUBLE	Reactivity in Water: NOT KNOWN

**Appearance & Odor:** MILKY WHITE LIQUID. MAY HAVE SLIGHT AMMONIA SMELL.

All Sizes – Blick Matte Acrylic Gloss Varnish

Page 3 of 4 MSDS Date 03/15

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**SECTION 10 – STABILITY AND REACTIVITY**

Stability:	STABLE
Conditions To Avoid:	N/A
Incompatibility (Materials to Avoid):	NONE
Hazardous Decomposition Products:	NONE
Hazardous Polymerization Products:	NONE
Conditions To Avoid:	N/A

**SECTION 11 – TOXICOLOGICAL INFORMATION**

**The toxicological information for the components is:** NON-TOXIC

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**SECTION 12 – ECOLOGICAL INFORMATION**

NOT REGARDED AS DANGEROUS FOR THE ENVIRONMENT.

**SECTION 13 – DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods:**  
DISPOSE OF IN ACCORDANCE WITH LOCAL AND NATIONAL REGULATIONS FOR INERT NON-HAZARDOUS WASTE MATERIAL.

**SECTION 14 – TRANSPORT INFORMATION**

NON-HAZARDOUS FOR RAIL, ROAD, SEA AND AIR TRANSPORT.

**SECTION 15 – REGULATORY INFORMATION**

NONE

**SECTION 16 – OTHER INFORMATION**

THIS PRODUCT DOES NOT CONTAIN EGG, DAIRY, WHEAT, GLUTEN, SOY OR PEANUT PRODUCTS, BY-PRODUCTS OR DERIVATIVES.

THIS PRODUCT DOES NOT CONTAIN LATEX MATERIALS OR ANIMAL DERIVED INGREDIENTS.

All Sizes – Blick Matte Acrylic Gloss Varnish

Page 4 of 4    MSDS Date 03/15

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R.02-03-03 ✓

## Material Safety Data Sheet

CHROMA INC  
 Manufacturer  
 205 BUCKY DRIVE  
 Address  
 LITITZ, PA 17543  
 (717)626-8866  
 Phone Number (For Information)  
 (717)626-8866  
 Emergency Phone Number      Telex\*

DICK BLICK CRAFT COLORS

Identity (Trade Name As Used On Label)

MSDS Number\*

CAS Number\*

6/02

Date Prepared

Prepared By\*

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.

00727-  
 all Colors  
 Except  
 -1035  
 -1045  
 -1055

## SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS — Chemical Name & Common Names (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	%	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED
PRODUCT IS WATER BASED, NON-HAZARDOUS, NON-TOXIC				
ACRYLIC COLOR IN LIQUID FORM. CERTIFIED NON-TOXIC				
BY (ART & CREATIVE MATERIALS INSTITUTE).				
1. WATER				
2. VARIOUS ASSORTED PIGMENTS - ALL NON-TOXIC.				
3. ACRYLIC EMULSION				
4. ACRYLIC THICKENERS				
5. CALCIUM CARBONATE				
6. PRESERVATIVE NON-HAZARDOUS AT LEVEL USED (.3%)				
Non-Hazardous Ingredients				
TOTAL	100			

v.9.20

## SECTION 2 - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point	215°-275°F	Specific Gravity (H <sub>2</sub> O = 1)	NOT KNOWN
Vapor Pressure (mm Hg and Temperature)	NOT KNOWN	Melting Point	NOT KNOWN
Vapor Density (Air = 1)	LIGHTER THAN AIR	Evaporation Rate	= 1 SLOWER THAN ETHER
Solubility in Water	TOTALLY SOLUBLE	Water Reactive	NOT KNOWN

Appearance and Odor LIQUID ACRYLIC PAINTS IN ASSORTED COLORS. SLIGHT AMMONIA SMELL.

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method Used	N/A	Auto-Ignition Temperature	N/A	Flammability Limits in Air % by Volume	N/A	LEL	UNKNOWN	UEL	UNKNOWN
Extinguisher Media	N/A								
Special Fire Fighting Procedures	N/A								
Unusual Fire and Explosion Hazards	N/A								

## \*Optional

Item Numbers: 00727-0079, 00727-1023, 00727-1025, 00727-1079, 00727-1179, 00727-1583, 00727-2023, 00727-2025, 00727-2323, 00727-3063, 00727-3073, 00727-3083, 00727-3553, 00727-3563, 00727-3573, 00727-3703, 00727-3713, 00727-3723, 00727-4013, 00727-4023, 00727-4033, 00727-4293, 00727-4513, 00727-4523, 00727-4533, 00727-4753, 00727-4763, 00727-4773, 00727-4833, 00727-4843, 00727-4853, 00727-5023, 00727-5033, 00727-5043, 00727-5053, 00727-5063, 00727-5103, 00727-5113, 00727-5123, 00727-5373, 00727-5383, 00727-5393, 00727-5463, 00727-5813, 00727-5823, 00727-5833, 00727-5913, 00727-6533, 00727-6543, 00727-6553, 00727-7013, 00727-7023, 00727-7033, 00727-7043, 00727-7053, 00727-7063, 00727-7453, 00727-7483, 00727-7753, 00727-7763, 00727-7773, 00727-8003, 00727-8143, 00727-9023, 00727-9323, 00727-1093, 00727-2503, 00727-3043, 00727-3143, 00727-4113, 00727-5163, 00727-5293, 00727-6413, 00727-7083, 00727-9263, 00727-9333, 00727-9503

00727-002 00727-PAX 717 828 829

CHROMA, INC.

PAGE 2 - DICK BLICK CRAFT COLORS

0003

**SECTION 4 - REACTIVITY HAZARD DATA****STABILITY**  
☒ Stable  
☐ Unstable**Conditions  
To Avoid** N/A**Incompatibility  
(Materials to Avoid)** NONE**Hazardous  
Decomposition Products** NONE**HAZARDOUS POLYMERIZATION**☐ May Occur  
☒ Will Not Occur**Conditions  
To Avoid** NONE**SECTION 5 - HEALTH HAZARD DATA****PRIMARY ROUTES  
OF ENTRY**☐ Inhalation☐ Ingestion☐ Skin Absorption☒ Not Hazardous**CARCINOGEN  
LISTED IN**☐ NTP☐ IARC Monograph☐ OSHA☒ Not Listed**HEALTH HAZARDS****Acute**

NONE

**Chronic**

NONE

**Signs and Symptoms  
of Exposure** NONE**Medical Conditions  
Generally Aggravated by Exposure** NONE**EMERGENCY FIRST AID PROCEDURES** - Seek medical assistance for further treatment, observation and support if necessary.**Eye Contact**

NONE

**Skin Contact**

NONE

**Inhalation**

NONE

**Ingestion**

NONE

**SECTION 6 - CONTROL AND PROTECTIVE MEASURES****Respiratory Protection  
(Specify Type)**

NONE NEEDED UNDER NORMAL CONDITIONS OF USE

**Protective Gloves**

NOT REQUIRED

**Eye Protection**

NOT REQUIRED

**VENTILATION  
TO BE USED**☐ Local Exhaust

NONE

☐ Mechanical (general)

NONE

☐ Special

NONE

☐ Other (specify)

NONE

**Other Protective  
Clothing and Equipment**

NOT REQUIRED

**Hygienic Work  
Practices**

AS WITH ANY WATER BASED PRODUCT

**SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE / LEAK PROCEDURES****Steps to be Taken if Material  
is Spilled Or Released**

DIKE AND CONTAIN SPILL WITH INERT MATERIALS (SAND, SAWDUST, ETC.)

AND TRANSFER CONTENTS TO CONTAINERS FOR DISPOSAL.

**Waste Disposal  
Methods**

NORMAL DISPOSAL

**Precautions to be Taken  
in Handling and Storage**

NO PARTICULAR PRECAUTIONS

**Other Precautions and/or Special Hazards**

NONE

**NFPA  
Rating\***

Health

Flammability

Reactivity

Special

**HMS  
Rating\***

Health

Flammability

Reactivity

Personal Protection

\*Optional

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Reorder No. 2217-2

Item Numbers: 00727-0079, 00727-1023, 00727-1025, 00727-1079, 00727-1179, 00727-1583, 00727-2023, 00727-2025, 00727-2323, 00727-3063, 00727-3073, 00727-3083, 00727-3553, 00727-3563, 00727-3573, 00727-3703, 00727-3713, 00727-3723, 00727-4013, 00727-4023, 00727-4033, 00727-4293, 00727-4513, 00727-4523, 00727-4533, 00727-4753, 00727-4763, 00727-4773, 00727-4833, 00727-4843, 00727-4853, 00727-5023, 00727-5033, 00727-5043, 00727-5053, 00727-5063, 00727-5103, 00727-5113, 00727-5123, 00727-5373, 00727-5383, 00727-5393, 00727-5463, 00727-5813, 00727-5823, 00727-5833, 00727-5913, 00727-6533, 00727-6543, 00727-6553, 00727-7013, 00727-7023, 00727-7033, 00727-7043, 00727-7053, 00727-7063, 00727-7453, 00727-7483, 00727-7753, 00727-7763, 00727-7773, 00727-8003, 00727-8143, 00727-9023, 00727-9323, 00727-1093, 00727-2503, 00727-3043, 00727-3143, 00727-4113, 00727-5163, 00727-5293, 00727-6413, 00727-7083, 00727-9263, 00727-9333, 00727-9503

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04-17-03

L-06118

M A T E R I A L S A F E T Y D A T A S H E E T

PRODUCT NAME: DICK BLICK MATTE FIXATIVE  
PRODUCT CODE: L-06118  
PREPARED FOR: DICK BLICK COMPANY

HMIS CODES: H F R P  
2 4 0

## ===== SECTION I - MANUFACTURER IDENTIFICATION =====

MANUFACTURER'S NAME: HYDROSOL, INC.  
ADDRESS : 8407 S. 77th Avenue,  
Bridgeview, IL 60455

EMERGENCY PHONE : 708-598-7100  
INFORMATION PHONE : 708-598-7100

DATE PRINTED : 01/10/03  
NAME OF PREPARER : ESP

## ===== SECTION II - HAZARDOUS INGREDIENTS/SARA III INFORMATION =====

REPORTABLE COMPONENTS	CAS NUMBER	VAPOR PRESSURE		WEIGHT PERCENT
		mm Hg @ 20°C	TEMP	
* TOLUENE OSHA PEL: 200PPM TWA, ACGIH TLV: 100 PPM, : 200PPM ACC	108-88-3	10	81	36
ACETONE OSHA PEL: 750 PPM, ACGIH TLV: 750 PPM	67-64-1	181	63	18
ISOBUTYL ACETATE OSHA PEL: 150 PPM, ACGIH TLV: 150 PPM	110-19-0	13	68	12
ETHYL ACETATE OSHA PEL: 400 PPM, ACGIH TLV: 400 PPM	141-78-6	73	68	7
PROPANE OSHA PEL: 1000 PPM, ACGIH TLV: ASPHYXIAN	74-98-6	6350	68	20

\* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

## ===== SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS =====

BOILING RANGE: -44 deg F - 243 deg F  
VAPOR DENSITY: HEAVIER THAN AIR  
SOLUBILITY IN WATER: SLIGHT  
APPEARANCE AND ODOR: AEROSOL PRODUCT

SPECIFIC GRAVITY (H<sub>2</sub>O=1): 0.76  
EVAPORATION RATE: SLOWER THAN ETHER

## ===== SECTION IV - FIRE AND EXPLOSION HAZARD DATA =====

FLASH POINT: -156 deg F  
FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 1.2 UPPER: 13

METHOD USED: ESTIMATED

EXTINGUISHING MEDIA: FOAM, CO<sub>2</sub>, DRY CHEMICAL, WATER FOG

**SPECIAL FIREFIGHTING PROCEDURES**

WATER SPRAY MAY BE INEFFECTIVE. WATER MAY BE USED TO COOL CONTAINERS TO PREVENT PRESSURE BUILD-UP AND EXPLOSION WHEN EXPOSED TO EXTREME HEAT. IF WATER IS USED, FOG NOZZLES PREFERRED. WEAR GOGGLES AND SELF-CONTAINED BREATHING APPARATUS.

**UNUSUAL FIRE AND EXPLOSION HAZARDS**

CLOSED CONTAINERS MAY EXPLODE FROM INTERNAL PRESSURE BUILD-UP WHEN EXPOSED TO EXTREME HEAT AND DISCHARGE CONTENTS. VAPOR ACCUMULATION CAN FLASH OR EXPLODE IF IGNITED. OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD. SYMPTOMS MAY NOT BE READILY APPARENT. OBTAIN MEDICAL ATTENTION.

## ===== SECTION V - REACTIVITY DATA =====

STABILITY: STABLE  
CONDITIONS TO AVOID

APPLICATION TO HOT SURFACES. STORAGE ABOVE 120 DEG F. EXPOSURE TO OPEN FLAME.

INCOMPATIBILITY (MATERIALS TO AVOID)

STRONG OXIDIZING AGENTS.

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E-06118

**M A T E R I A L   S A F E T Y   D A T A   S H E E T**

Page: 2

**HAZARDOUS DECOMPOSITION OR BYPRODUCTS**

MAY PRODUCE FUMES WHEN HEATED TO DECOMPOSITION. FUMES MAY CONTAIN CARBON MONOXIDE.

**HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR**SECTION VI - HEALTH HAZARD DATA****INHALATION HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

RESPIRATORY IRRITATION, HEADACHE, NAUSEA, FATIGUE, DROWSINESS, IMPAIRED CO-ORDINATION, CENTRAL NERVOUS SYSTEM DEPRESSION OR HEART ARRHYTHMIA.

**SKIN AND EYE CONTACT HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

SKIN: CONTACT MAY DRY THE SKIN; PROLONGED CONTACT MAY CAUSE MODERATE IRRITATION. EYES: LIQUID OR VAPOR CAN CAUSE MODERATE TO SEVERE IRRITATION.

**SKIN ABSORPTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

NOT EASILY ABSORBED. SOLVENT ACTION CAN DRY AND DEFAT THE SKIN CAUSING THE SKIN TO CRACK, LEADING TO DERMATITIS.

**INGESTION HEALTH RISKS AND SYMPTOMS OF EXPOSURE**

NOT A LIKELY ROUTE OF EXPOSURE. IF SWALLOWED, DO NOT INDUCE VOMITING. SEEK IMMEDIATE MEDICAL ADVICE AND/OR ATTENTION.

**HEALTH HAZARDS (ACUTE AND CHRONIC)**

ACUTE: EYE IRRITANT. SKIN IRRITANT. NARCOTIC IN HIGH CONCENTRATIONS. SEVERE OVEREXPOSURE MAY CAUSE DAMAGE TO THE BLOOD. CHRONIC: REPORTS HAVE ASSOCIATED REPEATED AND PROLONGED OCCUPATIONAL EXPOSURE TO SOLVENTS WITH PERMANENT BRAIN AND NERVOUS SYSTEM AND OTHER INTERNAL ORGAN DAMAGE.

**CARCINOGENICITY:** NTP CARCINOGEN: No **IARC MONOGRAPHS:** No **OSHA REGULATED:** No**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE**

ACUTE AND CHRONIC LIVER AND KIDNEY DISEASE, ANEMIA, CORONARY DISEASE OR RHYTHM DISORDERS OF THE HEART.

**EMERGENCY AND FIRST AID PROCEDURES**

INHALATION: REMOVE TO FRESH AIR. ADMINISTER OXYGEN IF NEEDED. APPLY ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED. GET MEDICAL ATTENTION. SKIN: WIPE OFF WITH TOWEL. WASH WITH SOAP AND WATER. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. EYES: WASH IMMEDIATELY WITH LARGE VOLUMES OF FRESH WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE****STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

AVOID BREATHING VAPORS. VENTILATE AREA. REMOVE ALL SOURCES OF IGNITION. CLEAN UP AREA WITH ABSORBENT MATERIAL AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL.

**WASTE DISPOSAL METHOD**

DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. BEFORE ATTEMPTING CLEAN UP, REFER TO OTHER SECTIONS OF THIS MSDS FOR HAZARD CAUTION INFORMATION.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**

STORE AND USE IN COOL, DRY, WELL-VENTILATED AREAS. DO NOT STORE ABOVE 120 DEG F. DO NOT PUNCTURE OR INCINERATE (BURN) CANS. DO NOT STICK PIN, NAIL OR ANY OTHER SHARP OBJECT INTO OPENING ON TOP OF CAN. DO NOT SPRAY IN EYES. DO NOT TAKE INTERNALLY. SEE PRODUCT LABEL FOR ADDITIONAL INFORMATION.

**OTHER PRECAUTIONS**

SMALL PRESSURIZED CONTAINERS OF FLAMMABLE PRODUCTS MAY BE STORED IN AREAS SUITABLE FOR ORDINARY COMBUSTIBLES WITH RESPECT TO CONSTRUCTION, DRAINAGE, CONTROL OF IGNITION SOURCES, AND VENTILATION EXCEPT THAT THEY SHOULD NOT BE STORED IN BASEMENTS.

**SECTION VIII - CONTROL MEASURES****RESPIRATORY PROTECTION**

NONE UNDER NORMAL USE. AVOID BREATHING VAPORS. IN RESTRICTED AREAS, USE APPROVED CHEMICAL/MECHANICAL FILTERS DESIGNED TO REMOVE A COMBINATION OF PARTICLES AND VAPOR. IN CONFINED AREAS, USE APPROVED AIR LINE TYPE RESPIRATOR OR HOOD. SELF-CONTAINED BREATHING APPARATUS IS REQUIRED FOR VAPOR CONCENTRATIONS ABOVE PEL/TLV LIMITS.

**VENTILATION**

01/13/03

14:46

0705 386 0612

VINA DINE

L-06118

**M A T E R I A L   S A F E T Y   D A T A   S H E E T**

Page: 3

SUFFICIENT TO PREVENT INHALATION OF SOLVENT VAPORS. GENERAL DILUTION AND/OR LOCAL EXHAUST VENTILATION IN VOLUME OR PATTERN TO KEEP PEL/TLV OF MOST HAZARDOUS INGREDIENT BELOW ACCEPTABLE LIMIT AND LEL BELOW STATED LIMIT.

**PROTECTIVE GLOVES**

NONE UNDER NORMAL USE. SOLVENT RESISTANT REQUIRED FOR PROLONGED OR REPEATED CONTACT.

**EYE PROTECTION**

NONE UNDER NORMAL USE; HOWEVER, USE OF SAFETY GLASSES WITH SPLASH GUARDS OR FULL FACE SHIELD IS RECOMMENDED.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT**

NONE UNDER NORMAL USE; HOWEVER, USE OF SOLVENT RESISTANT APRONS OR OTHER CLOTHING IS RECOMMENDED.

**WORK/HYGIENIC PRACTICES**

EYE WASHES AND SAFETY SHOWERS IN THE WORKPLACE ARE RECOMMENDED.

**SECTION IX - DISCLAIMER**

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED ACCURATE; HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. BECAUSE THE INFORMATION CONTAINED HEREIN MAY BE APPLIED UNDER CONDITIONS BEYOND OUR CONTROL, WE ASSUME NO RESPONSIBILITY FOR ITS USE.

# Material Safety Data Sheet

## MAVERICK

	<b>DATE PREPARED:</b> 04/19/06
	<b>REVISION NUMBER:</b> NEW
	<b>EMERGENCY #:</b> 1-800-535-5053 - INFOTRAC
	<b>PRODUCT NUMBER:</b> 10338
	<b>SUPPLIERS PHONE #:</b> 201-935-4300

### SECTION I - IDENTIFICATION

**PRODUCT NAME:** ..... MAVERICK  
**APPLICATION:** ..... ALL PURPOSE CLEANER DEGREASER

### SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENT	CAS NUMBER	PEL
2-BUTOXYETHANOL	111-76-2	

### SECTION III - PHYSICAL DATA

**APPEARANCE:** ..... CLEAR, LT. BLUE LIQUID/LEMON ODOR  
**BOILING POINT:** ..... 212 DEGREES F  
**VAPOR PRESSURE:** ..... NA  
**VAPOR DENSITY (AIR=1):** ..... NA (Air = 1)  
**EVAPORATION RATE:** ..... NA  
**SPECIFIC GRAVITY:** ..... 1.008  
**FLAMMABLE LIMITS:** ..... NONE  
**SOLUBILITY IN WATER:** ..... COMPLETE  
**VOLATILITY INCLUDING WATER:** ..... NA

### SECTION IV - FIRE AND EXPLOSION DATA

**FLASHPOINT:** ..... NON-FLAMMABLE  
**EXTINGUISHING MEDIA:** ..... NOT FLAMMABLE  
**UPPER FLAMMABLE LIMIT (% BY VOL):** ..... NA  
**LOWER FLAMMABLE LIMIT (% BY VOL):** ..... NA  
**AUTO-IGNITION TEMPERATURE:** ..... NONE KNOWN  
**SPECIAL FIRE FIGHTING PROCEDURES:** ..... NONE  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** ..... UNKNOWN

# Material Safety Data Sheet

## MAVERICK

### SECTION V - REACTIVITY DATA

STABILITY CONDITIONS TO AVOID: ..... NONE  
HAZARDOUS POLYMERIZATION:..... WILL NOT OCCUR  
HAZARDOUS DECOMPOSITION PRODUCTS: ..... OXIDES OF CARBON  
INCOMPATIBILITY: ..... STRONG ACIDS  
REACTIVITY IN WATER: ..... NONE  
CONDITIONS TO AVOID: ..... NONE

### SECTION VI - HEALTH DATA

THRESHOLD LIMIT VALUE: ..... NONE  
OSHA: ..... NONE  
OSHA PEL:..... 50 PPM  
LISTED CARCINOGEN: ..... NO  
MEDICAL CONDITION AGGRAVATED BY EXP: NONE KNOWN  
CHRONIC OVER EXPOSURE EFFECTS: ..... REPEATED SKIN CONTACT MAY CAUSE  
IRRITATION  
IARC MONOGRAPHS: ..... NO  
NATIONAL TOXICOLOGY PROGRAM: ..... NO  
INHALATION:..... REMOVE TO FRESH AIR. CALL A PHYSICIAN  
INGESTION: ..... DO NOT INDUCE VOMITING, DRINK LOTS OF  
WATER, CALL A PHYSICIAN  
EYES: ..... SPLASH PROOF GOGGLES  
SKIN (DERMAL): ..... WASH WITH SOAP & WATER

### 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 SOAP & WATER FOR 15 MINUTES  
NOTE TO PHYSICIAN: ..... NONE

### SECTION VIII EMPLOYEE PROTECTION

RESPIRATORY PROTECTION:..... NONE NEEDED IN NORMAL USE  
LOCAL EXHAUST: ..... ADEQUATE  
MECHANICAL EXHAUST: ..... NONE  
SPECIAL: ..... NONE  
OTHERS: ..... NA  
PROTECTIVE CLOTHING: ..... NONE NEEDED IN NORMAL USAGE.  
EYE PROTECTION: ..... SPLASH PROOF GOGGLES  
PROTECTIVE GLOVES: ..... NON-POROUS RUBBER OR PLASTIC.



# Material Safety Data Sheet

## MAVERICK

### SECTION IX - SPILL AND DISPOSAL DATA

**SPILL:** USE ABSORBANT ON EXCESS. SWEEP UP ABSORBANT AND PLACE INTO CLOSED CONTAINER. FLUSH AREA WITH WATER.

**WASTE DISPOSAL:** OBSERVE ALL FEDERAL, STATE AND LOCAL REGULATIONS REGARDING DISPOSAL.

**OTHER PRECAUTIONS:** NONE

### SECTION X - OTHER REGULATORY INFORMATION

HMIS HEALTH: ..... 2  
HMIS FLAMMABILITY: ..... 0  
HMIS PHYSICAL HAZARD: ..... 0  
HMIS OTHER:..... B

### SECTION XI - PRECAUTIONARY LABEL STATEMENTS

**WARNING:** NONE

### SECTION XII - ADDITIONAL INFORMATION

**ADDITIONAL:** NONE



MAGCO INCORPORATED 888.405.0047 f 570.587.3550 www.magcosalt.com  
600 South State Street Clarks Summit, PA 18411

## I. GENERAL INFORMATION

TRADE NAME (COMMON NAME OR SYNONYM):

**EverGreen™ Professional Ice Melter**

### COMPOSITION:

EverGreen™ Professional Ice Melter is a blend of five ice melting chemicals.

Sodium Chloride	CAS Number 7647-14-5
Urea	CAS Number 0057-13-6
Potassium Chloride	CAS Number 7447-40-7
Magnesium Chloride	CAS Number 7791-18-6
CMA	CAS Number 76123-46-1

## II. MANUFACTURER NAME AND ADDRESS

CONTACT: MAGCO INCORPORATED

600 South State Street

Clarks Summit, PA 18411

Quality Assurance

PHONE NUMBER: 570-586-2338

DATE ISSUED: July 1, 2008

## III. HAZARDOUS IDENTIFICATION

Appearance: Blue and green-colored crystals and pellets. Odorless.

Eye: Flakes may cause slight eye irritation. Dust may cause severe eye irritation with corneal injury. Effects may be slow to heal. When dissolving, the heat produced may cause more intense effects as well as thermal burns.

Skin: Short single exposure not likely to cause significant skin irritation. Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if skin is damp or if material is confined to skin. May cause more severe response if skin is abraded. When dissolving, the heat produced may cause more intense effects as well as thermal burns. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.

Ingestion: Single dose oral toxicity is considered to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration.

## IV. FIRST AID

Eyes: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

Skin: Wash off in flowing water.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed by medical personnel.

Inhalation: Remove to fresh air if effects occur. Consult physician.

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## **V. FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT: Not Applicable

EXTINGUISHING MEDIA: Not Applicable

SPECIAL FIREFIGHTING PROCEDURES/EQUIPMENT: Not Applicable

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

Protective Equipment for Firefighters: Wear positive pressure, self-contained breathing apparatus (SCBA) and full protective firefighting clothing (includes firefighting helmet, coat, pants, boots and gloves.)

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## **VI. ACCIDENTAL RELEASE MEASURES**

Protect People:

Isolate area. Avoid contact with eyes and skin. May be a slipping hazard. Stop leak if it can be done safely. Wash exposed body areas thoroughly after handling. Use appropriate safety equipment.

Protect the Environment:

For small spills: Losses incidental to correct application of this product in its intended uses are not expected to be harmful to the environment.

For large spills: Avoid contamination of drinking water, natural water, ground water or any waterway. Losses incidental to correct application of this product in its intended uses are not expected to be harmful to the environment.

Clean-Up:

For small spills: Contain spill if possible. Collect material in suitable and properly labeled containers. Flush residue with plenty of water.

For large spills: Dike and transfer to suitable and properly labeled containers. Flush residue with plenty of water.

---

## **VII. HANDLING AND STORAGE**

Handling: Heat developed during diluting or dissolving is very high. Use cool water when dissolving or diluting.

Storage: Keep containers tightly closed when not in use. Store in a dry place. Protect from atmospheric moisture.

**VIII. EXPOSURE CONTROLS PERSONAL PROTECTION**

Eye/Face Protection: Use safety glasses. For dusty operations, wear chemical goggles.

Skin Protection: For brief contact, no precautions other than clean, body-covering clothing should be needed. Use protective clothing impervious to this material and its components. If hands are cut or scratched or sensitive to deicing chemicals, use gloves impervious to this material.

Respiratory Protection: In dusty applications or atmospheres, use an approved dust respirator.

**IX. PHYSICAL AND CHEMICAL PROPERTIES**

Blue and green colored crystals and pellets. Odorless.

Stability: Stable. Hygroscopic.

**X. OTHER IMPORTANT INFORMATION**

Do not dump into sewers, on the ground or into any body of water. Follow application directions found on the package.

Incompatibility with other materials: Corrosive to some metals. Avoid contact with metals such as: brass, mild steel, aluminum or any ferrous metal. Flammable hydrogen may be generated from contact with metals such as zinc or sodium. Avoid contact with sulfuric acid. Strong oxidizing agents will release chlorine.

Liberates chlorine upon thermal decomposition.

For disposal of this material as a waste, act in accordance with all applicable local, state and federal waste management regulations.

This product is not regulated by D.O.T. when shipped domestically by land.

To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

Consult MSDS sheets for sodium chloride, urea, potassium chloride, magnesium chloride and CMA (calcium magnesium acetate) for additional information.



Disclaimer: MAGCO INCORPORATED believes the information contained on this MSDS sheet to be accurate. However, the data and information are presented without any representation of warranty, expressed or implied, regarding the accuracy or correctness. Once this product leaves the property of MAGCO INCORPORATED, the conditions or methods of handling, storage, use and disposal are beyond the control and knowledge of MAGCO INCORPORATED. For this and other reasons, MAGCO INCORPORATED does not assume responsibility and expressly disclaims any liability for loss, damage, injury or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

Follow all instructions found on package.

30455-1100	-1200	-1300	-1400
-4770	-5140	-5210	-6090
-6170	-7010	-7510	-8340

## MSDS SHEET #3 Non-Toxic Fired Ceramic Products

<b>30454-1001</b>
<b>-1002</b>

### SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

Prepared: September 21, 2006  
 Supersedes: All previous  
 Manufacturer: Mayco Colors  
 Division of Coloramics, LLC  
 4077 Weaver Court South  
 Hilliard, Ohio 43026  
 United States of America

#### Distributor Contacts:

USA \_\_\_\_\_ Local Phone \_\_\_\_\_  
 EC \_\_\_\_\_ Local Phone \_\_\_\_\_  
 Australia \_\_\_\_\_ Local Phone \_\_\_\_\_

IN CASE OF EMERGENCY PLEASE CONTACT YOUR LOCAL POISON CONTROL CENTER

Prepared by: MSDS department  
 Information Telephone Number: 614-876-1171

#### Ceramic Glaze and Underglaze and Miscellaneous.

Astro Gems	AS-510, AS-512, AS-513, AS-515, AS-516, AS-518, AS-519, AS-523, AS-524, AS-527, AS-531, AS-532, AS-534, AS-535, AS-539, AS-545, AS-547, AS-548
Chalkboard Glazes	SG-101, SG-102
Classic Crackle	CC-101, CC-102, CC-103, CC-104, CC-105, CC-106, CC-107, CC-108
Cobblestone Glazes	SG-201, SG-202
Coloramics Fired	AC-306, AC-308
Access.-Miscs	
Crystalites	S-2701, S-2702, S-2703, S-2704, S-2705, S-2706, S-2707, S-2708, S-2709, S-2710, S-2711, S-2712, S-2713, S-2714, S-2715, S-2716, S-2717, S-2718, S-2719, S-2722, S-2723, S-2724, S-2725, S-2726, S-2727, S-2731, S-2732
Element Chunkies	EL-201, EL-203, EL-204, EL-206, EL-209, EL-211, EL-212
Elements	EL-101, EL-102, EL-104, EL-107, EL-109, EL-110, EL-111, EL-112, EL-116, EL-118, EL-121, EL-124
One Stroke Translucent Underglazes	OS-1, OS-105, OS-136, OS-142, OS-147, OS-17, OS-18, OS-2, OS-21, OS-26, OS-29, OS-3, OS-32, OS-34, OS-36, OS-38, OS-4, OS-41, OS-47, OS-48, OS-58, OS-59, OS-6, OS-60, OS-61, OS-62, OS-63, OS-8, OS-9
Pottery Coat	PC-501, PC-502, PC-503, PC-504, PC-505
Pottery Coat Cascades	PC-601, PC-602, PC-603, PC-604

Series 2000 Glazes	S-2000, S-2101, S-2102, S-2103, S-2107, S-2109, S-2110, S-2111, S-2112, S-2113, S-2114, S-2115, S-2116, S-2117, S-2118, S-2119, S-2120, S-2121, S-2123, S-2126, S-2127, S-2128, S-2132, S-2133, S-2134, S-2136, S-2137, S-2138, S-2139, S-2140, S-2141, S-2142, S-2143, S-2144, S-2145, S-2146, S-2147, S-2148, S-2149, S-2150, S-2151, S-2152, S-2153, S-2154, S-2155, S-2159, S-2160, S-2161, S-2162, S-2163, S-2164, S-2165, S-2166, S-2167, S-2169, S-2171, S-2200, S-2201, S-2208, S-2209, S-2218, S-2220, S-2221, S-2223, S-2226, S-2227, S-2228, S-2229, S-2230, S-2231, S-2232, S-2233, S-2234, S-2235, S-2236, S-2237, S-2238, S-2239, S-2240, S-2242, S-2401, S-2402, S-2408, S-2421, S-2422, S-2423, S-2424, S-2425, S-2427, S-2560, S-2561, S-2562, S-2564, S-2565, S-2566, S-2574, S-2577, S-2578, S-2579, S-2580, S-2581, S-2582, S-2585, S-2587, S-2588, S-2589, S-2590, S-2591, S-2592, S-2593
Specialty Glazes	SG-301, SG-302
Speckled Stroke & Coat®	SP-201, SP-202, SP-203, SP-205, SP-206, SP-210, SP-211, SP-212, SP-213, SP-215, SP-216, SP-223, SP-226, SP-227, SP-231, SP-241, SP-245, SP-253, SP-254, SP-260, SP-270
Stoneware Glazes	SLG-17, SLG-2, SLG-6
Stroke & Coat®	SC-1, SC-10, SC-11, SC-12, SC-13, SC-14, SC-15, SC-16, SC-17, SC-18, SC-2, SC-22, SC-25, SC-26, SC-27, SC-28, SC-29, SC-3, SC-30, SC-31, SC-32, SC-33, SC-34, SC-35, SC-36, SC-37, SC-39, SC-40, SC-41, SC-42, SC-43, SC-45, SC-46, SC-48, SC-5, SC-51, SC-52, SC-53, SC-54, SC-55, SC-58, SC-6, SC-60, SC-63, SC-65, SC-7, SC-70, SC-71, SC-72, SC-76, SC-77, SC-78, SC-79, SC-8, SC-9
Underglazes	UG-1, UG-10, UG-100, UG-104, UG-11, UG-12, UG-125, UG-130, UG-131, UG-145, UG-146, UG-15, UG-18, UG-181, UG-189, UG-19, UG-194, UG-198, UG-2, UG-201, UG-21, UG-22, UG-24, UG-25, UG-26, UG-27, UG-3, UG-30, UG-31, UG-32, UG-33, UG-34, UG-35, UG-37, UG-38, UG-39, UG-41, UG-42, UG-43, UG-45, UG-46, UG-50, UG-51, UG-52, UG-53, UG-57, UG-58, UG-67, UG-68, UG-69, UG-70, UG-71, UG-72, UG-73, UG-80, UG-81, UG-82, UG-83, UG-87, UG-89, UG-90, UG-91, UG-92, UG-93, UG-94, UG-95, UG-97

## **SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients	CAS	ACGIH TLV	OSHA PEL
Silica	14808-60-7	0.10mg/M3	0.10mg/M3
Alumina Silicate	1332-58-7	N/A	N/A
Bentonite/Clay	1302-78-9	N/A	N/A
Water	7732-18-5	N/A	N/A

## **SECTION 3: HAZARDS IDENTIFICATION**

Crystalline Silica may be present .  
(OSHA PEL .1mg/m3)

Route(s) of Entry: Igestion, absorption through the skin is negligible.

Inhalation only if sprayed.

Health Hazards (acute and chronic): Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs.

## **SECTION 4: FIRST AID MEASURES**

If Inhaled: Remove from exposure

If on skin: Wash skin with soap and water  
If in eyes: Flush eyes with large quantities of water for at least 15 minutes. If irritation persists after washing, contact a physician.  
If swallowed: Dilute by drinking water

## **SECTION 5: FIRE FIGHTING MEASURES**

### **FIRE AND EXPLOSION HAZARD DATA**

Flash Point (method used): N/A

LEL: N/A

UEL: N/A

Flammable Limits: N/A

Extinguishing Media: None required - not combustible

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

Steps to be taken in case material is released or spilled:

Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.

Waste Disposal Method: Follow Federal or State and Local regulations for disposal. Testing of the waste may be required to determine status under the hazardous waste regulations.

## **SECTION 7: HANDLING AND STORAGE**

### **PRECAUTIONS FOR SAFE HANDLING AND USE:**

- Engineer Control - None
- Work practices- Store away from feed and food. Do not smoke, eat or drink while handling.
- Procedure/equipment: None
- Procedure for leaks or spills: Uncontaminated material may be recovered and reused. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.
- Waste Disposal Method: Follow Federal or State and Local regulations for disposal.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

Use of the following protective measures are strongly recommended if the glazes are to be applied by spraying.

The Work/Hygienic Practices apply regardless of the method of application. Respiratory Protection (Specify Type): Use a NIOSH approved dust and/or fume respirator as necessary.

Ventilation: Local Exhaust - for spraying

Protective Gloves: N/A

Eye Protection: for spraying

Other Protective Clothing or Equipment: Wear appropriate clean, protective clothing such as, but not limited to, overalls, smocks, and aprons. Work/Hygienic Practices: Food, beverages, and smoking materials should not be in the work area. Hygiene is very important. Wash thoroughly before eating, drinking, smoking, or applying cosmetics.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Various colors

Odor and odor threshold: Negligible

Ph: Not available

Boiling Point: None

Vapor Pressure: NA

Vapor Density: NA



Melting Point: above 1000oF  
Specific Gravity (H2O=1): 1.4 to 1.6  
Flammable Limits: None  
Explosive limits: None  
Partition Coefficient: None  
Oxidizing Properties: None  
Solubility in Water: Negligible  
Percent Volatile by Volume: None  
Evaporation Rate: None  
Freezing point: NA  
Flash Point: None  
Auto ignition temperature: None

#### **SECTION 10: STABILITY AND REACTIVITY DATA**

- Incompatibility (material to avoid): Avoid fumes from firing by venting kiln area.
- Stability: Stable (conditions to avoid): N/A
- Hazardous Decomposition or Byproducts: Not available.
- Hazardous Polymerization: Will not occur
- Conditions to avoid: Fumes from firing in kiln. Inhalation of spray.

#### **SECTION 11: TOXICOLOGY INFORMATION**

Hazard to Human: None during normal use. Harmful if inhaled or swallowed.  
DO NOT SPRAY APPLY

If glaze is spray applied the following warnings apply: Warning: Contains Quartz.

1. Possible cancer agent based on tests with laboratory animals.
2. Exposure may cause lung damage.
3. Keep out of reach of children; avoid inhalation.

This product contains chemicals known to the State of California to cause cancer.

Health Hazards (acute and chronic): Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs.

Additional information: Frits are fused silica glass like substances. The bioavailability may be limited because of the physical nature of the frit.

#### **SECTION 12: ECOLOGICAL INFORMATION**

- Mobility: Not available.
- Persistence/degradability: Not available.
- Bioaccumulation: Not available.
- Ecotoxicity: Not available.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Follow your Federal or State and Local regulations for disposal. Lead is listed in US-EPA Code of Federal Regulations 40, Part 261.24. Testing of the waste may be required to determine status under the hazardous waste regulations.

Waste from residue/unused product: Can be landfilled according to local regulations. Contaminated packing: Can be landfilled according to local regulations.

#### **SECTION 14: TRANSPORTATION INFORMATION**

UN Number: None for this product.

#### **SECTION 15: REGULATORY INFORMATION**

Silica is listed by California , Proposition 65  
Silica is listed on the IARC, OSHA or NTP carcinogen list.  
All ingredients are on U.S. TSCA / EC / AICS / DSL Inventory.  
See local requirements.

EU Status:  
Symbol- None  
WHMIS Status : Not Controlled

**SECTION 16: ADDITIONAL INFORMATION**

This information is furnished with out warranty, representation, inducement or license of any kind, except that it is accurate to the best of knowledge of COLORAMICS, LLC or obtained from sources believed to be accurate.

COLORAMICS, LLC does not assume any legal responsibility for use or reliance on same. Customers are encouraged to conduct their own tests before using any product. Read the product label.

For more information in AUSTRALIA see web site [www.nohsc.gov.au](http://www.nohsc.gov.au)

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COLORAMICS

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02-04-04 ✓

**MAYCO MSDS SHEET #3**  
**Active Products****30441-XXXX****30442-XXXX****30443-XXXX****30444-all codes except:****-1006****-2006****-3006****SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION**

Prepared: September 22, 2003

Supersedes: All previous

Manufacturer: MAYCO COLORS division of Coloramics, LLC  
 4077 Weaver Court South  
 Hilliard, Ohio 43026  
 United States of America

Distributor USA \_\_\_\_\_ Local Phone \_\_\_\_\_

EC \_\_\_\_\_ Local Phone \_\_\_\_\_

Australia \_\_\_\_\_ Local Phone \_\_\_\_\_

IN CASE OF EMERGENCY PLEASE CONTACT YOUR LOCAL POISON CONTROL CENTER

Prepared by: MSDS department Information Telephone Number: 614-876-1171  
 Ceramic Glaze and underglazes and Miscellaneous.

Astro Gem Glazes AS-510, 512, 513, 515, 516, 518, 519, 520, 521, 523, 524, 527, 528, 531, 532  
 534, 535, 539, 541, 545, 547, 548, 551  
 One Stroke Colors OS-1, 2, 3, 4, 6, 8, 9, 17, 18, 21, 26, 29, 32, 34, 36, 38, 41, 43, 44, 45, 46, 47  
 48, 52, 54, 58, 59, 60, 61, 62, 63, 65, 66, 104, 105, 132, 136, 137, 138, 140  
 142, 143, 144, 147, 153  
 Underglazes UG-1, 2, 3, 7, 8, 10, 11, 12, 15, 17, 18, 19, 21, 22, 24, 25, 26, 27, 30, 31, 32, 33,  
 34, 35, 37, 38, 39, 41, 42, 43, 45, 46, 50, 51, 52, 53, 56, 57, 58, 67, 68, 69, 70,  
 71, 72, 73, 75, 78, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 91, 92, 93, 94, 95, 97,  
 98, 100, 103, 104, 105, 108, 109, 110, 111, 116, 119, 125, 127, 128, 130, 131,  
 136, 141, 142, 144, 145, 146, 150, 178, 180, 181, 189, 191, 192, 194, 195, 196,  
 198, 201, 202  
 Pottery Coats PC-501 through PC-505  
 Miscellaneous AC-306, AC-308  
 Series 2000 Glazes \*S-2101-2168  
 S-2560, 2561, 2562, 2564, 2565, 2566, 2574, 2577, 2578, 2579, 2580, 2581,  
 2585  
 S-2587, 2588, 2589, 2590, 2591, 2592, 2593  
 \*Excluding: S-2104, 2105, 2122, 2130, 2168, and 2586  
 Series 2000 Mattes\* S-2200, 2201, 2208, 2209, 2218, 2223, 2226, 2227, 2228, 2229, 2230, 2231,  
 208, S-2232, 2233, 2234, 2235, 2236, 2237, 2239, \*Excluding S-2224, S-2225,  
 All Stroke and Coat (SC's) except SC-23, 58, 59, 62, 24, 20, 4, 67, 68, 50,  
 Stroke and Coat Series SP-204, SD-304, SD-323 all SP series except SP-204  
 Specstone Glazes S-2167, 2169, 2401, 2402, 2408, 2421, 2422, 2423, 2424, 2425, 2427  
 Crystalites S-2701 through S-2718 & S-2719, S-2722, S-2723  
 Roll a Coat SC-210  
 Elements EL-101 through EL-118  
 Chunky Elements EL-201 through EL-206  
 Classic Crackles CC-500 through CC-507  
 Clear Glaze S-2000, S-2101, SC-209  
 Stoneware Like Glaze SLG-02, 06, 17

V-2872

**SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS**

INGREDIENTS	CAS	ACGIH TLV	OSHA PEL
Alumina Silicate	1332-58-7	NA	NA
Bentonite / Clay	1302-78-9	NA	NA
Water	7732-18-5	NA	NA

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COLORAMICS

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**SECTION 3 HAZARDS IDENTIFICATION**

Crystalline Silica may be present.  
(OSHA PEL .1mg/m3)

Route(s) of Entry: Ingestion, absorption through the skin is negligible.  
Inhalation only if sprayed.

Health Hazards (acute and chronic): Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs.

**SECTION 4 FIRST AID MEASURES**

If Inhaled: Remove from exposure  
If on skin: Wash skin with soap and water  
If in eyes: Flush eyes with large quantities of water for at least 15 minutes. If irritation persists after washing, contact a physician.  
If swallowed: Dilute by drinking water

**SECTION 5 FIRE FIGHTING MEASURES****FIRE AND EXPLOSION HAZARD DATA**

Flash Point (method used): N/A

LEL: N/A

UEL: N/A Flammable Limits: N/A

Extinguishing Media: None required, not combustible.

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

Steps to be taken in case material is released or spilled: Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.  
Waste Disposal Method: Follow Federal or State and Local regulations for disposal. Testing of the waste may be required to determine status under the hazardous waste regulations.

**SECTION 7 HANDLING AND STORAGE****PRECAUTIONS FOR SAFE HANDLING AND USE**

Engineer Control - None

Work practices- Store away from feed and food. Do not smoke, eat or drink while handling.

Procedure / equipment- None

Procedure for leaks or spills: Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.

Waste Disposal Method: Follow Federal or State and Local regulations for disposal.

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

Use of the following protective measures are strongly recommended if the glazes are to be applied by spraying.

The Work/Hygienic Practices apply regardless of the method of application. Respiratory Protection (Specify Type): Use a NIOSH approved dust and/or fume respirator as necessary.

Ventilation: Local Exhaust - for spraying

Protective Gloves: N/A

Eye Protection: for spraying

Other Protective Clothing or Equipment: Wear appropriate clean, protective clothing such as, but not limited to, overalls, smocks, and aprons. Work/Hygienic Practices: Food, beverages, and

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smoking materials should not be in the work area. Hygiene is very important. Wash thoroughly before eating, drinking, smoking, or applying cosmetics.

#### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Various colors  
Odor and odor threshold: Negligible  
PH: Not available  
Boiling Point: None  
Vapor Pressure: NA  
Vapor Density: NA  
Melting Point: above 1000oF  
Specific Gravity (H2O=1): 1.4 to 1.6  
Flammable Limits: None  
Explosive limits: None  
Partition Coefficient: None  
Oxidizing Properties: None  
Solubility in Water: Negligible  
Percent Volatile by Volume: None  
Evaporation Rate: None  
Freezing point: NA  
Flash Point: None  
Auto ignition temperature: None

#### SECTION 10 STABILITY AND REACTIVITY DATA

Incompatibility (material to avoid): Avoid fumes from firing by venting kiln area.  
Stability: Stable (conditions to avoid: N/A)  
Hazardous Decomposition or Byproducts: Not available  
Hazardous Polymerization: Will not occur  
Conditions to avoid: Fumes from firing in kiln. Inhalation of spray.

#### SECTION 11 TOXICOLOGICAL INFORMATION

Hazard to Human: None during normal use. Harmful if inhaled or swallowed.  
DO NOT SPRAY APPLY

If glaze is spray applied the following warnings apply: Warning: Contains Quartz.

1. Possible cancer agent based on tests with laboratory animals.
2. Exposure may cause lung damage.
3. Keep out of reach of children; avoid Inhalation.

This product contains chemicals known to the State of California to cause cancer.

Health Hazards (acute and chronic): Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs.

Additional information: Frits are fused silica glass like substances. The bioavailability may be limited because of the physical nature of the frit.

#### SECTION 12 ECOLOGICAL INFORMATION

Mobility: Not Available  
Persistence/degradability: Not Available  
Bioaccumulation: Not Available  
Ecotoxicity: Not Available

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**SECTION 13 DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Follow your Federal or State and Local regulations for disposal. Lead is listed in US-EPA Code of Federal Regulations 40, Part 261.24. Testing of the waste may be required to determine status under the hazardous waste regulations.

Waste from residue/unused product: Can be landfilled according to local regulations.

Contaminated packing: Can be landfilled according to local regulations.

**SECTION 14 TRANSPORTATION INFORMATION**

UN Number: None for this product.

**SECTION 15 REGULATORY INFORMATION**

Silica is listed by California, Proposition 65

Silica is listed on the IARC, OSHA or NTP carcinogen list.

All ingredients are on U.S. TSCA / EC / AICS / DSL Inventory.

See local requirements.

EU Status:

Symbol- None

WHMIS Status: Not Controlled

**SECTION 16 ADDITIONAL INFORMATION**

This information is furnished with out warranty, representation, inducement or license of any Kind, except that it is accurate to the best of knowledge of COLORAMICS, LLC or obtained from sources believed to be accurate. COLORAMICS, LLC does not assume any legal responsibility for use or reliance on same. Customers are encouraged to conduct their own tests before using any product. Read the product label.

For more information in AUSTRALIA see web site [www.nohsc.gov.au](http://www.nohsc.gov.au)

# MSDS SHEET #1 Ceramic Glazes Lead Bearing

## **SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION**

Prepared: November 25, 2006  
Supersedes: All previous  
Manufacturer: Mayco Colors  
Division of Coloramics, LLC  
4077 Weaver Court South  
Hilliard, Ohio 43026  
United States of America

### Distributor Contacts:

USA \_\_\_\_\_ Local Phone \_\_\_\_\_  
EC \_\_\_\_\_ Local Phone \_\_\_\_\_  
Australia \_\_\_\_\_ Local Phone \_\_\_\_\_

IN CASE OF EMERGENCY PLEASE CONTACT YOUR LOCAL POISON CONTROL CENTER

Prepared by: MSDS department

Information Telephone Number: 614-876-1171

### **Ceramic Glaze (s): (note See MSDS #16 for Lead and Copper Bearing Glazes)**

Art Glazes AG-201, AG-202, AG-203, AG-207, AG-210, AG-213, AG-240, AG-241, AG-242, AG-244, AG-251, AG-253, AG-254, AG-257, AG-258, AG-261, AG-263, AG-264, AG-291, AG-404, AG-407, AG-408, AG-414, AG-453, AG-454, AG-460, AG-585, AG-601, AG-610, AG-630  
Bisque Glazes BG-641  
Clear & Dipping Glazes C-100, C-101, C-105, C-109, C-300  
Clear Art Glazes CA-110, CA-111, CA-112, CA-113, CA-122, CA-123, CA-124  
Exotic Glazes E-101, E-102, E-103, E-105, E-107, E-837, E-850, E-960, E-961, E-965, E-968, E-971  
Jungle Gem CG-712, CG-716, CG-718, CG-721, CG-722, CG-723, CG-730, CG-750, CG-765, CG-768, CG-772, CG-775, CG-779, CG-783, CG-785, CG-786, CG-788, CG-790, CG-793, CG-795, CG-798, CG-954, CG-958, CG-961

## **SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients	CAS	ACGIH TLV	OSHA PEL
Leaded Frit	65997-18-4	Lead .15mg/m3	Lead .05mg/m3
Alumina Silicate	1352-58-7	N/A	N/A
Bentonite	1302-78-9	N/A	N/A

Water	7732-18-5	N/A	N/A
Silica	14808-60-7	0.10mg/M3	0.10mg/M3

### **SECTION 3: HAZARDS IDENTIFICATION**

Frit contains Lead. Crystalline Silica may also be present (OSHA PEL= 0.1mg/m3)

Route(s) of Entry: Igestion, absorption through the skin is negligible.

Inhalation only if sprayed.

Health Hazards (acute and chronic): Prolonged or repeated inhalation and/or ingestion of lead containing frit may result in lead poisoning. Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs. Carcinogenicity: In IARC Supplement 7, inorganic lead compounds are given a 2B rating. This indicates "sufficient evidence" for Carcinogenicity to animals and "inadequate evidence" for Carcinogenicity to humans. California lists lead as a possible carcinogen and requires Prop. 65 warning as required.

### **SECTION 4: FIRST AID MEASURES**

- If Inhaled: Remove from exposure
- If on skin: Wash skin with soap and water
- If in eyes: Flush eyes with large quantities of water for at least 15 minutes. If irritation persists after washing, contact a physician.
- If swallowed: Dilute by drinking water

### **SECTION 5: FIRE FIGHTING MEASURES**

#### **FIRE AND EXPLOSION HAZARD DATA**

Flash Point (method used): N/A

LEL: N/A

UEL: N/A Flammable Limits: N/A

Extinguishing Media: None required, not combustible.

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

Steps to be taken in case material is released or spilled: Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.

Waste Disposal Method: Follow Federal or State and Local regulations for disposal. Lead is listed in US-EPA Code of Federal Regulations 40, Part 261.24. Testing of the waste may be required to determine status under the hazardous waste regulations.

### **SECTION 7: HANDLING AND STORAGE**

#### **PRECAUTIONS FOR SAFE HANDLING AND USE**

Engineer Control - None

Work practices- Store away from feed and food. Do not smoke, eat or drink while handling.

Procedure / equipment- None

Procedure for leaks or spills: Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.



Waste Disposal Method: Follow Federal or State and Local regulations for disposal. Lead is listed in US-EPA Code of Federal Regulations 40, Part 261.24. Testing of the waste may be required to determine status under the hazardous waste regulations.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

Use of the following protective measures are strongly recommended if the glazes are to be applied by spraying.

The Work/Hygienic Practices apply regardless of the method of application. Respiratory Protection (Specify Type): Use a NIOSH approved dust and/or fume respirator as necessary.

Ventilation: Local Exhaust - for spraying

Protective Gloves: N/A

Eye Protection: for spraying

Other Protective Clothing or Equipment: Wear appropriate clean, protective clothing such as, but not limited to, overalls, smocks, and aprons. Work/Hygienic Practices: Food, beverages, and smoking materials should not be in the work area. Hygiene is very important. Wash thoroughly before eating, drinking, smoking, or applying cosmetics.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Various colors

Odor and odor threshold: Negligible

Ph: Not available

Boiling Point: None

Vapor Pressure: NA

Vapor Density: NA

Melting Point: above 1000oF

Specific Gravity (H2O=1): 1.4 to 1.6

Flammable Limits: None

Explosive limits: None

Partition Coefficient: None

Oxidizing Properties: None

Solubility in Water: Negligible

Percent Volatile by Volume: None

Evaporation Rate: None

Freezing point: NA

Flash Point: None

Auto ignition temperature: None

## **SECTION 10: STABILITY AND REACTIVITY DATA**

Incompatibility (material to avoid): Avoid fumes from firing by venting kiln area.

Stability: Stable (conditions to avoid: N/A)

Hazardous Decomposition or Byproducts: Not available

Hazardous Polymerization: Will not occur

Conditions to avoid: Fumes from firing in kiln. Inhalation of spray.

## **SECTION 11: TOXICOLOGY INFORMATION**

Hazard to Human: None during normal use. Harmful if inhaled or swallowed.

Lead Bearing Frit (s) - Frit is a fused silicate glass substance.

DO NOT SPRAY APPLY

If glaze is spray applied the following warnings apply: Warning: Contains Quartz.

1. Possible cancer agent based on tests with laboratory animals.

2. Exposure may cause lung damage.

3. Keep out of reach of children; avoid inhalation.

This product contains chemicals known to the State of California to cause cancer.

Health Hazards (acute and chronic): Prolonged or repeated inhalation and/or ingestion of lead containing frit may result in lead poisoning. Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs. Carcinogenicity: In IARC Supplement 7, inorganic lead compounds are given a 2B rating. This indicates "sufficient evidence" for Carcinogenicity to animals and "inadequate evidence" for Carcinogenicity to humans.

Additional information: Frits are fused silica glass like substances. The bioavailability may be limited because of the physical nature of the frit.

## **SECTION 12: ECOLOGICAL INFORMATION**

- Mobility: N/A
- Persistence/degradability: N/A
- Bioaccumulation: N/A
- Ecotoxicity: N/A

## **SECTION 13: DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Follow your Federal or State and Local regulations for disposal. Lead is listed in US-EPA Code of Federal Regulations 40, Part 261.24.

Testing of the waste may be required to determine status under the hazardous waste regulations.

Waste from residue/unused product: Can be landfilled according to local regulations. Contaminated packing: Can be landfilled according to local regulations.

## **SECTION 14: TRANSPORTATION INFORMATION**

UN Number: None for this product.  
For soluble lead UN number is 2291, guide number is 53

## **SECTION 15: REGULATORY INFORMATION**

Lead and Silica are listed by California , Proposition 65  
Lead and Silica are listed on the IARC, OSHA or NTP carcinogen list.  
All ingredients are on U.S. TSCA / EC / AICS / DSL Inventory.  
See local requirements.

EU Status:

Symbol- None for Frit

For lead compounds;

Repr. Cat 1

R 61- May cause harm to unborn child.

Repr. Cat 3

R62 - Possible risk of impaired fertility

Harmful (xb)

R20/22 - Harmful by inhalation and if swallowed

R33 - Danger of cumulative effects

WHMIS Status : Not Controlled

## **SECTION 16: ADDITIONAL INFORMATION**

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COLORAMICS, LLC does not assume any legal responsibility for use or reliance on same. Customers are encouraged to conduct their own tests before using any product. Read the product label.

For more information in AUSTRALIA see web site [www.nohsc.gov.au](http://www.nohsc.gov.au)

# MSDS Sheet - Magic Metallics Metal Products, Rapid Rust

## SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

Prepared: November 25, 2006  
Supersedes: All previous  
Manufacturer: Mayco Colors  
Division of Coloramics, LLC  
4077 Weaver Court South  
Hilliard, Ohio 43026  
United States of America

### Distributor Contacts:

USA \_\_\_\_\_ Local Phone \_\_\_\_\_  
EC \_\_\_\_\_ Local Phone \_\_\_\_\_  
Australia \_\_\_\_\_ Local Phone \_\_\_\_\_

IN CASE OF EMERGENCY PLEASE CONTACT YOUR LOCAL POISON CONTROL CENTER

Prepared by: MSDS department  
Information Telephone Number: 614-876-1171

## NON FIRED WATER BASED PRODUCTS

This series is certified by a toxicologist as NON-TOXIC during normal use.

Magic Metallics MM-100, MM-101, MM-102, MM-103, MM-105, MM-106, MM-305

## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS	ACGIH TLV	OSHA PEL
Copper	7440-50-8	2.0 mg/M3	1.0mg/M3
Silica	14808-60-7	0.10mg/M3	0.10mg/M3
Zinc	7440-66-6	NA	5.0mg/M3

## SECTION 3: HAZARDS IDENTIFICATION

Contains Copper metallic based pigments.

Crystalline Silica may be present .

(OSHA PEL .1mg/m3)

Route(s) of Entry: Dermal, Ingestion, absorption through the skin is negligible.

Inhalation only if sprayed. Ingestion only if taken internally.

Health Hazards (acute and chronic): Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs.

Copper see section 11

#### SECTION 4: FIRST AID MEASURES

- If inhaled: Remove from exposure
- If on skin: Wash skin with soap and water
- If in eyes: Flush eyes with large quantities of water for at least 15 minutes. If irritation persists after washing, contact a physician.
- If swallowed: Dilute by drinking water

#### SECTION 5: FIRE FIGHTING MEASURES

##### FIRE AND EXPLOSION HAZARD DATA

Flash Point (method used): N/A

LEL: N/A

UEL: N/A

Flammable Limits: N/A

Extinguishing Media: None required - not combustible

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.

Waste Disposal Method: Follow Federal or State and Local regulations for disposal. Testing of the waste may be required to determine status under the hazardous waste regulations.

These products have been certified non toxic.

#### SECTION 7: HANDLING AND STORAGE

##### PRECAUTIONS FOR SAFE HANDLING AND USE

Engineer Control - None

Work practices- Store away from feed and food. Do not smoke, eat or drink while handling.

Procedure / equipment- None

Procedure for leaks or spills: Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.

Waste Disposal Method: Follow Federal or State and Local regulations for disposal.

#### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Use of the following protective measures are strongly recommended if the paints are to be applied by spraying.

The Work/Hygienic Practices apply regardless of the method of application. Respiratory Protection (Specify Type): Use a NIOSH approved dust and/or fume respirator as necessary.

Ventilation: Local Exhaust - for spraying

Protective Gloves: N/A

Eye Protection: for spraying

Other Protective Clothing or Equipment: Wear appropriate clean, protective clothing such as, but not limited to, overalls, smocks, and aprons.

Work/Hygienic Practices: Food, beverages, and smoking materials should not be in the work area. Hygiene is very important. Wash thoroughly before eating, drinking, smoking, or applying cosmetics.

#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Various Metallic colors, see label.  
Odor and odor threshold: Mild  
Ph: Not available  
Boiling Point: 212 deg F  
Vapor Pressure: 18mm at 70 deg F  
Vapor Density: heavier than air  
Melting Point: NA  
Specific Gravity (H<sub>2</sub>O= 1): 1.2 to 1.4      pg 3 of 4  
Flammable Limits: None  
Explosive limits: None  
Partition Coefficient: None  
Oxidizing Properties: None  
Solubility in Water: Soluble  
Percent Volatile by Volume: None  
Evaporation Rate: None  
Freezing point: NA  
Flash Point: None  
Auto ignition temperature: None

#### SECTION 10: STABILITY AND REACTIVITY DATA

Incompatibility (material to avoid): None  
Stability: Stable (conditions to avoid: N/A)  
Hazardous Decomposition or Byproducts: Not available  
Hazardous Polymerization: Will not occur  
Conditions to avoid: None.

#### SECTION 11: TOXICOLOGY INFORMATION

Hazard to Human: None during normal use. Harmful if inhaled or ingested.  
Product may contain silica.  
If product is spray applied the following warnings apply: Warning: Contains Quartz.  
1. Possible cancer agent based on tests with laboratory animals.  
2. Exposure may cause lung damage.  
3. Keep out of reach of children; avoid inhalation.

EFFECTS OF OVEREXPOSURE: Copper metal is slightly toxic. Inhalation of copper dust may cause acute irritation of the nose and/or trachea, may produce acute gastroenteric symptoms resulting in vomiting and/or inflammation, and/or may cause acute metal fume fever.

Exposure of skin to copper dust may cause acute dermatitis. In the case of chronic exposure, the liver, kidneys and/or spleen may be injured, and/or anemia may develop. Chronic toxicity is confined to those persons suffering from pre-existing Wilsons Disease.

MEDICAL CONDITIONS PRONE TO AGGRAVATION BY EXPOSURE: The following medical conditions may be aggravated by exposure to copper dust:

1. Persons afflicted with chronic respiratory disease and/or impaired pulmonary functions, especially those with obstructive airway diseases.
2. Persons afflicted with pre-existing liver disease.
3. Persons afflicted with pre-existing kidney disease.
4. Persons afflicted with pre-existing skin disorders.
5. Persons afflicted with pre-existing blood disorders.
6. Persons afflicted with pre-existing Wilsons Disease.

PRIMARY ROUTE(S) OF ENTRY: Inhalation, Only if spray applied ---DO NOT SPRAY.  
Ingestion.

#### SECTION 12: ECOLOGICAL INFORMATION

- Mobility: N/A

- Persistence/degradability: N/A
- Bioaccumulation: N/A
- Ecotoxicity: N/A

### SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Follow your Federal or State and Local regulations for disposal. Lead is listed in US-EPA Code of Federal Regulations 40, Part 261.24. Testing of the waste may be required to determine status under the hazardous waste regulations.

Waste from residue/unused product: Can be landfilled according to local regulations.

Contaminated packing: Empty containers should be taken for recycling, recovery or waste disposal.

### SECTION 14: TRANSPORTATION INFORMATION

UN Number: None for this product.

### SECTION 15: REGULATORY INFORMATION

Silica is listed by California, Proposition 65

Silica is listed on the IARC, OSHA or NTP carcinogen list.

All ingredients are on U.S. TSCA / EC / AICS / DSL Inventory.

See local requirements.

EU Status:

Symbol- None

WHMIS

Status : Not Controlled

### SECTION 16: ADDITIONAL INFORMATION

Composition and possible harmful effects will vary depending on pigments used.

This information is furnished with out warranty, representation, inducement or license of any kind, except that it is accurate to the best of knowledge of COLORAMICS, LLC or obtained from sources believed to be accurate. COLORAMICS, LLC does not assume any legal responsibility for use or reliance on same. Customers are encouraged to conduct thier own tests before using any product. Read the product label.

For more information in AUSTRALIA see web sight [www.nohsc.gov.au](http://www.nohsc.gov.au)

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02-04-04 ✓

MAYCO MSDS SHEET #3  
Active Products

30441-XXXX
30442-XXXX
30443-XXXX
30444-XXXX

## SECTION 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Prepared: September 22, 2003

Supersedes: All previous

Manufacturer: MAYCO COLORS division of Coloramics, LLC  
 4077 Weaver Court South  
 Hilliard, Ohio 43026  
 United States of America

Distributor USA \_\_\_\_\_ Local Phone \_\_\_\_\_  
 EC \_\_\_\_\_ Local Phone \_\_\_\_\_  
 Australia \_\_\_\_\_ Local Phone \_\_\_\_\_

IN CASE OF EMERGENCY PLEASE CONTACT YOUR LOCAL POISON CONTROL  
 CENTER

Prepared by: MSDS department Information Telephone Number: 614-876-1171  
 Ceramic Glaze and underglazes and Miscellaneous.

Astro Gem Glazes AS-510, 512, 513, 515, 516, 518, 519, 520, 521, 523, 524, 527, 528, 531, 532  
 534, 535, 539, 541, 545, 547, 548, 551  
 One Stroke Colors OS-1, 2, 3, 4, 6, 8, 9, 17, 18, 21, 26, 29, 32, 34, 36, 38, 41, 43, 44, 45, 46, 47  
 48, 52, 54, 58, 59, 60, 61, 62, 63, 65, 66, 104, 105, 132, 136, 137, 138, 140  
 142, 143, 144, 147, 153  
 Underglazes UG-1, 2, 3, 7, 8, 10, 11, 12, 15, 17, 18, 19, 21, 22, 24, 25, 26, 27, 30, 31, 32, 33,  
 34, 35, 37, 38, 39, 41, 42, 43, 45, 46, 50, 51, 52, 53, 56, 57, 58, 67, 68, 69, 70,  
 71, 72, 73, 75, 78, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 91, 92, 93, 94, 95, 97,  
 98, 100, 103, 104, 105, 108, 109, 110, 111, 116, 119, 125, 127, 128, 130, 131,  
 136, 141, 142, 144, 145, 146, 150, 178, 180, 181, 189, 191, 192, 194, 195, 196,  
 198, 201, 202  
 Pottery Coats PC-501 through PC-505  
 Miscellaneous AC-306, AC-308  
 Series 2000 Glazes \*S-2101-2168  
 S-2560, 2561, 2562, 2564, 2565, 2566, 2574, 2577, 2578, 2579, 2580, 2581,  
 2585  
 S-2587, 2588, 2589, 2590, 2591, 2592, 2593  
 \*Excluding: S-2104, 2105, 2122, 2130, 2168, and 2586  
 Series 2000 Mattes\* S-2200, 2201, 2208, 2209, 2218, 2223, 2226, 2227, 2228, 2229, 2230, 2231,  
 208, S-2232, 2233, 2234, 2235, 2236, 2237, 2239, \*Excluding S-2224, S-2225,  
 Stroke and Coat Series All Stroke and Coat (SC's) except SC-23, 58, 59, 62, 24, 20, 4, 67, 68, 50,  
 SP-204, SD-304, SD-323 all SP series except SP-204  
 Specstone Glazes S-2167, 2169, 2401, 2402, 2408, 2421, 2422, 2423, 2424, 2425, 2427  
 Crystalites S-2701 through S-2718 & S-2719, S-2722, S-2723  
 Roll a Coat SC-210  
 Elements EL-101 through EL-118  
 Chunky Elements EL-201 through EL-206  
 Classic Crackles CC-500 through CC-507  
 Clear Glaze S-2000, S-2101, SC-209  
 Stoneware Like Glaze SLG-02, 06, 17

V-2872

## SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS	ACGIH TLV	OSHA PEL
Alumina Silicate	1332-58-7	NA	NA
Bentonite / Clay	1302-78-9	NA	NA
Water	7732-18-5	NA	NA

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**SECTION 3 HAZARDS IDENTIFICATION**

Crystalline Silica may be present.

(OSHA PEL .1mg/m3)

Route(s) of Entry: Ingestion, absorption through the skin is negligible.

Inhalation only if sprayed.

Health Hazards (acute and chronic): Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs.

**SECTION 4 FIRST AID MEASURES**

If Inhaled: Remove from exposure

If on skin: Wash skin with soap and water

If in eyes: Flush eyes with large quantities of water for at least 15 minutes. If irritation persists after washing, contact a physician.

If swallowed: Dilute by drinking water

**SECTION 5 FIRE FIGHTING MEASURES****FIRE AND EXPLOSION HAZARD DATA**

Flash Point (method used): N/A

LEL: N/A

UEL: N/A Flammable Limits: N/A

Extinguishing Media: None required, not combustible.

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

Steps to be taken in case material is released or spilled: Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal. Waste Disposal Method: Follow Federal or State and Local regulations for disposal. Testing of the waste may be required to determine status under the hazardous waste regulations.

**SECTION 7 HANDLING AND STORAGE****PRECAUTIONS FOR SAFE HANDLING AND USE**

Engineer Control - None

Work practices- Store away from feed and food. Do not smoke, eat or drink while handling.

Procedure / equipment- None

Procedure for leaks or spills: Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.

Waste Disposal Method: Follow Federal or State and Local regulations for disposal.

**SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

Use of the following protective measures are strongly recommended if the glazes are to be applied by spraying.

The Work/Hygienic Practices apply regardless of the method of application. Respiratory Protection (Specify Type): Use a NIOSH approved dust and/or fume respirator as necessary.

Ventilation: Local Exhaust - for spraying

Protective Gloves: N/A

Eye Protection: for spraying

Other Protective Clothing or Equipment: Wear appropriate clean, protective clothing such as, but not limited to, overalls, smocks, and aprons. Work/Hygienic Practices: Food, beverages, and



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smoking materials should not be in the work area. Hygiene is very important. Wash thoroughly before eating, drinking, smoking, or applying cosmetics.

#### SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Various colors  
Odor and odor threshold: Negligible  
PH: Not available  
Boiling Point: None  
Vapor Pressure: NA  
Vapor Density: NA  
Melting Point: above 1000oF  
Specific Gravity (H2O=1): 1.4 to 1.6  
Flammable Limits: None  
Explosive limits: None  
Partition Coefficient: None  
Oxidizing Properties: None  
Solubility in Water: Negligible  
Percent Volatile by Volume: None  
Evaporation Rate: None  
Freezing point: NA  
Flash Point: None  
Auto ignition temperature: None

#### SECTION 10 STABILITY AND REACTIVITY DATA

Incompatibility (material to avoid): Avoid fumes from firing by venting kiln area.  
Stability: Stable (conditions to avoid: N/A)  
Hazardous Decomposition or Byproducts: Not available  
Hazardous Polymerization: Will not occur  
Conditions to avoid: Fumes from firing in kiln. Inhalation of spray.

#### SECTION 11 TOXICOLOGICAL INFORMATION

Hazard to Human: None during normal use. Harmful if inhaled or swallowed.

##### DO NOT SPRAY APPLY

If glaze is spray applied the following warnings apply: Warning: Contains Quartz.

1. Possible cancer agent based on tests with laboratory animals.
2. Exposure may cause lung damage.
3. Keep out of reach of children; avoid Inhalation.

This product contains chemicals known to the State of California to cause cancer.

Health Hazards (acute and chronic): Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs.

Additional information: Frits are fused silica glass like substances. The bioavailability may be limited because of the physical nature of the frit.

#### SECTION 12 ECOLOGICAL INFORMATION

Mobility: Not Available  
Persistence/degradability: Not Available  
Bioaccumulation: Not Available  
Ecotoxicity: Not Available

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COLORAMICS

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**SECTION 13 DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Follow your Federal or State and Local regulations for disposal. Lead is listed in US-EPA Code of Federal Regulations 40, Part 261.24. Testing of the waste may be required to determine status under the hazardous waste regulations.

Waste from residue/unused product: Can be landfilled according to local regulations.

Contaminated packing: Can be landfilled according to local regulations.

**SECTION 14 TRANSPORTATION INFORMATION**

UN Number: None for this product.

**SECTION 15 REGULATORY INFORMATION**

Silica is listed by California, Proposition 65

Silica is listed on the IARC, OSHA or NTP carcinogen list.

All Ingredients are on U.S. TSCA / EC / AICS / DSL Inventory.

See local requirements.

EU Status:

Symbol- None

WHMIS Status: Not Controlled

**SECTION 16 ADDITIONAL INFORMATION**

This information is furnished with out warranty, representation, inducement or license of any kind, except that it is accurate to the best of knowledge of COLORAMICS, LLC or obtained from sources believed to be accurate. COLORAMICS, LLC does not assume any legal responsibility for use or reliance on same. Customers are encouraged to conduct their own tests before using any product. Read the product label.

For more information in AUSTRALIA see web site [www.nohsc.gov.au](http://www.nohsc.gov.au)

30455-1100	-1200	-1300	-1400
-4770	-5140	-5210	-6090
-6170	-7010	-7510	-8340

## MSDS SHEET #3 Non-Toxic Fired Ceramic Products

<b>30454-1001</b>
<b>-1002</b>

### SECTION 1: CHEMICAL PRODUCT AND COMPANY INFORMATION

Prepared: September 21, 2006  
 Supersedes: All previous  
 Manufacturer: Mayco Colors  
 Division of Coloramics, LLC  
 4077 Weaver Court South  
 Hilliard, Ohio 43026  
 United States of America

#### Distributor Contacts:

USA \_\_\_\_\_ Local Phone \_\_\_\_\_  
 EC \_\_\_\_\_ Local Phone \_\_\_\_\_  
 Australia \_\_\_\_\_ Local Phone \_\_\_\_\_

IN CASE OF EMERGENCY PLEASE CONTACT YOUR LOCAL POISON CONTROL CENTER

Prepared by: MSDS department  
 Information Telephone Number: 614-876-1171

#### Ceramic Glaze and Underglaze and Miscellaneous.

Astro Gems	AS-510, AS-512, AS-513, AS-515, AS-516, AS-518, AS-519, AS-523, AS-524, AS-527, AS-531, AS-532, AS-534, AS-535, AS-539, AS-545, AS-547, AS-548
Chalkboard Glazes	SG-101, SG-102
Classic Crackle	CC-101, CC-102, CC-103, CC-104, CC-105, CC-106, CC-107, CC-108
Cobblestone Glazes	SG-201, SG-202
Coloramics Fired Access.-Miscs	AC-306, AC-308
Crystalites	S-2701, S-2702, S-2703, S-2704, S-2705, S-2706, S-2707, S-2708, S-2709, S-2710, S-2711, S-2712, S-2713, S-2714, S-2715, S-2716, S-2717, S-2718, S-2719, S-2722, S-2723, S-2724, S-2725, S-2726, S-2727, S-2731, S-2732
Element Chunkies	EL-201, EL-203, EL-204, EL-206, EL-209, EL-211, EL-212
Elements	EL-101, EL-102, EL-104, EL-107, EL-109, EL-110, EL-111, EL-112, EL-116, EL-118, EL-121, EL-124
One Stroke Translucent Underglazes	OS-1, OS-105, OS-136, OS-142, OS-147, OS-17, OS-18, OS-2, OS-21, OS-26, OS-29, OS-3, OS-32, OS-34, OS-36, OS-38, OS-4, OS-41, OS-47, OS-48, OS-58, OS-59, OS-6, OS-60, OS-61, OS-62, OS-63, OS-8, OS-9
Pottery Coat	PC-501, PC-502, PC-503, PC-504, PC-505
Pottery Coat Cascades	PC-601, PC-602, PC-603, PC-604

Series 2000 Glazes	S-2000, S-2101, S-2102, S-2103, S-2107, S-2109, S-2110, S-2111, S-2112, S-2113, S-2114, S-2115, S-2116, S-2117, S-2118, S-2119, S-2120, S-2121, S-2123, S-2126, S-2127, S-2128, S-2132, S-2133, S-2134, S-2136, S-2137, S-2138, S-2139, S-2140, S-2141, S-2142, S-2143, S-2144, S-2145, S-2146, S-2147, S-2148, S-2149, S-2150, S-2151, S-2152, S-2153, S-2154, S-2155, S-2159, S-2160, S-2161, S-2162, S-2163, S-2164, S-2165, S-2166, S-2167, S-2169, S-2171, S-2200, S-2201, S-2208, S-2209, S-2218, S-2220, S-2221, S-2223, S-2226, S-2227, S-2228, S-2229, S-2230, S-2231, S-2232, S-2233, S-2234, S-2235, S-2236, S-2237, S-2238, S-2239, S-2240, S-2242, S-2401, S-2402, S-2408, S-2421, S-2422, S-2423, S-2424, S-2425, S-2427, S-2560, S-2561, S-2562, S-2564, S-2565, S-2566, S-2574, S-2577, S-2578, S-2579, S-2580, S-2581, S-2582, S-2585, S-2587, S-2588, S-2589, S-2590, S-2591, S-2592, S-2593
Specialty Glazes	SG-301, SG-302
Speckled Stroke & Coat®	SP-201, SP-202, SP-203, SP-205, SP-206, SP-210, SP-211, SP-212, SP-213, SP-215, SP-216, SP-223, SP-226, SP-227, SP-231, SP-241, SP-245, SP-253, SP-254, SP-260, SP-270
Stoneware Glazes	SLG-17, SLG-2, SLG-6
Stroke & Coat®	SC-1, SC-10, SC-11, SC-12, SC-13, SC-14, SC-15, SC-16, SC-17, SC-18, SC-2, SC-22, SC-25, SC-26, SC-27, SC-28, SC-29, SC-3, SC-30, SC-31, SC-32, SC-33, SC-34, SC-35, SC-36, SC-37, SC-39, SC-40, SC-41, SC-42, SC-43, SC-45, SC-46, SC-48, SC-5, SC-51, SC-52, SC-53, SC-54, SC-55, SC-58, SC-6, SC-60, SC-63, SC-65, SC-7, SC-70, SC-71, SC-72, SC-76, SC-77, SC-78, SC-79, SC-8, SC-9
Underglazes	UG-1, UG-10, UG-100, UG-104, UG-11, UG-12, UG-125, UG-130, UG-131, UG-145, UG-146, UG-15, UG-18, UG-181, UG-189, UG-19, UG-194, UG-198, UG-2, UG-201, UG-21, UG-22, UG-24, UG-25, UG-26, UG-27, UG-3, UG-30, UG-31, UG-32, UG-33, UG-34, UG-35, UG-37, UG-38, UG-39, UG-41, UG-42, UG-43, UG-45, UG-46, UG-50, UG-51, UG-52, UG-53, UG-57, UG-58, UG-67, UG-68, UG-69, UG-70, UG-71, UG-72, UG-73, UG-80, UG-81, UG-82, UG-83, UG-87, UG-89, UG-90, UG-91, UG-92, UG-93, UG-94, UG-95, UG-97

## **SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Ingredients	CAS	ACGIH TLV	OSHA PEL
Silica	14808-60-7	0.10mg/M3	0.10mg/M3
Alumina Silicate	1332-58-7	N/A	N/A
Bentonite/Clay	1302-78-9	N/A	N/A
Water	7732-18-5	N/A	N/A

## **SECTION 3: HAZARDS IDENTIFICATION**

Crystalline Silica may be present .  
(OSHA PEL .1mg/m3)

Route(s) of Entry: Igestion, absorption through the skin is negligible.

Inhalation only if sprayed.

Health Hazards (acute and chronic): Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs.

## **SECTION 4: FIRST AID MEASURES**

If Inhaled: Remove from exposure

If on skin: Wash skin with soap and water  
If in eyes: Flush eyes with large quantities of water for at least 15 minutes. If irritation persists after washing, contact a physician.  
If swallowed: Dilute by drinking water

## **SECTION 5: FIRE FIGHTING MEASURES**

### **FIRE AND EXPLOSION HAZARD DATA**

Flash Point (method used): N/A

LEL: N/A

UEL: N/A

Flammable Limits: N/A

Extinguishing Media: None required - not combustible

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

Steps to be taken in case material is released or spilled:

Uncontaminated material may be recovered and re-used. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.

Waste Disposal Method: Follow Federal or State and Local regulations for disposal. Testing of the waste may be required to determine status under the hazardous waste regulations.

## **SECTION 7: HANDLING AND STORAGE**

### **PRECAUTIONS FOR SAFE HANDLING AND USE:**

- Engineer Control - None
- Work practices- Store away from feed and food. Do not smoke, eat or drink while handling.
- Procedure/equipment: None
- Procedure for leaks or spills: Uncontaminated material may be recovered and reused. If contaminated, scoop, vacuum, or wash into a receptacle for disposal.
- Waste Disposal Method: Follow Federal or State and Local regulations for disposal.

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

Use of the following protective measures are strongly recommended if the glazes are to be applied by spraying.

The Work/Hygienic Practices apply regardless of the method of application. Respiratory Protection (Specify Type): Use a NIOSH approved dust and/or fume respirator as necessary.

Ventilation: Local Exhaust - for spraying

Protective Gloves: N/A

Eye Protection: for spraying

Other Protective Clothing or Equipment: Wear appropriate clean, protective clothing such as, but not limited to, overalls, smocks, and aprons. Work/Hygienic Practices: Food, beverages, and smoking materials should not be in the work area. Hygiene is very important. Wash thoroughly before eating, drinking, smoking, or applying cosmetics.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : Various colors

Odor and odor threshold: Negligible

Ph: Not available

Boiling Point: None

Vapor Pressure: NA

Vapor Density: NA

Melting Point: above 1000oF  
Specific Gravity (H2O=1): 1.4 to 1.6  
Flammable Limits: None  
Explosive limits: None  
Partition Coefficient: None  
Oxidizing Properties: None  
Solubility in Water: Negligible  
Percent Volatile by Volume: None  
Evaporation Rate: None  
Freezing point: NA  
Flash Point: None  
Auto ignition temperature: None

#### **SECTION 10: STABILITY AND REACTIVITY DATA**

- Incompatibility (material to avoid): Avoid fumes from firing by venting kiln area.
- Stability: Stable (conditions to avoid): N/A
- Hazardous Decomposition or Byproducts: Not available.
- Hazardous Polymerization: Will not occur
- Conditions to avoid: Fumes from firing in kiln. Inhalation of spray.

#### **SECTION 11: TOXICOLOGY INFORMATION**

Hazard to Human: None during normal use. Harmful if inhaled or swallowed.  
DO NOT SPRAY APPLY

If glaze is spray applied the following warnings apply: Warning: Contains Quartz.

1. Possible cancer agent based on tests with laboratory animals.
2. Exposure may cause lung damage.
3. Keep out of reach of children; avoid inhalation.

This product contains chemicals known to the State of California to cause cancer.

Health Hazards (acute and chronic): Prolonged inhalation of silica, in excess of TLV, over an extended period of time may result in injury to the lungs.

Additional information: Frits are fused silica glass like substances. The bioavailability may be limited because of the physical nature of the frit.

#### **SECTION 12: ECOLOGICAL INFORMATION**

- Mobility: Not available.
- Persistence/degradability: Not available.
- Bioaccumulation: Not available.
- Ecotoxicity: Not available.

#### **SECTION 13: DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Follow your Federal or State and Local regulations for disposal. Lead is listed in US-EPA Code of Federal Regulations 40, Part 261.24. Testing of the waste may be required to determine status under the hazardous waste regulations.

Waste from residue/unused product: Can be landfilled according to local regulations. Contaminated packing: Can be landfilled according to local regulations.

#### **SECTION 14: TRANSPORTATION INFORMATION**

UN Number: None for this product.

#### **SECTION 15: REGULATORY INFORMATION**

Silica is listed by California , Proposition 65  
Silica is listed on the IARC, OSHA or NTP carcinogen list.  
All ingredients are on U.S. TSCA / EC / AICS / DSL Inventory.  
See local requirements.

EU Status:  
Symbol- None  
WHMIS Status : Not Controlled

**SECTION 16: ADDITIONAL INFORMATION**

This information is furnished with out warranty, representation, inducement or license of any kind, except that it is accurate to the best of knowledge of COLORAMICS, LLC or obtained from sources believed to be accurate.

COLORAMICS, LLC does not assume any legal responsibility for use or reliance on same. Customers are encouraged to conduct their own tests before using any product. Read the product label.

For more information in AUSTRALIA see web site [www.nohsc.gov.au](http://www.nohsc.gov.au)

## I. GENERAL INFORMATION

PRODUCT NAME: **MBC 215**

MANUFACTURER'S ADDRESS: Nashville Chemical & Equipment Co., Inc.  
7001 Westbelt Drive  
Nashville, TN 37209

24 HOUR EMERGENCY PHONE: **1-800-424-9300**

TRADE NAME: 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE AND  
2-METHYL-4-ISOTHIAZOLIN-3-ONE

CHEMICAL FORMULA: PRINTED ON LABEL

CHEMICAL FAMILY: MICROBIOCIDE

HEALTH	3
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	H

## II. HAZARDOUS INGREDIENTS

PRINCIPAL HAZARDOUS INGREDIENT(S):	% OF PRODUCT	PEL / TLV	CAS NO.
5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE	1.11	NONE ESTABLISHED	26172-55-4
2-METHYL-4-ISOTHIAZOLIN-3-ONE	0.39	NONE ESTABLISHED	2682-20-4
MAGNESIUM CHLORIDE	1.1	NONE ESTABLISHED	7786-30-3
MAGNESIUM NITRATE	1.8	NONE ESTABLISHED	10377-60-3
CUPRIC NITRATE TRIHYDRATE	0.20	NONE ESTABLISHED	10031-43-3
PRODUCT IS REGULATED UNDER FIFRA; COMPONENTS ARE NOT REQUIRED TO BE ON THE TSCA INVENTORY.			

## III. PHYSICAL DATA

BOILING POINT (F):	212 °F	SPECIFIC GRAVITY (H2O=1):	1.03
VAPOR PRESSURE:	17MM HG	PERCENT VOLATILE BY WEIGHT (%)	95-96% (WATER)
VAPOR DENSITY:	NE	MELTING / FREEZING POINT (F):	FREEZES AT 27 °F
SOLUBILITY IN WATER:	COMPLETE	PH:	APPROXIMATELY 3.0
APPEARANCE AND ODOR:	PALE YELLOW TO GREEN LIQUID; SLIGHT ODOR.		

## IV. FIRE AND EXPLOSION DATA

FLASH POINT:	N/A	FLAMMABLE LIMITS IN AIR, VOLUME PERCENTAGE (%):	
AUTO IGNITION TEMPERATURE:	NE	UPPER:	N/A
EXTINGUISHER MEDIA:	NON-COMBUSTIBLE	LOWER:	N/A
SPECIAL FIRE FIGHTING PROCEDURES:	WEAR BREATHING APPARATUS (MSHA/NIOSH-APPROVED, PRESSURE DEMAND, SELF-CONTAINED OR EQUIVALENT) AND FULL PROTECTIVE CLOTHING. USE WATER SPRAY TO COOL FIRE-EXPOSED CONTAINERS. CONTAIN RUN-OFF.		

UNUSUAL FIRE/EXPLOSION HAZARDS: AVOID EXPOSURE TO FUMES AND VAPORS FROM A FIRE-- CAN POSSIBLY INCLUDE SULFUR DIOXIDE AND HYDROGEN CHLORIDE AND OXIDES OF NITROGEN.

## V. PHYSICAL HAZARDS

STABILITY:	STABLE	CONDITIONS TO AVOID:	NONE KNOWN
MATERIALS TO AVOID:	OXIDIZING AGENTS, REDUCING AGENTS, AMINES, MERCAPTANS		
HAZ. POLYMERIZATION:	WILL NOT OCCUR	CONDITIONS TO AVOID:	NOT APPLICABLE
HAZARDOUS DECOMPOSITION PRODUCTS:	HYDROGEN CHLORIDE AND OXIDES OF SULFUR		



**VI. HEALTH HAZARDS**

ACUTE: CORROSIVE

CHRONIC: NONE

SIGNS AND SYMPTOMS OF EXPOSURE:

HARMFUL IF INHALED. CORROSIVE TO EYES. CAUSES IRREVERSIBLE EYE DAMAGE.  
CORROSIVE TO SKIN. CAUSES SKIN BURNS. THESE EFFECTS MAY BE DELAYED FOR  
HOURS. CAN CAUSE ALLERGIC DERMATITIS.

MEDICAL CONDITIONS GENERALLY

AGGREGATED BY EXPOSURE:

EXPOSURE TO MBC 215 MAY CAUSE ALLERGIC CONTACT DERMATITIS.

LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

IARC: NO

NATIONAL TOXICOLOGY PROGRAM: NO

**VII. EMERGENCY AND FIRST AID PROCEDURES**

TREAT SYSTEMATICALLY AS OUTLINED BELOW:

INHALATION: MOVE SUBJECT TO FRESH AIR. APPLY ARTIFICIAL RESPIRATION IF NEEDED.

SKIN: WASH SKIN THOROUGHLY WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. SEEK MEDICAL ATTENTION IF IRRITATION OCCURS.

EYES: IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER, LIFTING UPPER AND LOWER EYE LIDS OCCASIONALLY, FOR AT LEAST 15 MINUTES. GET PROMPT MEDICAL ATTENTION.

INGESTION: IF SWALLOWED, DILUTE BY GIVING 2 GLASSES OF WATER TO DRINK AND CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

**VIII. ENVIRONMENTAL DATA: SPILL AND DISPOSAL PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

LARGE AND SMALL SPILL: WEAR PROTECTIVE CLOTHING, SPLASH PROOF GOGGLES AND IMPERVIOUS OVERSHOES. REMOVE CONTAMINATED CLOTHING. PROMPTLY LAUNDRER BEFORE REUSE. WASH SKIN WITH SOAP AND WATER. KEEP SPILLS OUT OF MUNICIPAL SEWERS AND OPEN BODIES OF WATER. DIKE AND ABSORB SPILL WITH INERT MATERIAL (DRY EARTH, SAND). SHOVEL ALL CONTAMINATED SOLIDS-DIKING MATERIAL, ABSORBENT AND SOIL INTO CORROSION PROOF, DOT APPROVED CONTAINERS. SEAL

SEE SECTION X FOR MORE REGULATORY INFORMATION.

WASTE DISPOSAL METHODS: INCINERATE LIQUID AND CONTAMINATED SOLIDS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS (SEE 40 CFR 268).

**IX. CONTROL MEASURES**

RESPIRATORY PROTECTION: WEAR MSHA/NIOSH-APPROVED RESPIRATOR SUITABLE FOR CONCENTRATIONS ENCOUNTERED WHERE EXPOSURE LIMITS ARE EXCEEDED.

VENTILATION: LOCAL EXHAUST: PREFERRED

PROTECTIVE GLOVES: BUTYL RUBBER/NITRILE

EYE PROTECTION: SPLASH PROOF GOGGLES AND FACE SHIELD (ANSI Z87.1 OR EQUIVALENT)

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: IMPERVIOUS APRON, EYE WASH FACILITY, EMERGENCY SHOWER.

WORK/HYGENIC PRACTICES: WASH SKIN WITH SOAP AND WATER. LAUNDRER CONTAMINATED CLOTHING BEFORE REUSE.

OTHER: EYE WASH FACILITY AND SAFETY SHOWER. DO NOT STORE BELOW 32 °F.

**X. REGULATORY INFORMATION**

DOT SHIPPING NAME: CORROSIVE LIQUIDS, ACIDIC, ORGANIC, N.O.S. (5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE), 8, UN 3265, PG II

HAZARD CLASSIFICATION: CORROSIVE

UN / NA NUMBER: UN 3265

DOT LABEL REQUIRED: CORROSIVE

SARA TITLE III REPORTING: SECTION 311: X SECTION 312: X SECTION 313: X

SARA 313 REPORTABLE PRODUCT: MAGNESIUM NITRATE

SARA TPQ: N/A

CERCLA REPORTABLE QUANTITY OF PRODUCT: N/A

HMIS RATING: HEALTH 3 FLAMMABILITY 0 REACTIVITY 0

DATE PREPARED: OCTOBER 2003 (REVIEWED SEPT. 2008)

PREPARED BY: CHRIS BUNCH

NE = Not Established

N/A = Not Applicable

NR = Not Required

&lt; = Less Than

&gt; = Greater Than

THE INFORMATION PROVIDED IN THIS MATERIAL SAFETY DATA SHEET HAS BEEN OBTAINED FROM SOURCES BELIEVED TO BE RELIABLE AND IS OFFERED IN GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE. CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL. ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT.

# MEDICATED HAND CLEANER

1337

## MATERIAL SAFETY DATA SHEET

PART NO. WOD300

WOD303

### SECTION I

REFERENCE NO

PRODUCT NAME OR NUMBER (as it appears on label) <u>Snap-on Orange Scent Medicated Hand Cleaner</u>		
MANUFACTURER'S NAME <u>Woodbine Chemical Co., Inc.</u>		EMERGENCY TELEPHONE NO <u>216-725-0165</u>
ADDRESS (Number, Street, City, State and Zip Code) <u>915 W. Smith Rd., Medina, OH 44256</u>		MANUFACTURER'S D-U-N-S NO
HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASS, HAZARD ID NO. (49 CFR 172.101) <u>None</u>		
ADDITIONAL HAZARD CLASSES (as applicable) <u>None</u>		
CHEMICAL FAMILY <u>Waterless Hand Cleaner</u>	FORMULA	

### SECTION II - INGREDIENTS

CAS REGISTRY NO.	%W %V	CHEMICAL NAME(S)	Listed as a Carcinogen in NTP, IARC or OSHA 1810(z) (specify)
64741-65-7	<35	Isoparaffins	No
9016459	<15	Surfactant	No
	<50	Water	No
88040	<1	Chlorinated Xylenol (Antimicrobial) Antiseptic	No
	<10	Mixture perfume, soaps and conditioners	No

### SECTION III - PHYSICAL DATA

BOILING POINT ____ °F ____ °C	SPECIFIC GRAVITY (H <sub>2</sub> O = 1) ____	
VAPOR PRESSURE ____ °F ____ °C <input type="checkbox"/> mm Hg <input type="checkbox"/> psi	PERCENT VOLATILE BY VOLUME (%)	PERCENT SOLID BY WEIGHT (%)
VAPOR DENSITY (AIR = 1)	EVAPORATION RATE (____ = 1)	
SOLUBILITY IN WATER <u>Soluble</u>	pH = <u>7.5 - 8.0</u>	
APPEARANCE AND ODOR <u>Light orange, orange fragrance</u>	IS MATERIAL: <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID <input type="checkbox"/> SOLID <u>PASTE</u> <input type="checkbox"/> POWDER	

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT ____ °F <u>85</u> °C method used	FLAMMABLE LIMITS	LFL	UEL
EXTINGUISHING MEDIA <u>Water</u>			
SPECIAL FIRE FIGHTING PROCEDURES <u>None (Non-flammable)</u>			
UNUSUAL FIRE AND EXPLOSION HAZARDS <u>None</u>			

## SECTION V - HEALTH HAZARD DATA

WCD 300  
WCD 303

EFFECTS OF OVEREXPOSURE - Conditions to Avoid None	THRESHOLD LIMIT VALUE = PERMISSIBLE EXPOSURE LIMIT =
Eye contact - Flush with water	OTHER LIMIT <input type="checkbox"/>
PRIMARY ROUTES OF ENTRY    Inhalation <input type="checkbox"/> Skin Contact <input type="checkbox"/> Other (specify) _____	
EMERGENCY AND FIRST AID PROCEDURES In case of accidental ingestion, do not induce vomiting due to danger of aspiration.	
Call physician.	

## SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE	X	CONDITIONS TO AVOID
	STABLE		
INCOMPATIBILITY (materials to avoid) None			
HAZARDOUS DECOMPOSITION PRODUCTS: None			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR		

## SECTION VII - SPILL OR LEAK PROCEDURES

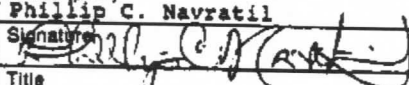
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Flush with water	
WASTE DISPOSAL METHOD Flush with water, Bio-degradable	
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs) None	
RCRA HAZARDOUS WASTE NO. (40 CFR 261.33)	
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water)	
<input type="checkbox"/> Theoretical <u>7.6</u> lb/gal	<input type="checkbox"/> Analytical _____ lb/gal

## SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) None required		
VENTILATION	LOCAL EXHAUST (Specify Rate) None required	SPECIAL
	MECHANICAL (General) (Specify Rate) None required	OTHER
PROTECTIVE GLOVES (specify type) None required		EYE PROTECTION (specify type) None required
OTHER PROTECTIVE EQUIPMENT None required		

## SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING To prolong shelf life, store below 120°F	
OTHER PRECAUTIONS	

	Name (print) Phillip C. Navratil Signature  Title President Date 03/22/94
--	---



**Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT - LO-VOC**

**\*\*\* Section 1 - Product and Company Identification \*\*\***

**MSDS #1101E**

**Part Numbers:** Clear -30350, 31017, 31018, 31019, 31020, 31021, 31550, 31551, 31552, 31553, 31946, 31947, 31948, 31949, 32222, 32223, 32224, 32225, 32255, 32256, 32257, 32258

Gray - 30883, 30884, 30885, 30886, 30887, 31930, 31931, 31932, 31933

**Manufacturer Information**

Oatey Co.  
4700 West 160th Street  
Cleveland, OH 44135

Phone: 216-267-7100

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.

**\*\*\* Section 2 - Hazards Identification \*\*\***

**GHS Classification:**

Flammable Liquids - Category 2  
Acute Toxicity Oral - Category 4  
Acute Toxicity Dermal - Category 4  
Acute Toxicity Inhalation - Category 4  
Eye Damage/Irritation - Category 2A  
Carcinogenicity - Category 2  
Specific Target Organ Toxicity Single Exposure - Category 3

**GHS LABEL ELEMENTS**

**Symbol(s)**



**Signal Word**

Danger

**Hazard Statements**

Highly flammable liquid and vapor.  
Harmful if swallowed.  
Harmful in contact with skin.  
Harmful if inhaled.  
Causes serious eye irritation.  
Contains a chemical classified by the US EPA as a suspected possible carcinogen.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.

**Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC**

## **Precautionary Statements**

### **Prevention**

Keep away from heat/sparks/open flames and hot surfaces. - No smoking.  
Keep container tightly closed.  
Use explosion-proof electrical/ventilating/lighting/equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Wear protective gloves/eye protection/face protection.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Avoid breathing fume/gas/mist/vapors.  
Use only outdoors or in a well-ventilated area.

### **Response**

If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.  
If swallowed: Call a poison center or doctor/physician if you feel unwell. Rinse mouth. Do not induce vomiting.  
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.  
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 exposed or concerned Get medical advice/attention.  
In case of fire: Use dry chemical, CO<sub>2</sub>, or foam to extinguish fire.

### **Storage**

Store in a well-ventilated place. Keep cool.  
Store locked up.

### **Disposal**

Dispose of contents/container in accordance with local/regional/national/international regulations.

## **\* \* \* Section 3 - Composition / Information on Ingredients \* \* \***

<b>CAS #</b>	<b>Component</b>	<b>Percent</b>
109-99-9	Tetrahydrofuran	30-50
67-64-1	Acetone	10-25
78-93-3	Methyl ethyl ketone	10-25
9002-86-2	PVC (Chloroethylene, polymer)	12-20
108-94-1	Cyclohexanone	10-20
112945-52-5	Silica, amorphous, fumed, crystalline-free	1-5

## **\* \* \* Section 4 - First Aid Measures \* \* \***

### **First Aid: 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.

**Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC**

**First Aid: 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.

**First Aid: 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.

**First Aid: 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.

<p style="text-align: center;">* * * <b>Section 5 - Fire Fighting Measures</b> * * *</p>
--

**General Fire Hazards**

See Section 9 for Flammability Properties.

Highly flammable liquid and vapor. 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 Combustion Products**

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.

**Extinguishing Media**

Use dry chemical, CO<sub>2</sub>, or foam to extinguish fire. Cool fire exposed container with water. Water may be ineffective as an extinguishing agent.

**Unsuitable Extinguishing Media**

None.

**Fire Fighting Equipment/Instructions**

Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

<p style="text-align: center;">* * * <b>Section 6 - Accidental Release Measures</b> * * *</p>
---

**Recovery and Neutralization**

Stop leak if it can be done without risk.

**Materials and Methods for Clean-Up**

Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent such as sand, earth or other noncombusting material. Put absorbent material in covered, labeled metal containers.

**Emergency Measures**

Isolate area. Keep unnecessary personnel away.

**Personal Precautions and Protective Equipment**

Personnel cleaning up the spill should wear appropriate personal protective equipment, including respirators if vapor concentrations are high.

**Environmental Precautions**

Prevent liquid from entering watercourses, sewers and natural waterways.

**Prevention of Secondary Hazards**

None

**\*\*\* Section 7 - Handling and Storage \*\*\***

**Handling Procedures**

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. Other: "Empty" containers retain product residue and can be hazardous. Follow all SDS precautions in handling empty containers. Do not cut or weld on or near empty or full containers.

**Storage Procedures**

Store in a cool, dry, well-ventilated area away from incompatible materials. Keep containers closed when not in use.

**Incompatibilities**

Oxidizing agents, alkalis, amines, ammonia, acids, chlorine compounds, chlorinated inorganics (potassium, calcium and sodium hypochlorite) and hydrogen peroxides. May attack plastic, resins and rubber.

**\*\*\* Section 8 - Exposure Controls / Personal Protection \*\*\***

**Component Exposure Limits**

**Tetrahydrofuran (109-99-9)**

ACGIH: 50 ppm TWA  
100 ppm STEL  
Skin - potential significant contribution to overall exposure by the cutaneous route  
OSHA: 200 ppm TWA; 590 mg/m3 TWA  
NIOSH: 200 ppm TWA; 590 mg/m3 TWA  
250 ppm STEL; 735 mg/m3 STEL

**Acetone (67-64-1)**

ACGIH: 500 ppm TWA  
750 ppm STEL  
OSHA: 1000 ppm TWA; 2400 mg/m3 TWA  
NIOSH: 250 ppm TWA; 590 mg/m3 TWA

**Methyl ethyl ketone (78-93-3)**

ACGIH: 200 ppm TWA  
300 ppm STEL  
OSHA: 200 ppm TWA; 590 mg/m3 TWA  
NIOSH: 200 ppm TWA; 590 mg/m3 TWA  
300 ppm STEL; 885 mg/m3 STEL

**PVC (Chloroethylene, polymer) (9002-86-2)**

ACGIH: 1 mg/m3 TWA (respirable fraction)

**Cyclohexanone (108-94-1)**

ACGIH: 20 ppm TWA  
50 ppm STEL  
Skin - potential significant contribution to overall exposure by the cutaneous route  
OSHA: 50 ppm TWA; 200 mg/m3 TWA  
NIOSH: 25 ppm TWA; 100 mg/m3 TWA  
Potential for dermal absorption

**Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC**

### Engineering Measures

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.

### Personal Protective Equipment: Respiratory

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.

### Personal Protective Equipment: Hands

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.

### Personal Protective Equipment: Eyes

Safety glasses with side shields or safety goggles.

### Personal Protective Equipment: Skin and Body

No additional protective equipment needed.

## \* \* \* Section 9 - Physical & Chemical Properties \* \* \*

<b>Appearance:</b>	Clear	<b>Odor:</b>	Ether-like
<b>Physical State:</b>	Liquid	<b>pH:</b>	NA
<b>Vapor Pressure:</b>	145 mmHg @ 20°C	<b>Vapor Density:</b>	2.5
<b>Boiling Point:</b>	151°F (66°C)	<b>Melting Point:</b>	NA
<b>Solubility (H2O):</b>	Negligible	<b>Specific Gravity:</b>	0.93 +/- 0.02 @ 20°C
<b>Evaporation Rate:</b>	(BUAC = 1) = 5.5 - 8.0	<b>VOC:</b>	< 510 g/L per SCAQMD
<b>Octanol/H2O Coeff.:</b>	ND	<b>Flash Point:</b>	14-23°F (-10 to -5°C)
<b>Flash Point Method:</b>	CCCFP	<b>Upper Flammability Limit (UFL):</b>	11.8
<b>Lower Flammability Limit (LFL):</b>	1.8	<b>Burning Rate:</b>	ND
<b>Auto Ignition:</b>	ND		

## \* \* \* Section 10 - Chemical Stability & Reactivity Information \* \* \*

### Chemical Stability

This is a stable material.

### Hazardous Reaction Potential

Will not occur.

### Conditions to Avoid

Avoid heat, sparks, flames and other sources of ignition.

### Incompatible Products

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 Decomposition Products

Combustion will produce toxic and irritating vapors including carbon monoxide, carbon dioxide and hydrogen chloride.



**Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC**

<b>* * * Section 11 - Toxicological Information * * *</b>
---

**Acute Toxicity**

**Component Analysis - LD50/LC50**

**Tetrahydrofuran (109-99-9)**

Inhalation LC50 Rat 53.9 mg/L 4 h; Inhalation LC50 Rat 180 mg/L 1 h; Oral LD50 Rat 1650 mg/kg

**Acetone (67-64-1)**

Oral LD50 Rat 5800 mg/kg

**Methyl ethyl ketone (78-93-3)**

Inhalation LC50 Mouse 32 g/m<sup>3</sup> 4 h; Oral LD50 Rat 2737 mg/kg; Dermal LD50 Rabbit 6480 mg/kg

**Cyclohexanone (108-94-1)**

Inhalation LC50 Rat 10.7 mg/L 4 h; Inhalation LC50 Rat 8000 ppm 4 h; Oral LD50 Rat 800 mg/kg; Dermal LD50 Rabbit 948 mg/kg

**Silica, amorphous, fumed, crystalline-free (112945-52-5)**

Oral LD50 Rat 3160 mg/kg

**Potential Health Effects: Skin Corrosion Property/Stimulativeness**

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.

**Potential Health Effects: Eye Critical Damage/ Stimulativeness**

Vapors may cause irritation. Direct contact may cause irritation with redness, stinging and tearing of the eyes. May cause eye damage.

**Potential Health Effects: 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.

**Potential Health Effects: 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.

**Respiratory Organs Sensitization/Skin Sensitization**

This product is not reported to have any skin sensitization effects.

**Generative Cell Mutagenicity**

Cyclohexanone has been positive in bacterial and mammalian assays. Acetone, methyl ethyl ketone and tetrahydrofuran are generally thought not to be mutagenic.

**Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC**

## **Carcinogenicity**

### **A: General Product Information**

In 2012 USEPA Integrated Risk Information System (IRIS) reviewed a two species inhalation lifetime study on THF conducted by NTP (1998). Male rats developed renal tumors and female mice developed liver tumors while neither the female rats nor the male mice showed similar results. Because the carcinogenic mechanisms could not be identified clearly in either species for either tumor, the EPA determined that the male rat and female mouse findings are relevant to the assessment of carcinogenic potential in humans. Therefore, the IRIS review concludes that these data in aggregate indicate that there is "suggestive evidence of carcinogenic potential" following exposure to THF by all routes of exposure.

### **B: Component Carcinogenicity**

#### **Tetrahydrofuran (109-99-9)**

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

#### **Acetone (67-64-1)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

#### **PVC (Chloroethylene, polymer) (9002-86-2)**

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Supplement 7 [1987]; Monograph 19 [1979] (Group 3 (not classifiable))

#### **Cyclohexanone (108-94-1)**

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

IARC: Monograph 71 [1999]; Monograph 47 [1989] (Group 3 (not classifiable))

#### **Silica, amorphous, fumed, crystalline-free (112945-52-5)**

IARC: Monograph 68 [1997] (listed under Amorphous silica) (Group 3 (not classifiable))

## **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.

### **Specified Target Organ General Toxicity: Single Exposure**

May cause respiratory irritation. Inhalation of high concentrations may cause central nervous system depression, narcosis and unconsciousness. May cause kidney, liver and lung damage.

### **Specified Target Organ General Toxicity: Repeated Exposure**

This product is not reported to have any specific target organ toxicity repeat exposure effects.

### **Aspiration Respiratory Organs Hazard**

Aspiration during swallowing or vomiting can cause chemical pneumonia and lung damage. May cause kidney and liver damage.

## **\* \* \* Section 12 - Ecological Information \* \* \***

## **Ecotoxicity**

### **A: General Product Information**

This product is not expected to be toxic to aquatic organisms.

## Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

### B: Component Analysis - Ecotoxicity - Aquatic Toxicity

#### Tetrahydrofuran (109-99-9)

##### Test & Species

96 Hr LC50 Pimephales promelas	1970-2360 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	2700-3600 mg/L [static]
24 Hr EC50 Daphnia magna	5930 mg/L

##### Conditions

#### Acetone (67-64-1)

##### Test & Species

96 Hr LC50 Oncorhynchus mykiss	4.74 - 6.33 mL/L
96 Hr LC50 Pimephales promelas	6210 - 8120 mg/L [static]
96 Hr LC50 Lepomis macrochirus	8300 mg/L
48 Hr EC50 Daphnia magna	10294 - 17704 mg/L [Static]
48 Hr EC50 Daphnia magna	12600 - 12700 mg/L

##### Conditions

#### Methyl ethyl ketone (78-93-3)

##### Test & Species

96 Hr LC50 Pimephales promelas	3130-3320 mg/L [flow-through]
48 Hr EC50 Daphnia magna	>520 mg/L
48 Hr EC50 Daphnia magna	5091 mg/L
48 Hr EC50 Daphnia magna	4025 - 6440 mg/L [Static]

##### Conditions

#### Cyclohexanone (108-94-1)

##### Test & Species

96 Hr LC50 Pimephales promelas	481-578 mg/L [flow-through]
96 Hr LC50 Pimephales promelas	8.9 mg/L
96 Hr EC50 Chlorella vulgaris	20 mg/L
24 Hr EC50 Daphnia magna	800 mg/L

##### Conditions

### Persistence/Degradability

No information available for the product.

### Bioaccumulation

No information available for the product.

### Mobility in Soil

No information available for the product.

## \* \* \* Section 13 - Disposal Considerations \* \* \*

### Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

### Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

\* \* \* **Section 14 - Transportation Information** \* \* \*

**DOT Information**

**For Greater than 1 liter (0.3 gal):**

**Shipping Name:** Adhesives

**UN #: 1133 Hazard Class: 3 Packing Group: II**

**Required Label(s):** Flammable Liquid

**For Less than 1 liter (0.3 gal):**

**Shipping Name:** Consumer Commodity, ORM-D

**IMDG Information**

**For Greater than 1 liter (0.3 gal):**

**Shipping Name:** Adhesives

**UN #: 1133 Hazard Class: 3 Packing Group: II**

**Required Label(s):** Flammable Liquid

**For Less than 1 liter (0.3 gal):**

**Shipping Name:** Adhesives

**UN #: 1133 Hazard Class: 3 Packing Group: II**

**Required Label(s):** None (Limited Quantities are expected from labeling)

\* \* \* **Section 15 - Regulatory Information** \* \* \*

**Regulatory Information**

**US Federal Regulations**

**Component Analysis**

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

**Tetrahydrofuran (109-99-9)**

CERCLA: 1000 lb final RQ; 454 kg final RQ

**Acetone (67-64-1)**

CERCLA: 5000 lb final RQ; 2270 kg final RQ

**Methyl ethyl ketone (78-93-3)**

CERCLA: 5000 lb final RQ; 2270 kg final RQ

**Cyclohexanone (108-94-1)**

CERCLA: 5000 lb final RQ; 2270 kg final RQ

**State Regulations**

**Component Analysis - State**

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Tetrahydrofuran	109-99-9	Yes	Yes	Yes	Yes	Yes	No
Acetone	67-64-1	Yes	Yes	Yes	Yes	Yes	No
Methyl ethyl ketone	78-93-3	Yes	Yes	Yes	Yes	Yes	No
PVC (Chloroethylene, polymer)	9002-86-2	No	No	No	Yes	No	No
Cyclohexanone	108-94-1	Yes	Yes	Yes	Yes	Yes	No

## Material Name: OATEY PVC MEDIUM CLEAR or GRAY CEMENT – LO-VOC

### Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Tetrahydrofuran	109-99-9	1 %
Acetone	67-64-1	1 %
Methyl ethyl ketone	78-93-3	1 %
Cyclohexanone	108-94-1	0.1 %

### Additional Regulatory Information

#### A: General Product Information

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. The use of proper personal protective equipment (PPE) and ventilation guidelines noted in Section 8 will minimize exposure to these chemicals.

#### B: Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Tetrahydrofuran	109-99-9	Yes	DSL	EINECS
Acetone	67-64-1	Yes	DSL	EINECS
Methyl ethyl ketone	78-93-3	Yes	DSL	EINECS
PVC (Chloroethylene, polymer)	9002-86-2	Yes	DSL	ELINCS
Cyclohexanone	108-94-1	Yes	DSL	EINECS
Silica, amorphous, fumed, crystalline-free	112945-52-5	No	DSL	No

## \* \* \* Section 16 - Other Information \* \* \*

### Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration., NJTSR = New Jersey Trade Secret Registry.

### Literature References

None

### 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

### Revision History

Rev 1.1 - 5/19 added part numbers 32255, 32256, 32257, 32258 to Part Numbers in Section 1.

#### 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 do not make warranties, nor assume any liability for its use.

End of Sheet

**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 # 89**  
**Megaloc<sup>TM</sup>****Date Prepared:** 10/15/1995 **Last Reviewed:** 7/31/2007

Meets OSHA 29 CFR 1910.1200

**MATERIAL  
SAFETY  
INFORMATION  
SERVICE**

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**

This product is not classified as hazardous in accordance with OSHA 1910.1200

**HMIS Hazard Rating:** Health: 0 Flammability: 0 Reactivity: 0 Personal Protection: A**Section 3 - Physical/Chemical Characteristics**

<b>Boiling Point (°F):</b>	<b>Specific Gravity (H2O = 1):</b>	<b>Vapor Density (Air = 1):</b>	<b>Vapor Pressure (mm Hg):</b>
N/A	1.2	N/A	N/A
<b>Melting Point (° F):</b>	<b>Evaporation Rate: (Butyl Acetate = 1)</b>	<b>Solubility in Water:</b>	
N/A	N/A	Insoluble	
<b>Appearance And Color:</b>	Blue paste	<b>Odor:</b>	None

**Section 4 - Fire And Explosion Hazard Data**

<b>Flash Point:</b>	<b>Flammable Limits:</b>	<b>LEL:</b>	<b>UEL:</b>
N/A	N/A		
<b>Extinguishing Media:</b>	Dry chemical, foam, carbon dioxide		

**Special Firefighting Procedures:**

Use water to cool fire-exposed containers. If a leak or spill has not ignited, use water spray to disperse the vapors to provide protection for personnel.

**Unusual Fire And Explosion Hazards:**

None

Continued on Next Page

**Section 5 - Reactivity Data**

**Stability:** Stable      **Conditions To Avoid:** Direct contact with open flame.

**Incompatibility  
(Materials To Avoid):** None known

**Hazardous Decomposition:** CO<sub>2</sub> and CO may form on burning

**Hazardous Polymerization:** Will not occur

**Section 6 - Health Hazard Data**

**Routes of Entry:**    **Inhalation**    N/A      **Skin**    YES/Primary      **Ingestion**    YES/Secondary

**Health Hazards:**

None

**Carcinogenicity:**    **NTP**    NO      **IARC**    NO      **OSHA Regulated**    NO

**Signs And Symptoms of Exposure:**

None: Could be mildly irritating to certain persons on prolonged contact.

**Medical Conditions Generally Aggravated By Exposure:**

None known

**Emergency And First Aid Procedures:**

**SKIN:** Wash with soap and water. **EYES:** As with most foreign materials should eye contact occur, flush eyes with plenty of water & get medical attention. **INGESTION:** Do not induce vomiting. Get medical attention.

*Continued on Next Page*

**Section 7 - Precautions For Safe Handling And Use:**

**Steps To Be Taken In Case Material Is Released Or Spilled:**

Use absorbent material and sweep up.

**Waste Disposal Method:**

Non-hazardous landfill

**Precautions To Be Taken In Handling And Storing:**

None

**Other Precautions:**

Keep away from direct contact with open flame or sparks.

**Section 8 - Control Measures:**

**Respiratory Protection:**

N/A

**Ventilation:** Local Exhaust Normal ventilation  
Mechanical N/A

**Special** N/A

**Other:** N/A

**Gloves:** Rubber gloves

**Eye Protection:** Goggles or safety goggles

**Other Protective Clothing:** None required

**Work/Hygienic Practices:** Wash up after handling the material.



**FACTS**  
axed  
AST!

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.



# FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

## Material Safety Data Sheet (MSDS)

MSDS #: 499.00

Revision Date: November 25, 2002

### Section 1 — Chemical Product and Company Identification

#### Mercuric Nitrate

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

Mercuric Nitrate

Synonym: mercury pernitrate, mercury (II) nitrate

CAS#: 7783-34-8

### Section 3 — Hazards Identification

Colorless crystals or powder. Odor of nitric acid.

Highly toxic by ingestion, inhalation and skin absorption. May be fatal. Corrosive to body tissues.

Avoid all body contact. Strong oxidizing agent. Avoid contact with organic materials.

#### 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: 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 solid.

Strong oxidizer; fire hazard when in contact with combustible materials.

**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 #3. Store with amides, nitrates and nitrites.

Keep container tightly closed. Deliquescent, store in Flinn Chem-Saf Bag. Store in a poisons cabinet.

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 0.1 mg/m<sup>3</sup> (Hg) (ACGIH)

### Section 9 — Physical and Chemical Properties

Colorless crystals or powder. Odor of nitric acid.

Solubility: Soluble in water and nitric acid.

Insoluble in alcohol.

Formula:  $\text{Hg}(\text{NO}_3)_2 \cdot \text{H}_2\text{O}$

Formula Weight: 342.63

Specific Gravity: 4.3

Melting Point: 79 C

### Section 10 — Stability and Reactivity

Avoid contact with acetylene, ethyl alcohol, sulfur, and sodium carbonate. Avoid contact with organic materials.

Shelf life: Poor; deliquescent.

### Section 11 — Toxicological Information

Acute effects: Highly toxic, corrosive

Chronic effects: Neurotoxic effects, neurological hazard

Target organs: Kidneys, GI system, nerves, blood

ORL-RAT LD50: 26 mg/kg

IHL-RAT LC50: N.A.

SKN-RAT LD50: 75 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 consult with state and local regulations.

Flinn Suggested Disposal Method #27f is one option.

### Section 14 — Transport Information

Shipping Name: Mercuric Nitrate

Hazard Class: 6.1, Poison

UN Number: UN1625

N/A = Not applicable

### Section 15 — Regulatory Information

TSCA-listed, EINECS-listed (233-152-3), RCRA code D001, D009.

### 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.

## FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

*Flinn Chemicals--Your Best Choice*

flinn@flinnsci.com www.flinnsci.com  
P.O. Box 219 Batavia IL 60510  
(800) 452-1261 Fax (866) 452-1436

# FLINN SCIENTIFIC INC.

"Your Safer Source for Science Supplies"

## Material Safety Data Sheet (MSDS)

MSDS #: 505.00

Revision Date: November 25, 2002

### Section 1 — Chemical Product and Company Identification

#### Mercurous Nitrate

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

Mercurous Nitrate

Synonym: mercury (I) nitrate

CAS#: 7782-86-7

### Section 3 — Hazards Identification

Small, colorless crystals. Faint nitric acid odor.

Highly toxic by ingestion and inhalation. Irritating to body tissues. Sensitizer. Avoid all body contact.

May explode if heated.

#### 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: 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

Non flammable solids.

Strong oxidant, may explode if heated. Fire hazard when in contact with combustible materials.

Material will sublime and release mercury vapor and toxic fumes of NOx.

**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 water. 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 #3. Store with amides, nitrates and nitrites.

Store in a cool dry place. Deliquescent, store in Flinn Chem-Saf Bag. Store in a poisons cabinet. 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 0.1 mg/m<sup>3</sup> (Hg) (ACGIH)

### Section 9 — Physical and Chemical Properties

Small colorless crystals. Faint nitric acid odor.  
Solubility: Soluble in small quantities of warm water.  
Formula:  $\text{HgNO}_3 \cdot \text{H}_2\text{O}$   
Formula Weight: 280.61

Specific Gravity: 4.785  
Melting Point: 70 °C

### Section 10 — Stability and Reactivity

Avoid contact with strong reducers, neat organic materials protect from light.  
Material will sublime and release mercury vapor and toxic fumes of  $\text{NO}_x$ .  
Shelf life: Anhydrous in dry air, sensitive to light; otherwise good.

### Section 11 — Toxicological Information

Acute effects: Highly toxic, irritant, sensitizer  
Chronic effects: Neurotoxic effects, neurological hazards  
Target organs: Kidneys, nerves, GI system, blood

ORL-RAT LD50: 170 mg/kg  
IHL-RAT LC50: N.A.  
SKN-RAT LD50: 2330 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 consult with state and local regulations.  
Flinn Suggested Disposal Method #27f is one option.

### Section 14 — Transport Information

Shipping Name: Mercurous nitrate  
Hazard Class: 6.1, Poison  
UN Number: UN1627

N/A = Not applicable

### Section 15 — Regulatory Information

TSCA-listed, RCRA code D001, D009.

### 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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P.O. Box 219 Batavia IL 60510  
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Material Safety Data Sheet - OSHA 174

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00040 - XXXX

**Material Safety Data Sheet****U.S. Department of Labor**

Occupational Safety and Health Administration

May be used to comply with

OSHA's Hazard Communication Standard, (Non-Mandatory Form)

29 CFR 1910.1200. Standard must be consulted for specific requirements.

Form Approved

OMB No. 1218-0072

IDENTITY (As Used on Label and List)  
**SARGENT METALLIC TEMPERA**

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**

<b>Manufacturer's Name</b> Sargent Art, Inc.	<b>Emergency Telephone Number</b> 570-454-3596
<b>Address (Number, Street, City, State, and ZIP Code)</b> 100 E Diamond Avenue Hazleton PA 18201	<b>Telephone Number for Information</b> 570-454-3596
	<b>Date Prepared</b> 7-26-2002
	<b>Signature of Preparer (optional)</b>

**Section II - Hazard Ingredients/Identity Information****Hazardous Components (Specific Chemical Identity: Common Name(s))**

ALL CP/AP PRODUCTS ARE CERTIFIED BY A NATIONALLY RECOGNIZED AUTHORITY

ON TOXICOLOGY ASSOCIATED WITH A LEADING UNIVERSITY TO CONTAIN

NO KNOWN TOXIC MATERIALS IN SUFFICIENT QUANTITIES TO BE

INJURIOUS TO THE HUMAN BODY EVEN IF INGESTED.

CONFORMS TO ASTM-D 4236.

**Section III - Physical/Chemical Characteristics**

<b>Vapor Pressure (mm Hg.)</b> N/A	<b>Melting Point</b> N/A
<b>Vapor Density (AIR = 1)</b> N/A	<b>Evaporation Rate</b> N/A (Butyl Acetate = 1)
<b>Solubility in Water</b>	Water Soluable - Water Dispersible
<b>Appearance and Odor</b>	Various Colors - Essentially Odorless
<b>Section IV - Fire and Explosion Hazard Data</b>	
<b>Flash Point (Method Used)</b> N/A	<b>Flammable Limits</b> LEL UEL NONE

## Material Safety Data Sheet - OSHA 174

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	NONE	NONE
<b>Extinguishing Media</b>	CARBON DIOXIDE, WATER, FOAM	
<b>Special Fire Fighting Procedures</b>	SELF-CONTAINED BREATHING APPARATUS	
<b>Unusual Fire and Explosion Hazards</b>	NONE	

## Material Safety Data Sheet - OSHA 174

Page 3 of 4

**Section V - Reactivity Data**

<b>Stability</b>	<b>Unstable Avoid</b>	<b>Conditions to</b>
	<b>Stable</b> X	None Known
<b>Incompatibility (Materials to Avoid)</b> <i>Strong oxidizers and acids</i>	Strong oxidizers and acids	

**Hazardous Decomposition or Byproducts**

<b>Hazardous</b>	<b>May Occur</b>	<b>Conditions to</b>
<b>Polymerization</b> Will Not Occur X	<b>Avoid</b>	None
	Known	

**Section VI - Health Hazard Data**

<b>Route(s) of Entry:</b> Inhalation? Possible	<b>Skin?</b> N/A	<b>Ingestion?</b> Possible
--	------------------	----------------------------

**Health Hazards (Acute and Chronic)**

This product is certified to contain no materials in sufficient quantities to be toxic or injurious to humans or to cause acute or chronic health problems.

<b>Carcinogenicity:</b> NTP? None	<b>IARC Monographs?</b> N/A	<b>OSHA</b>
	<b>Regulated?</b> No	

<b>Signs and Symptoms of Exposure</b>	None Known
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<b>Medical Conditions</b>	
<b>Generally Aggravated by Exposure</b>	None Known

<b>Emergency and First Aid Procedures</b>	If ingested, do not induce vomiting, call physician.
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**Section VII - Precautions for Safe Handling and Use**

<b>Steps to Be Taken in Case Material is Released or Spilled</b>	Sweep into container and dispose of according to local regulations.
<b>Waste Disposal Method</b>	In accordance with local regulations.
<b>Precautions to Be taken in Handling and Storing</b>	Keep in cool, dry area.
<b>Other Precautions</b>	None Known

**Section VIII - Control Measures**

<b>Respiratory Protection (Specify Type)</b>	Not Required.		
<b>Ventilation</b>	<b>Local Exhaust</b>	Not Required	Special None
<b>Mechanical (General)</b>		Not Required	Other None
<b>Protective Gloves</b>		Not Required	Eye Protection Not Required
<b>Other Protective Clothing or Equipment</b>	Not Required		

Material Safety Data Sheet - OSHA 174

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**Work/Hygienic Practices**

Clean, safe work practices

Page 2



# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 509.00

Revision Date: May 5, 2015

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Methyl Alcohol

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: Acute toxicity, oral and dermal (Category 3). Toxic if swallowed, in contact with skin or if inhaled (H301+H311+H331). 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). Do not breathe mist, vapors or spray (P260).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Methyl alcohol	67-56-1	CH <sub>3</sub> OH	32.04	
Synonyms: Methanol, Wood alcohol				

### SECTION 4 — FIRST AID MEASURES

**If exposed or concerned:** Call a POISON CENTER or physician (P307+P311).

**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 (or hair):** Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Remove immediately all contaminated clothing (P361). Wash contaminated clothing before reuse (P363). **If swallowed:** Rinse mouth. Immediately call a POISON CENTER or physician (P301+P310+P330).

### SECTION 5 — FIRE FIGHTING MEASURES

Class IB flammable liquid.

Flash point: 11 °C Flammable limits: Lower: 6.0% Upper 36% Autoignition Temperature: 464 °C

Dangerous fire risk. 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-1

F-3

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.

---

**SECTION 7 — HANDLING AND STORAGE**

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Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. 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).

---

**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 200 ppm (OSHA/ACGIH); STEL 250 ppm (ACGIH) Readily absorbed through the skin.

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

Clear, colorless, mobile, highly polar liquid. Alcohol odor.  
Soluble: Miscible with water, alcohol, and ether.

Boiling point: 64.6 °C  
Melting point: -98 °C  
Specific gravity: 0.7914  
Vapor density: 1.1  
Vapor pressure: 410 mmHg

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with acids, acid chlorides, acid anhydrides, oxidizers, reducers, and alkali metals.  
Shelf life: Good, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Irritation eyes, skin, upper respiratory system;  
headache, drowsiness, dizziness, nausea, vomiting; visual  
disturbance, dermatitis

ORL-RAT LD<sub>50</sub>: 5628 mg/kg  
IHL-RAT LC<sub>50</sub>: 64,000 ppm/4H  
SKN-RBT LD<sub>50</sub>: 15,800 mg/kg

Chronic effects: Optic nerve damage (blindness)

Target organs: Eyes, skin, respiratory system, CNS, GI tract

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

---

**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.  
Flinn Suggested Disposal Method #18a is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Methyl Alcohol. Hazard class: 3, Flammable liquid. UN number: UN1230.

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (200-659-6), RCRA code U154.

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**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: May 5, 2015




# MATERIAL SAFETY DATA SHEET

5100 W. Henrietta Rd.  
West Henrietta, NY 14586  
TEL: (866) 260-0501

MSDS No. 9460604 9460606  
Effective Date: October 9, 2002

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	Methylcellulose 1.5% Solution	<b>416-984-3000</b>  <b>NFPA</b>   <b>HAZARD RATING</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4  <b>WHMIS</b> Health 1 Flammability 0 Reactivity 0
Chemical Synonyms	N/A	
Formula	Mixture.	
CAS No.	Mixture.	

## SECTION II DANGEROUS INGREDIENTS

Name	%	TLV Units
Methylcellulose: CAS # 9004-67-5	1.5%	N/A
Water: CAS # 7732-18-5	98.4%	N/A
Salicylic acid: CAS # 69-72-7 as preservative	0.1%	N/A
<b>CAUTION!</b>		

## SECTION III PHYSICAL DATA

Melting Point (°C)	Freezes @ ~ 0°C	Specific Gravity (H <sub>2</sub> O = 1)	~ 1.0
Boiling Point (°C)	~ 100°C	Percent Volatile by Volume (%)	98.4%
Vapor Pressure (mm Hg)	14 (water)	Evaporation Rate (Water =1)	< 1
Vapor Density (Air=1)	0.7 (water)		
Solubility in Water	Soluble.		
Appearance & Odor	Clear, thick liquid; no odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash point	Non-flammable.	Flammable Limits in Air % by Volume	N/A	Lower	Upper
Firefighting Procedures					

Use dry chemical, CO<sub>2</sub>, 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.

**TDG** Not controlled under TDG.

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 MM0400

Chemical Stability	Yes	X	If no. under what conditions?
	No		
Incompatible with Other products	Yes	X	Oxidizing agents.
	No		
Hazardous Decomposition Products	Carbon oxides.		

Reactive under what conditions Heat and excessive temperatures.

## SECTION VI TOXICOLOGICAL PROPERTIES

Route of Entry	Ingestion. Inhalation.
TLV	N/A
Toxicity for animals	N/A
Chronic effects on humans	There is no known effects from chronic exposure to this product. Target organs: None known.

Acute effects on humans May cause eye irritation, skin irritation.

## 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.
Precautions	Avoid contact with skin and eyes. Do not breathe vapors or spray. Use with adequate ventilation. Do not ingest.
Spill or leak	Absorb with an inert DRY material and place in an appropriate waste disposal container. Wash spill area with soap and water.
Protective Clothing	Safety glasses, lab coat, dust 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. Seek immediate medical attention.
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## SECTION IX PREPARATION OF THE MSDS

Rev. No.	3	Date	October 9, 2002	Approved	Michael Raszeja
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## SECTION I Identification

Produit	Solution de méthylcellulose 1,5%
Synonymes	Sans objet.
Formule	Mélange.
# CAS	Mélange.

## Telephone D'urgence

416-984-3000

NFPA



Niveau de risque

Minime	Légère	Modéré	Sérieux	Extrême
0	1	2	3	4

Santé	1
Flammabilité	0
Reactivité	0

WHMIS

## SECTION II Ingrédients Dangereux

Nom	%	TWA
Méthylcellulose: CAS # 9004-67-5	1.5%	Sans objet.
L'eau: CAS # 7732-18-5	98.4%	Sans objet.
Acide salicylique: CAS # 69-72-7 (agent conservateur)	0.1%	Sans objet.
ATTENTION!		

## SECTION III Caractéristiques Physiques

Point de fusion (°C)	Gelers @ ~ 0°C	Gravité spécifique (Eau = 1)	~ 1,0
Point d'ébullition (°C)	~ 100°C	Volatilité % par volume	98,4%
Tension de vapeur (mm Hg)	14 (eau)	Taux d'évaporation (Eau = 1)	< 1
Densité de la vapeur (Air=1)	0,7 (eau)		
Solubilité	Soluble.		
Odeur et apparence	Épais liquide incolore; inodore.		

## SECTION IV Risques D'incendie ou D'explosion

Point d'éclair	Ininflammable.	Limites d'inflammabilité % par volume	Sans objet.	Seuil minimal	Seuil maximal
Moyens d'extinction					

Utiliser des poudres chimiques sèches, du CO<sub>2</sub>, une mousse d'alcool ou de l'eau pulvérisée. En cas de feu, sapeur-pompier 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.

TMD Substance non réglementée par le TMD (Canada).

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 a trait à l'exactitude ou à l'état complet de l'information contenue dans ce document. La détermination finale de la convenance de tout matériel 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

MM0400

Chimique Stabilité	oui	X	Si non, dans quelles condition?
	non		
Incompatibilité avec d'autres produits	oui	X	Agents oxydant.
	non		
Produits de decomposition dangereux	Oxydes de carbones.		
Conditions de Réactivité	Le chaleur et des excessif températures.		

## SECTION VI Propriétés Toxicologiques

Voies d'absorption	Ingestion. Inhalation.
LMP	Sans objet.
Toxicité pour les animaux	Sans objet.
Effets chroniques sur les humains	Il n'y a aucun effet connu dû à une exposition chronique à ce produit. On ne connaît aucun organe de cible.
Effets aiguë sur les humains	Peut provoquer une irritation des yeux, une irritation de la peau.

## 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. Conserver le récipient bien fermé.
Précautions	Éviter tout contact avec la peau et les yeux. Ne pas inhaler les vapeur ou aérosols. Utilisez la ventilation adéquate. Ne pas ingérer.
Déversement ou fuite	Absorber avec une moppe, ou absorber avec une substance inerte SÈCHE 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, blouse 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: Vérifier si la victime porte des verres de contact et dans ce cas lui les enlever. Rincer les yeux immédiatement à l'eau courante pendant au moins 15 minutes en gardant les paupières ouvertes. Obtenir de l'aide médicale. Contact cutané: 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. Obtenir immédiatement de l'aide médicale.
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## SECTION IX Renseignements sur la Préparation de la FS

# Rev.	3	Date	9 octobre, 2002	Véifié par	Michael Raszeja
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# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 511.00

Revision Date: September 22, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Methyl Ethyl Ketone

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: Skin and serious eye damage, corrosion or irritation (Category 2, 2A). Causes skin and serious eye irritation (H315+H319).

Hazard class: Acute toxicity, oral and inhalation (Category 5). May be harmful if swallowed or inhaled (H303+333).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Methyl ethyl ketone	78-93-3	CH <sub>3</sub> COC <sub>2</sub> H <sub>5</sub>	72.11	
Synonyms: MEK; 2-Butanone				

### 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:** 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 IB flammable liquid.

Flash point: -9 °C Flammable limits: Lower: 1.4% Upper: 11.4% Autoignition Temperature: 404 °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-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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Organic #4. Store with ethers, ketones, and halogenated hydrocarbons. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in a Flinn Saf-Stor™ can. Keep container tightly closed (P233). Keep cool (P235). 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: PEL/TLV 200 ppm (OSHA/ACGIH); STEL 300 ppm (ACGIH)

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

Colorless liquid. Odor like nail polish remover.  
Soluble: Alcohol and ether. Miscible with oils.

Boiling point: 80 °C  
Melting point: -87 °C  
Refractive index: 1.3788  
Specific gravity: 0.7999

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with oxidizers, reducers, and bases.  
Shelf life: Good, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Severe eye irritant, nausea, dizziness, headache, GI disturbances  
Chronic effects: Dermatitis  
Target organs: Central nervous system

ORL-RAT LD<sub>50</sub>: 2737 mg/kg  
IHL-RAT LC<sub>50</sub>: 23500 mg/m<sup>3</sup>/8H  
SKN-RBT LD<sub>50</sub>: 6480 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 #18b is one option.

---

**SECTION 14 — TRANSPORT INFORMATION**

---

Shipping name: Methyl ethyl ketone. Hazard class: 3, Flammable liquid. UN number: UN1193.

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

---

TSCA-listed, EINECS-listed (201-159-0), RCRA code U159.

---

**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: September 22, 2014

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 517.00

Revision Date: February 6, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Methyl Orange 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: 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
Methyl orange	547-58-0	$C_{14}H_{15}N_3O_3SNa$	327.334	0.1%
Water	7732-18-5	$H_2O$	18.00	99.9%
Synonym: Methyl orange indicator solution				

### 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, noncombustible solution.

**In case of fire:** Use a tri-class dry chemical fire extinguisher.

**NFPA CODE**  
None  
established

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.  
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**

---

Orange liquid. Odorless.

pH indicator: 3.0 red to 4.4 yellow.

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Shelf life: Fair.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: N.A.

ORL-RAT LD<sub>50</sub>: 60 mg/kg as methyl orange

Chronic effects: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: N.A.

SKN-RBT LD<sub>50</sub>: 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



# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 516.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Methyl Orange

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).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Methyl orange	547-58-0	$C_{14}H_{15}N_3O_3SNa$	327.334	
Synonyms: Sodium p-dimethylaminoazobenzenesulfonate; C.I. 13025				

### 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+P310+P330).

### 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 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.

---

**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 (P264). Will stain skin, clothing, and surfaces.

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

Orange powder. Odor like burnt rubber.  
Soluble: Hot water. Partially in alcohol.

pH indicator: 3.0 red to 4.4 yellow.

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong oxidizers.  
Shelf life: Indefinite, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Harmful if swallowed.  
Chronic effects: N.A.  
Target organs: N.A.

ORL-RAT LD<sub>50</sub>: 60 mg/kg  
IHL-RAT LC<sub>50</sub>: N.A.  
SKN-RBT LD<sub>50</sub>: 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 (208-925-3).

---

**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

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 519.00

Revision Date: February 6, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Methyl Red Indicator 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
Methyl red, sodium salt	845-10-3	$C_{15}H_{14}N_3O_2Na$	291.28	0.1%
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 the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Organic #9. Store with dyes, indicators and stains.  
Avoid storing for prolonged periods. Color fades because of reduction.

---

**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, orange or yellow liquid. Odorless.

pH indicator: 4.4 red to 6.2 yellow.

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Shelf life: Fair to poor. Color fades because of reduction.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: N.A.

ORL-RAT LD<sub>50</sub>: N.A.

Chronic effects: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: N.A.

SKN-RBT LD<sub>50</sub>: 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




# MATERIAL SAFETY DATA SHEET

5100 W. Henrietta Rd.  
West Henrietta, NY 14586  
TEL: (866) 260-0501

MSDS No. 9461501 9461502  
Effective Date: December 12, 2002

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	Methyl Violet (2B)	<b>416-984-3000</b>  <b>NFPA</b>   <b>HAZARD RATING</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4  <b>WHMIS</b> Health 2 Flammability 1 Reactivity 1
Chemical Synonyms	Basic Violet 1; C.I. No. 42535	
Formula	C <sub>24</sub> H <sub>28</sub> N <sub>3</sub> Cl	
CAS No.	8004-87-3	

## SECTION II DANGEROUS INGREDIENTS

Name	%	TLV Units
Methyl violet	95%	N/A
<b>WARNING!</b>		

## SECTION III PHYSICAL DATA

Melting Point (°C)	137°C decomposes	Specific Gravity (H <sub>2</sub> O = 1)	Unknown.
Boiling Point (°C)	Decomposes.	Percent Volatile by Volume (%)	Negligible.
Vapor Pressure (mm Hg)	Negligible.	Evaporation Rate ( =1)	N/A
Vapor Density (Air=1)	Unknown.		
Solubility in Water	Soluble.		
Appearance & Odor	Blue-green crystalline powder; no odor. Hygroscopic.		

## 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<sub>2</sub>, 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.

**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

MM0540

Chemical Stability	Yes	X	If no, under what conditions?
	No		
Incompatible with Other products	Yes	X	Strong oxidizers and reducing agents.
	No		
Hazardous Decomposition Products	Carbon and nitrogen oxides, hydrogen chloride gas.		
Reactive under what conditions	Protect from light.		

## SECTION VI TOXICOLOGICAL PROPERTIES

Route of Entry	Inhalation. Ingestion.
TLV	Not available.
Toxicity for animals	Not available.
Chronic effects on humans	Repeated or prolonged exposure to the substance can produce target organ damage. Target organs: Skin and eyes.
Acute effects on humans	May be harmful if inhaled, swallowed or absorbed through skin. 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 heat. Keep away from incompatible materials. Protect from light.
Precautions	Avoid contact with skin and eyes. Do not breathe dust. Use with adequate ventilation. Do not ingest. If ingested, seek immediate medical attention.
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.
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## SECTION IX PREPARATION OF THE MSDS

Rev. No.	1	Date	December 12, 2002	Approved	Michael Raszeja
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## SECTION I Identification

Produit	Violet de méthyle (2B)
Synonymes	Violet basique 1; C.I. No. 42535
Formule	C <sub>24</sub> H <sub>28</sub> N <sub>3</sub> Cl
# CAS	8004-87-3

## Telephone D'urgence

416-984-3000

NFPA



Santé	2
Flammabilité	1
Reactivité	1

Niveau de risque

Minime 0 Légère 1 Modéré 2

WHMIS

Sérieux 3 Extrême 4

## SECTION II Ingrédients Dangereux

Nom	%	TWA
Violet de méthyle	95%	Sans objet.
AVERTISSEMENT!		

## SECTION III Caractéristiques Physiques

Point de fusion (°C)	137°C Se décompose	Gravité spécifique (Eau = 1)	Aucun inconnu.
Point d'ébullition (°C)	Se décompose.	Volatilité % par volume	Négligeable.
Tension de vapeur (mm Hg)	Négligeable.	Taux d'évaporation (=1)	Sans objet.
Densité de la vapeur (Air=1)	Aucun inconnu.		
Solubilité	Soluble.		
Odeur et apparence	Poudre cristallin bleu-vert; inodore. Hygroscopique.		

## SECTION IV Risques D'incendie ou D'explosion

Point d'éclair	Ininflammable.	Limites d'inflammabilité % par volume	Sans objet.	Seuil minimal	Seuil maximal
Moyens d'extinction					

Utiliser des poudres chimiques sèches, du CO<sub>2</sub>, une mousse d'alcool ou de l'eau pulvérisée. En cas de feu, sapeur-pompier 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.

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 a trait à l'exactitude ou à l'état complet de l'information contenue dans ce document. La détermination finale de la convenance de tout matériel 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

MM0540

Chimique Stabilité	oui	X	Si non, dans quelles condition?
	non		
Incompatibilité avec d'autres produits	oui	X	Comburante forte et l'agents reducteurs.
	non		
Produits de decomposition dangereux	Oxydes de carbone et d'azote, le gaz de chlorure d'hydrogène.		
Conditions de Réactivité	Protéger de la lumière.		

## SECTION VI Propriétés Toxicologiques

Voies d'absorption	Inhalation. Ingestion.
LMP	N'est pas à notre disposition.
Toxicité pour les animaux	N'est pas à notre disposition.
Effets chroniques sur les humains	Une exposition répété ou prolongé à la substance peut causer du dommage à certains organes de cibles. La peau et les yeux sont des organes de cible.
Effets aigué sur les humains	Peut être nuisible en cas d'inhalation, en cas d'ingestion ou absorbé à travers la peau. 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 de la chaleur. Conserver à l'écart des matières incompatibles. Protéger de la lumière.
Précautions	Éviter tout contact avec la peau et les yeux. Ne pas inhaler les poussières. Utilisez la ventilation adéquate. Ne pas ingérer. En cas d'ingestion il faut obtenir immédiatement de l'aide médicale.
Déversement ou fuite	Utiliser les instruments nécessaires pour mettre le solide répandu 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	Gants, 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: Vérifier si la victime porte des verres de contact et dans ce cas lui les enlever. Rincer les yeux immédiatement à l'eau courante pendant au moins 15 minutes en gardant les paupières ouvertes. Obtenir de l'aide médicale. Contact cutané: 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.
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## SECTION IX Renseignements sur la Préparation de la FS

# Rev.	1	Date	12 decembre, 2002	Vérfié par	Michael Raszeja
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# Safety Data Sheet

## Methylene Blue Staining Solution

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1

### Product Description

**Product Name:** Methylene Blue Staining Solution  
**Recommended Use:** Science education applications  
**Synonyms:** Methylene Blue Stain  
**Distributor:** Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215-3398  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2

### Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**DANGER**



May damage fertility or the unborn child. Causes damage to organs.

**GHS Classification:**

Reproductive Toxicity Category 1A, Specific Target Organ Systemic Toxicity (STOT) - Single Exposure Category 1

**Other Safety Precautions:**

IF exposed or concerned: Get medical advice/attention.  
IF exposed: Call a POISON CENTER or doctor/physician.

**Acute Toxicity Dermal Contains**

21.72375 % of the mixture consists of ingredient(s) of unknown toxicity

### Section 3

### Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Water	7732-18-5	76.02
Ethanol	64-17-5	21.49
2-Propanol	67-63-0	1.19
Methanol	67-56-1	1.07
Methylene Blue Chloride	61-73-4	0.23

### Section 4

### First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
**Eyes:** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
**Skin Contact:** After contact with skin, wash immediately with plenty of water.  
**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Section 5

### Firefighting Procedures

**Extinguishing Media:** Use media suitable to extinguish surrounding fire.  
**Fire Fighting Methods and Protection:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
**Fire and/or Explosion Hazards:** Fire or excessive heat may produce hazardous decomposition products.  
**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide

### Section 6

### Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** No health affects expected from the clean-up of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this MSDS. Ventilate the contaminated area.

# Safety Data Sheet

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

## Section 7 Handling and Storage

**Handling:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use personal protective equipment as required.

**Storage:** Store locked up. Keep container tightly closed in a cool, well-ventilated place.

**Storage Code:** Green - general chemical storage

## Section 8 Protection Information

Chemical Name	ACGIH		OSHA PEL	
	(TWA)	(STEL)	(TWA)	(STEL)
Ethanol	N/A	1000 ppm STEL	1000 ppm TWA; 1900 mg/m3 TWA	N/A
2-Propanol	200 ppm TWA	400 ppm STEL	400 ppm TWA; 980 mg/m3 TWA	N/A
Methanol	200 ppm TWA	250 ppm STEL	200 ppm TWA; 260 mg/m3 TWA	N/A
Methylene Blue Chloride	N/A	N/A	N/A	N/A

### Control Parameters

**Engineering Measures:** No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

**Personal Protective Equipment (PPE):** Lab coat, apron, eye wash, safety shower.

**Respiratory Protection:** No respiratory protection required under normal conditions of use.

**Respirator Type(s):** None required where adequate ventilation is provided. If airborne concentrations are above the applicable exposure limits, use NIOSH/MSHA approved respiratory protection.

**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.

**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

**Gloves:** Nitrile

## Section 9 Physical Data

**Formula:** See Section 3

**Molecular Weight:** No data available

**Appearance:** Blue Liquid

**Odor:** Mild Alcohol Odor

**Odor Threshold:** No data available

**pH:** No data available

**Melting Point:** No data available

**Boiling Point:** No data available

**Flash Point:** No data available

**Flammable Limits in Air:** No data available

**Vapor Pressure:** No data available

**Evaporation Rate (BuAc=1):** No data available

**Vapor Density (Air=1):** No data available

**Specific Gravity:** < 1

**Solubility in Water:** Soluble

**Log Pow (calculated):** No data available

**Autoignition Temperature:** No data available

**Decomposition Temperature:** No data available

**Viscosity:** No data available

**Percent Volatile by Volume:** No data available

## Section 10 Reactivity Data

**Reactivity:** Not generally reactive under normal conditions.

**Chemical Stability:** Stable under normal conditions.

**Conditions to Avoid:** Temperatures above flash point in combination with sparks, open flames, or other sources of ignition.

**Incompatible Materials:** Water-reactive materials, Organic Peroxides, Strong acids, Oxidizing materials

**Hazardous Polymerization:** Will not occur

## Section 11 Toxicity Data

**Routes of Entry** Inhalation and ingestion.



# Safety Data Sheet

**Symptoms (Acute):** Respiratory Irritation, Dermatitis, Central Nervous System Depression, Dizziness, Respiratory disorders, Eye disorders  
**Delayed Effects:** No data available

## Acute Toxicity:

Chemical Name	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
Water	7732-18-5	Oral LD50 Rat 90 g/kg		
Ethanol	64-17-5	Oral LD50 Rat 7060 mg/kg		INHALATION LC50-4H Rat 124.7 MG/L
2-Propanol	67-63-0	Oral LD50 Rat 4396 mg/kg	Dermal LD50 Rat 12800 mg/kg Dermal LD50 Rabbit 12870 mg/kg	INHALATION LC50-4H Rat 72.6 MG/L
Methanol	67-56-1	Oral LD50 Rat 5628 mg/kg	Dermal LD50 Rabbit 15800 mg/kg	INHALATION LC50-4H Rat 83.2 MG/L INHALATION LC50-4H Rat 64000 ppm
Methylene Blue Chloride	61-73-4	Oral LD50 Rat 1180 mg/kg		

## Carcinogenicity:

Chemical Name	CAS Number	IARC	NTP	OSHA
Ethanol	64-17-5	Listed	Listed	Listed
2-Propanol	67-63-0	Listed	Not listed	Not listed
Methanol	67-56-1	Not listed	Not listed	Not listed
Methylene Blue Chloride	61-73-4	Not listed	Not listed	Not listed

## Chronic Effects:

**Mutagenicity:** No evidence of a mutagenic effect.  
**Teratogenicity:** Evidence of a teratogenic effect (birth defect).  
**Sensitization:** No evidence of a sensitization effect.  
**Reproductive:** Evidence of negative reproductive effects.  
**Target Organ Effects:**  
**Acute:** Central Nervous System, Eyes, Blood  
**Chronic:** Eyes, Blood

## Section 12

## Ecological Data

**Overview:** This material is not expected to be harmful to the ecology.  
**Mobility:** No data  
**Persistence:** Biodegradation, Adsorbs to soil.  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

Chemical Name	CAS Number	Eco Toxicity
Water	7732-18-5	No data available
Ethanol	64-17-5	96 HR LC50 PIMEPHALES PROMELAS > 100 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA 2 MG/L [STATIC] 24 HR EC50 DAPHNIA MAGNA 10800 MG/L 48 HR LC50 DAPHNIA MAGNA 9268 - 14221 MG/L
2-Propanol	67-63-0	96 HR LC50 LEPOMIS MACROCHIRUS > 1400000 µG/L 96 HR LC50 PIMEPHALES PROMELAS 11130 MG/L [STATIC] 48 HR EC50 DAPHNIA MAGNA 13299 MG/L 72 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L 96 HR EC50 DESMODESMUS SUBSPICATUS > 1000 MG/L
Methanol	67-56-1	96 HR LC50 PIMEPHALES PROMELAS > 100 MG/L [STATIC]

## Section 13

## Disposal Information

# Safety Data Sheet

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

**Waste Disposal Code(s):** Not Determined

## Section 14 Transport Information

**Ground - DOT Proper Shipping Name:**  
Not regulated for transport by US DOT.

**Air - IATA Proper Shipping Name:**  
Not regulated for air transport by IATA.

## Section 15 Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Ethanol	64-17-5	No	No	No	No	No
2-Propanol	67-63-0	No	No	No	No	No
Methanol	67-56-1	No	No	No	No	No
Methylene Blue Chloride	61-73-4	No	No	No	No	No

**California Prop 65:** WARNING: This product contains a chemical known to the state of California to cause cancer, birth defects or other reproductive harm.

## Section 16 Additional Information

**Revised:** 06/20/2013

**Replaces:** 05/09/2013

**Printed:** 06-21-2013

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 525.00

Revision Date: February 6, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Methylene Blue Aqueous 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
Methylene blue trihydrate	7220-79-3	$C_{16}H_{18}ClN_3S \cdot 3H_2O$	373.90	1% or less
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 the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

**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**

---

Deep blue liquid. Odorless.

Absorbance maximum: 660nm

Biological stain and redox indicator.

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Shelf life: Indefinite, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: N.A.

ORL-RAT LD<sub>50</sub>: 1180 mg/kg (as methylene blue)

Chronic effects: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: N.A.

SKN-RBT LD<sub>50</sub>: 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.

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**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**

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

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

---

Not listed.

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**SECTION 16 — OTHER INFORMATION**

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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:** February 6, 2014

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 527.00

Revision Date: September 22, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Methylene 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 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: 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
Methylene chloride	75-09-2	CH <sub>2</sub> Cl <sub>2</sub>	84.94	
Synonym: Dichloromethane				

### 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 (P301+P330+P312).

### SECTION 5 — FIRE FIGHTING MEASURES

Combustible liquid. No conventional flash point but does mix with air to become flammable.

Flammable limits: Lower: 14% Upper: 22% Autoignition Temperature: 556 °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-1

R-0

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition. Ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

---

**SECTION 7 — HANDLING AND STORAGE**

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Flinn Suggested Chemical Storage Pattern: Organic #4. Store with ethers, ketones, and halogenated hydrocarbons. Keep tightly capped. Store in a cool, dry place. Use only in a hood or well-ventilated area (P271).

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**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 25 ppm (OSHA); TLV 50 ppm (ACGIH)

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Colorless, volatile liquid. Penetrating odor like ether.

Soluble: Alcohol and ether. Slightly in water.

Boiling point: 39-40 °C

Melting point: -97 °C

Specific gravity: 1.335

Vapor density: 2.9

Vapor pressure: 340 mm

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with alkali metals, aluminum, and heat.

Shelf life: Poor, volatile liquid. Keep tightly capped.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Toxic, irritant, nausea, dizziness, and headache

Chronic effects: Possible carcinogen, neurological hazard, possible mutagen

Target organs: Liver, pancreas, nerves

ORL-RAT LD<sub>50</sub>: 1600 mg/kg

IHL-RAT LC<sub>50</sub>: 88000 mg/m<sup>3</sup>/30M

SKN-RBT LD<sub>50</sub>: 1280 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.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

---

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #27j is one option.

---

**SECTION 14 — TRANSPORT INFORMATION**

---

Shipping name: Dichloromethane. Hazard class: 6.1, Keep away from food. UN number: UN1593.

N/A = Not applicable

---

**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (200-838-9), RCRA code U080.

---

**SECTION 16 — OTHER INFORMATION**

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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

# FLINN SCIENTIFIC, INC.

## Material Safety Data Sheet (MSDS)

MSDS #: 509.50

Revision Date: July 8, 2011

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Methyl-t-Butyl Ether

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

Methyl-t-butyl ether

Synonym: MTBE

CAS#: 1634-04-4

### SECTION 3 — HAZARDS IDENTIFICATION

Colorless liquid. Sweet odor; volatile.

Slightly toxic by ingestion.

Flammable liquid.

#### FLINN AT-A-GLANCE

Health-1

Flammability-3

Reactivity-0

Exposure-0

Storage-3

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

Class 1A flammable liquid.

Flash point: -10 °C Flammable limits: Lower: 1.6% Upper: 8.4% Autoignition Temperature: 160 °C

**Fire Fighting Instructions:** Use a 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 the area. Remove all ignition sources and ventilate area. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

### SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #4. Store with ethers, ketones, halogenated hydrocarbons, and ethylene oxide. Store in a dedicated flammables cabinet. If a flammables cabinet is not available, store in 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 a 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 40 ppm (ACGIH)

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Colorless liquid. Sweet odor. Volatile.

Solubility: Soluble in alcohol, chloroform, and ethyl ether. Slightly soluble in water.

Formula:  $\text{CH}_3\text{OC}(\text{CH}_3)_3$

Formula weight: 88.17

Boiling point: 53 °C

Melting point: -109 °C

Specific gravity: 0.745

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**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong oxidizers and heat.

Shelf life: Good, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: N.A.

Chronic effects: N.A.

Target organs: Skin, eyes.

ORL-RAT LD<sub>50</sub>: 3865 mg/kg

IHL-RAT LC<sub>50</sub>: 33,427 ppm

SKN-RBT LD<sub>50</sub>: >10,000 mg/kg

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply, before proceeding.

Flinn Suggested Disposal Methods #15 is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Methyl tert-Butyl Ether

Hazard class: 3, Flammable Liquid

UN number: UN2398

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (211-309-7), RCRA code D001.

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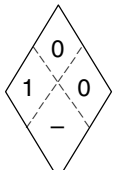
**SECTION 16 — OTHER INFORMATION**

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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).

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



<p align="center"><b>NFPA</b> Flammability</p> <div style="text-align: center;">  </div> <p>Health      Reactivity</p> <p>0 = Minimal Hazard 4 = Severe Hazard</p>	<p><b>MATERIAL SAFETY DATA SHEET* (MSDS)</b> <b>International Products Corporation</b></p> <p><b><big>micro-90</big>*</b> <b>CONCENTRATED CLEANING SOLUTION</b></p> <hr/> <p>DISTRIBUTED BY: COLE-PARMER INSTRUMENT COMPANY 625 E. Bunker Court, Vernon Hills, IL 60061 Toll-Free: 800/323-4340 Chicago Area 847/549-7600 Fax: 847/247-2929</p>	<p align="center"><b>HMIS</b></p> <p align="right">Health – 1 Flammability – 0 Reactivity – 0 Personal Protection – B</p> <p>0 = Minimal Hazard 4 = Severe Hazard B = Safety Glasses &amp; Gloves</p>																								
<p><b>1. PRODUCT AND COMPANY IDENTIFICATION</b></p> <p><b>PRODUCT NAME</b> ..... MICRO-90*  <b>CHEMICAL FAMILY</b> ..... Mixture  <b>CHEMICAL USE</b> ..... Concentrated Cleaning Solution  <b>ISSUE DATE of MSDS</b> ..... August 1, 2002</p> <p><b>MANUFACTURER:</b> International Products Corporation          201 Connecticut Drive          P.O. Box 70          Burlington, NJ 08016-0070 USA          Tel: (609) 386-8770          Fax: (609) 386-8438          E-mail: mkt@ipcol.com</p> <p><b>EMERGENCY TELEPHONES:</b>          Transportation: CHEMTREC (800) 424-9300          (Calls within USA &amp; Canada)          (703) 527-3887          (Calls outside the USA)          Nontransportation:          Tel: (609) 386-8770          Fax: (609) 386-8438</p>		<p><b>4. FIRST AID MEASURES</b></p> <p><b>EYE CONTACT</b> ..... Immediately flush eyes with plenty of water. Get medical attention if irritation develops or persists.</p> <p><b>SKIN CONTACT</b> ..... Remove contaminated clothing. Wash skin with soap and water. Get medical attention if irritation develops or persists.</p> <p><b>INHALATION</b> ..... If exposed to excessive levels of fumes, remove to fresh air. Get medical attention if cough or other symptoms develop.</p> <p><b>INGESTION</b> ..... 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.</p>																								
<p><b>2. COMPOSITION / INFORMATION ON INGREDIENTS</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Ingredients</th> <th style="text-align: left;">CAS Number</th> <th style="text-align: left;">Hazard Identity</th> <th style="text-align: left;">Concentration Range (w/w)</th> </tr> </thead> <tbody> <tr> <td>Water</td> <td>7732-18-5</td> <td>-----</td> <td>-----</td> </tr> <tr> <td>Glycine, N,N'-1,2-ethanediybis-(N-(carboxymethyl)-,tetra-sodium salt</td> <td>64-02-8</td> <td>Xi, R-36 R-38</td> <td>less than 20%</td> </tr> <tr> <td>Benzenesulfonic acid, dimethyl-, ammonium salt</td> <td>26447-10-9</td> <td>Xi, R-36 R-38</td> <td>less than 20%</td> </tr> <tr> <td>Benzenesulfonic acid, dodecyl-, cpd. with 2,2', 2"-nitritotris (ethanol)</td> <td>27323-41-7</td> <td>Xi, R-36 R-38</td> <td>less than 20%</td> </tr> <tr> <td>Poly(oxy-1,2-ethanediyl), alpha-(undecyl)-omega-hydroxy</td> <td>34398-01-1</td> <td>Xi, R-36</td> <td>less than 20%</td> </tr> </tbody> </table>		Ingredients	CAS Number	Hazard Identity	Concentration Range (w/w)	Water	7732-18-5	-----	-----	Glycine, N,N'-1,2-ethanediybis-(N-(carboxymethyl)-,tetra-sodium salt	64-02-8	Xi, R-36 R-38	less than 20%	Benzenesulfonic acid, dimethyl-, ammonium salt	26447-10-9	Xi, R-36 R-38	less than 20%	Benzenesulfonic acid, dodecyl-, cpd. with 2,2', 2"-nitritotris (ethanol)	27323-41-7	Xi, R-36 R-38	less than 20%	Poly(oxy-1,2-ethanediyl), alpha-(undecyl)-omega-hydroxy	34398-01-1	Xi, R-36	less than 20%	<p><b>5. FIRE FIGHTING MEASURES</b></p> <p>Nonflammable aqueous cleaner.</p> <p><b>FLASH POINT</b> ..... None.</p> <p><b>LFL</b> ..... Not applicable.</p> <p><b>UFL</b> ..... Not applicable.</p> <p><b>EXTINGUISHING MEDIA</b> ..... Use alcohol foam, carbon dioxide, or water spray to extinguish flames.</p> <p><b>FIRE FIGHTING INSTRUCTION</b> ..... As in any fire, wear self-contained breathing apparatus, pressure-demand MSHA/NIOSH (approved or equivalent) and full protective gear. Water runoff may cause environmental damage. Dike and collect water used to fight fire.</p>
Ingredients	CAS Number	Hazard Identity	Concentration Range (w/w)																							
Water	7732-18-5	-----	-----																							
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<p><b>3. HAZARDS IDENTIFICATION</b></p> <p align="center">*****</p> <p align="center"><b>EMERGENCY OVERVIEW</b></p> <p>Pale yellow aqueous solution with a slight ammonia odor. Nonflammable aqueous solution. NFPA rating of zero. No immediate hazards associated with the product.</p> <p align="center">*****</p> <p align="center"><b>POTENTIAL HEALTH EFFECTS</b></p> <p><b>EYE CONTACT</b> ..... Prolonged or repeated contact may cause irritation.</p> <p><b>SKIN CONTACT</b> ..... Prolonged or repeated contact may cause irritation.</p> <p><b>INHALATION</b> ..... Prolonged or repeated contact may cause irritation.</p> <p><b>INGESTION</b> ..... No hazard in normal industrial use.</p> <p><b>CARCINOGENICITY:</b>          NTP ..... No ingredients are listed.          IARC ..... No ingredients are listed.          OSHA ..... No ingredients are listed.</p> <p><b>CHRONIC EFFECTS</b> ..... Not determined.</p> <p><b>TARGET ORGANS</b> ..... Not determined.</p> <p><b>SIGNS AND SYMPTOMS</b> ..... Eye and skin irritation (redness or swelling)</p> <p align="center">*****</p> <p align="center"><b>POTENTIAL ENVIRONMENTAL EFFECTS</b></p> <p align="center">None known.</p>		<p><b>6. ACCIDENTAL RELEASE MEASURES</b></p> <p>Clean up spills immediately, observing precautions in Section 8 Personal Protection. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container.</p>																								
<p><b>7. HANDLING AND STORAGE</b></p> <p><b>HANDLING</b> ..... Avoid contact with eyes, skin and clothing. Use in a well-ventilated area.</p> <p><b>STORAGE</b> ..... Store in a cool place in original container and protect from sunlight. Keep container closed when not in use. Use only stainless steel, polyethylene or plastic-lined containers for handling. Do not store in contact with aluminum, zinc, copper or their alloys.</p> <p><b>SHELF LIFE</b> ..... One year from date of manufacture when stored in original sealed container at recommended storage temperature range.</p> <p><b>STORAGE TEMPERATURE</b> ..... 5–43°C (41–110°F)</p>																										

8. EXPOSURE CONTROLS / PERSONAL PROTECTION			14. TRANSPORTATION INFORMATION		
ENGINEERING CONTROLS ..... Good general ventilation should be sufficient to control airborne levels.			A. USA		
RESPIRATORY PROTECTION ..... For most situations, no respiratory protection should be needed.			D.O.T. SHIPPING ..... Not regulated.		
SKIN PROTECTION ..... Wear chemical-resistant gloves.			TECHNICAL SHIPPING NAME . Liquid Detergent		
EYE PROTECTION ..... Wear safety glasses with sideshields (or goggles). Contact lenses should not be worn.			D.O.T. LABEL ..... None		
GENERAL HYGIENE CONSIDERATIONS ..... There are no known health hazards associated with this material when used as recommended. The following general hygiene considerations are recognized as common, good industrial hygiene practices:			D.O.T. PLACARD (non-bulk) ... None		
.....			FREIGHT CLASS PACKAGE .... Class 55 - Liquid Detergent		
.....			PRODUCT LABEL ..... Concentrated Cleaning Solution		
.....			B. CANADA: TDG ..... Not regulated.		
.....			C. ENGLAND: APPROVED CARRIAGE LIST ..... Not regulated.		
.....					
.....			15. REGULATORY INFORMATION		
.....			A. USA		
.....			TSCA STATUS ..... All ingredients are listed on the TSCA inventory.		
.....			SARA TITLE III, 302/303 EHS ... None.		
.....			SARA TITLE III, 304, HS ..... None.		
.....			SARA TITLE III, 311/312 ..... None.		
.....			SARA TITLE III, 313 ..... None.		
.....			B. CANADA		
.....			DSL ..... All ingredients are listed on the Domestic Substance List.		
.....			WHMIS Classification ..... Not classified.		
.....			C. EC		
.....			EINECS ..... All ingredients are listed.		
.....			D. CHIPS ..... Not a significant eye irritant. Not a skin irritant.		
.....					
9. PHYSICAL AND CHEMICAL PROPERTIES			16. STATE REGULATORY INFORMATION		
APPEARANCE ..... Yellow Liquid.			For details on specific requirements, you should contact the appropriate agency in your state.		
ODOR ..... Ammonia Odor.					
pH (neat) ..... ca. 9.5			17. OTHER INFORMATION		
BOILING POINT ..... ca. 100°C (212°F)			PREPARED BY ..... K. Wyrofsky, Vice President of Marketing		
FREEZING POINT ..... ca. -8°C (18°F)			APPROVED BY ..... T. McGuckin, Director of Quality & Safety		
SOLUBILITY IN WATER ..... Complete			APPROVAL DATE ..... August 1, 2002		
SPECIFIC GRAVITY (water = 1) ..... 1.135@25°C			NOTE: All data presented here are for the full-strength product, unless otherwise noted. However, recommended usage is as a 1-2% w/w solution in water.		
10. STABILITY AND REACTIVITY			While International Products Corporation believes the information contained herein to be true and accurate, it has relied on information provided by others. International Products Corporation makes no warranties, express or implied, as to the accuracy or adequacy of the information contained herein or with respect to the results to be obtained from the use of the product. International Products Corporation disclaims all liability with respect to the use of this product, including without limitation, liability for injury to the user or third-party persons.		
STABILITY ..... Stable Liquid.					
HAZARDOUS POLYMERIZATION ..... Will not occur.					
INCOMPATIBILITIES ..... May etch aluminum and zinc. Do not mix with other cleaners. Mixing with chlorine-based cleaners may produce toxic gasses.					
DECOMPOSITION PRODUCTS ..... Not determined.					
11. TOXICOLOGICAL INFORMATION					
Eye: Irritant per USA-FHSA criteria. Not an Irritant per OECD Guideline No. 405.					
Skin: Not an irritant per USA-FHSA criteria. Not an irritant per OECD Guideline No. 404.					
Oral: LD <sub>50</sub> is greater than 5g/kg (rats).					
12. ECOLOGICAL INFORMATION					
Contains no CFCs, ODCs, phosphates, silicates, borates, halogens, or phenols.					
13. DISPOSAL CONSIDERATIONS					
MICRO-90* is not considered a hazardous waste under Federal Hazardous Waste Regulations 40 CFR 261. Please be advised, however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.					
(Note: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate.)					



## WALL BASE ADHESIVE

**DESCRIPTION:** PARABOND® Solvent-Free Acrylic Wall Base Adhesive is non-flammable water-based solvent free adhesive, which was developed for the permanent installation of rubber and vinyl Wall Base. Solvent-Free Acrylic Wall Base Adhesive may be used over most interior wall surfaces with the exception of vinyl wall covering and other similar non-porous surfaces that may prevent the curing of this latex based adhesive. This adhesive sets to an extremely strong, water-resistant bond.

### PREPARATION:

- 1) Use only on structurally sound surfaces such as plaster, drywall, plywood, paneling, masonry, etc.
- 2) Surface must be clean, dry and free from dust, dirt, wax, grease, loose paint or plaster, old adhesive, etc.
- 3) Plaster, cement, or dry wall compound must be cured and dry.
- 4) Do not apply over non-porous surfaces such as vinyl wall coverings, Masonite or plastic laminates, etc.
- 5) Solvent-Free Acrylic Wall Base Adhesive and wall base must be stored at room temperature between 65-80°F for 48 hours before and after installation.
- 6) Rolled or warped base should lay flat for 24 hours before application.

### DIRECTIONS:

- 1) Spread adhesive with a 1/8" saw tooth V or Sq-notched trowel or cartridge gun on back of base.
- 2) Press base firmly into place immediately after application of adhesive.
- 3) Apply adhesive to back of cove base.
- 4) Position or roll base immediately or within 20 minutes.

### COVERAGE:

4" Cove Base –      Approximately 20-25 Liner Feet per 11 Oz Cartridge  
                                    Approximately 55-60 Liner Feet per 30 Oz Cartridge  
                                    Approximately 35-50 Liner Feet per Quart  
                                    Approximately 150-200 Liner Feet per Gallon

### CLEAN-UP:

- Wet Adhesive - Remove immediately with a damp cloth.
- Dried Adhesive - Use a cloth moistened with Mineral Spirits.

**CAUTION:** IF FLAMMABLE SOLVENT IS USED - DO NOT USE AROUND SOURCES OF HEAT, SPARK OR OPEN FLAME. USE WITH ADEQUATE VENTILATION. DO NOT ALLOW SOLVENT TO PENETRATE THE SEAMS. THIS CAN DESTROY THE ADHESIVE BOND.

CALIFORNIA VOC (Volatile Organic compound) COMPLIANCE:

Solvent Free Product.

SCAQMD Rule 1168: VOC compliant.

SCAQMD Rule 443.1: Grams of VOC per Liter of Material < 1 gram/liter.

Grams of VOC per Liter of Coating < 1 gram/liter.

**FOR MORE INFORMATION READ MATERIAL SAFETY DATA SHEET.  
KEEP OUT OF REACH OF CHILDREN.**

**LIMITED WARRANTY:**

PARA-CHEM's only obligation shall be to replace or pay for any adhesive proved defective when authorized in writing by the company. Beyond the purchase price of materials supplied by us, we assume no liability for any damages of any kind and the user accepts the product "as is" and without warranties, expressed or implied. The suitability of the product for and intended use shall be solely up to the user.

Microban® is a registered trademark of Microban Products Company.

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# MATERIAL SAFETY DATA SHEET

Page 1 of 3

*Para-Chem<sup>®</sup>, PO Box 127, Simpsonville, SC 29681  
24-Hour Emergency Telephone: (864) 967-7691*

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## SECTION 1. PRODUCT IDENTIFICATION

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PRODUCT NAME: PARABOND<sup>®</sup> Wall Base Adhesive  
CHEMICAL FAMILY: Water Base Adhesive

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## SECTION 2. HAZARDOUS INGREDIENTS AND EXPOSURE LIMITS

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<u>Chemical Name</u>	<u>CAS Number</u>	<u>% by Weigh</u>	<u>ACGIHTLV</u>	<u>OSHA PEL</u>
None				

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## SECTION 3. HAZARDS IDENTIFICATION

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PRIMARY ROUTES OF ENTRY: Eyes, skin.  
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.  
POTENTIAL HEALTH EFFECTS:  
EYE CONTACT: May cause slight irritation.  
SKIN CONTACT: No effect known.  
INGESTION: May cause stomach discomfort.  
INHALATION: No effects anticipated.  
CHRONIC: None known.  
CARCINOGENICITY: This product contains no ingredient above the OSHA reporting threshold listed as a carcinogen by IARC, NTP, or OSHA.

---

## SECTION 4. FIRST AID MEASURES

---

EYE CONTACT: Flush with water for 15 minutes. Contact a physician if irritation occurs.  
SKIN CONTACT: Wash with soap and water.  
INGESTION: Do not induce vomiting, contact a physician.  
INHALATION: Remove to fresh air.

---

## SECTION 5. FIRE-FIGHTING MEASURES

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FLASH POINT (°)F: None.  
LOWER FLAMMABLE LIMIT: None.  
UPPER FLAMMABLE LIMIT: None.  
FIRE-FIGHTING INSTRUCTIONS: Use protective clothing and self-contained breathing apparatus.  
EXTINGUISHING MEDIA: Water fog, CO<sub>2</sub>, dry chemical, and chemical foam.  
DECOMPOSITION PRODUCTS: Dried material may produce CO, CO<sub>2</sub>, H<sub>2</sub>O, N<sub>x</sub>O, and hydrocarbons.

# MATERIAL SAFETY DATA SHEET

Page 2 of 3

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## SECTION 6. ACCIDENTAL RELEASE MEASURES

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STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Shovel or scoop paste into secure container for reuse or waste disposal. Dispense sand, sawdust, or vermiculite and absorb spill residue. Collect and place in waste container. Wash area thoroughly with water.

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## SECTION 7. HANDLING AND STORAGE

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HANDLING: Use good hygienic practices. Keep out of the reach of children.

STORAGE: Store above 40° F. Freeze/thaw stable up to five cycles at 20° F.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

---

PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: Wear safety glasses with side shields or splash goggles if contact with material is likely.

SKIN PROTECTION: Wear impervious rubber gloves where contact with material is likely.

RESPIRATORY PROTECTION: Not normally required with good ventilation.

ENGINEERING CONTROLS: Normal room ventilation. Site specific ventilation such as open windows and doors, with fans, where used in enclosed areas.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

---

BOILING POINT (°F): 212

SPECIFIC GRAVITY (WATER = 1): 1.14

VAPOR PRESSURE: Same as water.

VAPOR DENSITY(air=1): Same as water.

% VOLATILE BY WEIGHT: 42

pH: 9.2

APPEARANCE AND ODOR: Light tan colored paste.

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## SECTION 10. STABILITY AND REACTIVITY

---

CHEMICAL STABILITY: Stable.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: None known.

HAZARDOUS DECOMPOSITION PRODUCTS: None.

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## SECTION 11. TOXICOLOGICAL INFORMATION

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No information available.

# MATERIAL SAFETY DATA SHEET

Page 3 of 3

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## SECTION 12. ECOLOGICAL INFORMATION

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No information available.

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## SECTION 13. DISPOSAL CONSIDERATIONS

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Dispose of in accordance with Federal, State and Local regulations.

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## SECTION 14. TRANSPORT INFORMATION

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For domestic transportation purposes, this product is not designated as a hazardous material by the U.S. Department Of Transportation.

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## SECTION 15. REGULATORY INFORMATION

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TSCA: All components of this product are listed on the TSCA inventory.

SARA TITLE III:

Section 311 and 312 Health and Physical Hazards:

Immediate	Delayed	Fire	Pressure	Reactivity
[ ]	[ ]	[ ]	[ ]	[ ]

Section 313: Contains no components at or above EPA reporting thresholds.

CALIFORNIA VOC (Volatile Organic Compound) COMPLIANCE:

Solvent Free Product.

SCAQMD Rule 1168: VOC compliant.

SCAQMD Rule 443.1: Grams of VOC per Liter of Material < 1 gram/liter.

Grams of VOC per Liter of Coating < 1 gram/liter.

---

## SECTION 16. OTHER INFORMATION

---

HMIS RATINGS:    Health = 1                      Flammability = 0  
                         Reactivity = 0                      Personal Protective Equipment = B  
                         Hazard rating scale: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe

---

Para-Chem, Inc. believes the statements, technical information and recommendations contained herein are reliable. They are given without warranty or guarantee of any kind, expressed or implied.

DATE ISSUED: June 12, 2007 [Rev. 1]

PREPARED BY: R. W. Smith, Jr.

## MIKROKLENE

**Section 1. Chemical product and company identification****Product name** : MIKROKLENE**Recommended use and restrictions** : Sanitizer.

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** : 929422-03**Date of issue** : **08 Jan 2014****EPA Registration No.** : 1677-22EMERGENCY HEALTH INFORMATION: 1-800-328-0026  
Outside United States and Canada CALL 1-651-222-5352 (in USA)**Section 2. Hazards identification****GHS Classification** : **Product AS SOLD**  
ACUTE TOXICITY: ORAL - Category 4  
ACUTE TOXICITY: SKIN - Category 4  
ACUTE TOXICITY: INHALATION - Category 4  
SKIN CORROSION/IRRITATION - Category 1  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1**GHS label elements****Signal word** : Danger**Symbol** :**Hazard statements** : Harmful if swallowed, in contact with skin or if inhaled.  
Causes severe skin burns and eye damage.**Precautionary statements****Prevention** : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Keep away from flames and hot surfaces. - No smoking. Use only outdoors or in a well-ventilated area. Avoid breathing vapor. Wash hands thoroughly after handling. Do not mix with bleach or other chlorinated products - will cause chlorine gas.**Response** :**Product AT USE DILUTION**

Data not available - Refer to Product AS SOLD



## Section 2. Hazards identification

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 ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or physician if you feel unwell. 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** : No other specific measures identified.

**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
PHOSPHORIC ACID	6.55	7664-38-2
BUTOXYETHANOL	2	111-76-2
oxirane, methyl-, polymer with oxirane, monobutyl ether	5 - 20	9038-95-3
iodine	2.00	7553-56-2

### Product AT USE DILUTION

Hazardous ingredients	Concentration Range (%)	CAS number
Data not available - Refer to Product AS SOLD		

## Section 4. First aid measures

	Product AS SOLD	Product AT USE DILUTION
<b>Eye contact</b>	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.	Data not available - Refer to Product AS SOLD
<b>Skin contact</b>	: Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.	
<b>Inhalation</b>	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately.	
<b>Ingestion</b>	: Get medical attention immediately. Rinse mouth. Do not induce vomiting.	

## Section 4. First aid measures

- 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. If ventilation is inadequate, use respirator that will protect against dust/mist. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- 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 dry chemical, CO<sub>2</sub>, water spray (fog) or foam.
- 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  
phosphorus oxides  
halogenated compounds
- 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** : 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	Product AT USE DILUTION
<b>Personal precautions</b>	: Initiate company's spill response procedures immediately. Keep people out of area. Put on appropriate personal protective equipment (see section 8). Eliminate all ignition sources. Use personal protective equipment as required. Do not touch or walk through spilled material.	Data not available - Refer to Product AS SOLD
<b>Environmental precautions</b>	: Avoid contact of spilled material and runoff with soil and surface waterways.	
<b>Methods for cleaning up</b>	: Follow company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see section 8). Absorb/neutralize liquid material. Use a tool to scoop up solid or absorbed material and put into appropriate labeled container. If emergency personnel are not present, contain and collect small spillages with non-combustible absorbent material, e.g. sand, earth or other suitable material and place in a suitable container for disposal. Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Use a water rinse for final clean-up.	

## Section 7. Handling and storage

	<b>Product AS SOLD</b>
<b>Handling</b>	: Do not ingest. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Keep away from heat, sparks and flame. To avoid fire, eliminate ignition sources. Use only with adequate ventilation. Wash thoroughly after handling. Do not mix with bleach or other chlorinated products - will cause chlorine gas.
<b>Storage</b>	: Keep out of reach of children. Keep container tightly closed. 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). Store in a segregated and approved area. Store between the following temperatures: 0 and 40°C

### Product AT USE DILUTION

Data not available - Refer to Product AS SOLD

## Section 8. Exposure controls/personal protection

### Control parameters

Ingredient name	Exposure limits
PHOSPHORIC ACID	<b>ACGIH TLV (United States, 3/2012).</b> STEL: 3 mg/m <sup>3</sup> 15 minutes. TWA: 1 mg/m <sup>3</sup> 8 hours. <b>OSHA PEL (United States, 6/2010).</b> TWA: 1 mg/m <sup>3</sup> 8 hours. <b>NIOSH REL (United States, 6/2009).</b> TWA: 1 mg/m <sup>3</sup> 10 hours. STEL: 3 mg/m <sup>3</sup> 15 minutes.
iodine	<b>ACGIH TLV (United States, 3/2012).</b> TWA: 0.01 ppm 8 hours. Form: Inhalable fraction and vapor STEL: 0.1 ppm 15 minutes. Form: Vapour and aerosols <b>OSHA PEL (United States, 6/2010).</b> CEIL: 1 mg/m <sup>3</sup> CEIL: 0.1 ppm <b>NIOSH REL (United States, 6/2009).</b> CEIL: 0.1 ppm CEIL: 1 mg/m <sup>3</sup>
BUTOXYETHANOL	<b>ACGIH TLV (United States, 3/2012).</b> TWA: 20 ppm 8 hours. <b>OSHA PEL (United States, 6/2010).</b> <b>Absorbed through skin.</b> TWA: 240 mg/m <sup>3</sup> 8 hours. TWA: 50 ppm 8 hours. <b>NIOSH REL (United States, 6/2009).</b> <b>Absorbed through skin.</b> TWA: 5 ppm 10 hours. TWA: 24 mg/m <sup>3</sup> 10 hours.

## Section 8. Exposure controls/personal protection

	Product AS SOLD	Product AT USE DILUTION
<b>Appropriate engineering controls</b>	: 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. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.	Data not available - Refer to Product AS SOLD
<b><u>Personal protection</u></b>		
<b>Eye protection</b>	: Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.	
<b>Hand protection</b>	: Use chemical-resistant, impervious gloves.	
<b>Skin protection</b>	: Use suitable protective clothing.	
<b>Respiratory protection</b>	: Wear appropriate respirator when ventilation is inadequate and occupational exposure limits are exceeded.	
<b>Hygiene measures</b>	: 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	Product AT USE DILUTION
<b>Physical state</b>	: Liquid.	Data not available - Refer to Product AS SOLD
<b>Color</b>	: Brown [Dark]	
<b>Odor</b>	: Faint odor	
<b>pH</b>	: 1.75 (100%)	
<b>Flash point</b>	: 93 °C (Closed cup)	
<b>Explosion limits</b>	: Not available.	
<b>Flammability (solid, gas)</b>	: Not available.	
<b>Melting point</b>	: Not available.	
<b>Boiling point</b>	: Not available.	
<b>Evaporation rate (butyl acetate = 1)</b>	: Not available.	
<b>Vapor pressure</b>	: Not available.	
<b>Vapor density</b>	: Not available.	
<b>Relative density</b>	: 1.077 (Water = 1)	
<b>Solubility</b>	: Not available.	

## Section 9. Physical and chemical properties

Partition coefficient: : Not available.

n-octanol/water

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Odor threshold : Not available.

Viscosity : Kinematic (room temperature): 0 cm<sup>2</sup>/s (0 cSt)

## 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). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

Materials to avoid : Highly reactive or incompatible with the following materials: alkalis.  
Reactive or incompatible with the following materials: metals.  
Slightly reactive or incompatible with the following materials: organic materials and moisture.  
Do not mix with bleach or other chlorinated products - will cause chlorine gas.

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 : Adverse symptoms may include the following:  
pain  
watering  
redness

Skin contact : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur

Inhalation : Adverse symptoms may include the following:  
coughing  
Respiratory tract irritation

Ingestion : Adverse symptoms may include the following:  
stomach pains

#### Acute toxicity

Eye contact : Causes serious eye damage.

Skin contact : Causes severe burns. Harmful in contact with skin.

Inhalation : Harmful if inhaled. May cause respiratory irritation.

Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

#### Toxicity data

### Product AT USE DILUTION

Data not available - Refer to Product AS SOLD

## Section 11. Toxicological information

### Product/ingredient name

oxirane, methyl-, polymer with oxirane, monobutyl ether	LC50 Inhalation Dusts and mists	Rat	4670 mg/m <sup>3</sup>
phosphoric acid	LC50 Inhalation Dusts and mists	Rat	0.962 mg/l
	LD50 Dermal	Rat	>2000 mg/kg
	LD50 Oral	Rat	>2000 mg/kg
iodine	LC50 Inhalation Dusts and mists	Rat	>4.588 mg/l
	LD50 Dermal	Rabbit	1425 mg/kg
	LD50 Oral	Rabbit	14000 mg/kg
2-butoxyethanol	LC50 Inhalation Vapor	Rat	3.8 mg/l
	LD50 Dermal	Rabbit	2000 mg/kg
	LD50 Oral	Rat	1500 mg/kg

### Chronic toxicity

<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

## Section 12. Ecological information

### Product AS SOLD

<b>Ecotoxicity</b>	: No known significant effects or critical hazards.
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### Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
Not available.			

<b>Other adverse effects</b>	: No known significant effects or critical hazards.
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## Section 13. Disposal considerations

Product AS SOLD	
<b>Disposal methods</b>	: 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.
<b>RCRA classification</b>	: Unused product is D002 (Corrosive)

**Product AT USE DILUTION**  
Data not available - Refer to Product AS SOLD

## 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

<b>DOT Classification</b>	UN1805
<b>DOT Proper shipping name</b>	Phosphoric acid solution
<b>Class</b>	8
<b>Packing group</b>	III

### IMO/IMDG

<b>IMO/IMDG Classification</b>	UN1805
<b>IMO/IMDG Proper shipping name</b>	PHOSPHORIC ACID SOLUTION

## Section 14. Transport information

Class 8

Packing group III

For transport in bulk, see shipping documents for specific transportation 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.

EPA Registration No. : 1677-22

SARA 302/304/311/312 extremely hazardous substances: No listed substance

SARA 302/304 emergency planning and notification: No listed substance

<u>SARA 313</u>	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	: 2-butoxyethanol	111-76-2	1.8037

California Prop. 65 : No listed substance

## Section 16. Other information

### Product AS SOLD

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

Health	*	3
Flammability		1
Physical hazards		0

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



Date of issue : 08 Jan 2014  
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.

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 529.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Mineral Oil

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 topical use as it has been stored with other nonfood-grade chemicals.

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Mineral oil	8042-47-5	Mixture of oils	Mixture	

### 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 aspirated into lungs:**

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 so. Continue rinsing.

**If on skin:** Wash with plenty of water.

**If swallowed:** Do NOT induce vomiting. Call a POISON CENTER or physician if you feel unwell.

### SECTION 5 — FIRE FIGHTING MEASURES

Combustible liquid.

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. Contain the spill with sand or absorbent material and deposit in a sealed bag or container. Carefully clean spill surface to remove all traces of the slippery mineral oil. See Sections 8 and 13 for further information.



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**SECTION 7 — HANDLING AND STORAGE**

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Flinn Suggested Chemical Storage Pattern: Organic #3. Store with hydrocarbons, oils, esters and aldehydes.

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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Avoid contact with eyes and clothing. Wash hands thoroughly after handling.

Exposure guidelines: PEL 5 mg/m<sup>3</sup> as oil mist (OSHA); TLV (inhalable fraction) 5 mg/m<sup>3</sup> (ACGIH)

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Colorless, oily liquid. Odorless.

Soluble: Many common organic solvents. Insoluble in acids and water.

Boiling point: varies from 179-210 °C

Specific gravity: 0.845-0.860

Not for topical use.

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**SECTION 10 — STABILITY AND REACTIVITY**

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Shelf life: Indefinite, if stored properly.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: N.A.

Chronic effects: N.A.

Target organs: N.A.

ORL-RAT LD<sub>50</sub>: N.A.

IHL-RAT LC<sub>50</sub>: N.A.

SKN-RBT LD<sub>50</sub>: N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #18b is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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Not listed.

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**SECTION 16 — OTHER INFORMATION**

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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

# Material Safety Data Sheet

[\[Home\]](#) [\[Manufacturer\]](#) [\[Part Number\]](#) [\[NSN\]](#) [\[Help\]](#)

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## SECTION I - Material Identity

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Item Name..... WOOD FINISH, GOLDEN OAK  
Part Number/Trade Name..... 210B MINWAX (R) WOOD FINISH, GOLDEN OAK  
National Stock Number..... 8010P210B  
CAGE Code..... 0K1A4  
Part Number Indicator..... A  
MSDS Number..... 189195  
HAZ Code..... B

## SECTION II - Manufacturer's Information

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Manufacturer Name..... MINWAX  
Street..... 66 WEST BEAVER CREEK RD  
City..... RICHMOND HILL  
Country..... CA  
Zip Code..... L4B 1G5  
Emergency Phone..... 800-424-9300 CHEMTREC  
Information Phone..... 216-566-2917 / 905-761-9185

## MSDS Preparer's Information

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Date MSDS Prepared/Revised..... 01JUN00  
Active Indicator..... Y

## Alternate Vendors

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## SECTION III - Physical/Chemical Characteristics

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Hazard Storage Compatibility Code..... NR  
NRC License Number..... NR  
Net Propellant Weight (Ammo)..... NR  
Appearance/Odor..... GOLDEN OAK WOOD FINISH  
Boiling Point..... 300 - 412 F  
Melting Point..... NA  
Vapor Pressure..... NR  
Vapor Density..... > THAN AIR  
Specific Gravity..... 0.8345  
Decomposition Temperature..... NR  
Evaporation Rate..... < ETHER  
Solubility in Water..... NA

Percent Volatiles by Volume..... 66  
Chemical pH..... NR  
Corrosion Rate..... NR  
Container Pressure Code..... 1  
Temperature Code..... 4  
Product State Code..... L

## SECTION IV - Fire and Explosion Hazard Data

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Flash Point..... 105  
Flash Point Method..... PMCC  
Lower Explosion Limit..... 1  
Upper Explosion Limit..... 7  
Extinguishing Media..... CARBON DIOXIDE, DRY CHEMICAL, FOAM  
Special Fire Fighting Procedures..... FULL PROTECTIVE EQUIPMENT INCLUDING SCBA SHOULD BE USED, WATER SORAY MAY BE INEFFECTIVE,. IF WATER IS USED, FOG SPRAY IS PREFERRED. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILDUP AND POSSIBLE AUTOINGNITION OR EXPLOSION WHEN EXPOSED TO EXTREME HEAT.  
Unusual Fire/Explosion Hazards..... KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

## SECTION V - Reactivity Data

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Stability..... YES  
Stability Conditions to Avoid..... NONE KNOWN  
Materials to Avoid..... NONE KNOWN  
Hazardous Decomposition Products..... CARBON DIOXIDE, CARBON MONOXIDE  
Hazardous Polymerization..... NO  
Polymerization Conditions to Avoid..... WILL NOT OCCUR

## SECTION VI - Health Hazard Data

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Route of Entry: Skin..... YES  
Route of Entry: Ingestion..... YES  
Route of Entry: Inhalation..... YES  
Health Hazards - Acute and Chronic..... IRRITATION OF EYES, SKIN AND RESPIRATORY SYSTEM. MAY CAUSE NERVOUSE SYSTEM DEPRESSION. EXTREME OVEREXPOSURE MAY RESULT IN UNCONSCIOUSNESS AND POSSIBLY DEATH.  
Carcinogenity: NTP..... NO  
Carcinogenity: IARC..... NO  
Carcinogenity: OSHA..... NO  
Explanation of Carcinogenity..... NO INGREDIENT IN THIS PRODUCT IS AN IARC, NTP, OR OSHA LISTED CARCINOGEN.

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 Cond. Aggravated by Exposure.... NONE GENERALLY RECOGNIZED

Emergency/First Aid Procedures..... [INHAL] 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 RE-USE. [EYE] FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. GET MED ATTEN [INGEST] NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT INDUCE VOMITING. GIVE CONSCIOUS PATIENT SEVERAL GLASSES OF WATER. SEEK MEDICAL ATTENTION.

## SECTION VII - Precautions for Safe Handling and Use

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Steps if Material Released/Spilled..... REMOVE ALL SOURCES OF IGNITION. VENTILATE AND REMOVE WITH INERT ABSORBENT.

Neutralizing Agent..... NR

Waste Disposal Method..... WASTE FROM THIS PRODUCT MAY BE HAZARDOUS AS DEFINED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT. INCINERATE IN APPROVED FACILITY. DO NOT INCINERATE CLOSED CONTAINER. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

Handling and Storage Precautions..... CONTENTS ARE COMBUSTIBLE. KEEP AWAY FROM HEAT AND OPEN FLAME. 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.

Other Precautions..... INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

## SECTION VIII - Control Measures

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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.

Ventilation..... LOCAL EXHAUST PREFERRABLE

Protective Gloves..... WEAR GLOVES RECOMMENDED BY GLOVE SUPPLR

Eye Protection..... SAFETY GLASSES/ SIDE SHIELDS

Other Protective Equipment..... NR

Work Hygienic Practices..... NR  
Supplemental Health/Safety Data..... NR

## SECTION IX - Label Data

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Protect Eye..... YES  
Protect Skin..... YES  
Protect Respiratory..... YES  
Chronic Indicator..... YES  
Contact Code..... SLIGHT  
Fire Code..... UNKNOWN  
Health Code..... UNKNOWN  
React Code..... UNKNOWN  
Specific Hazard and Precaution..... TARGET ORGANS: LIVER, URINARY SYSTEM,  
CENTRAL NERVOUS SYSTEM

## SECTION X - Transportation Data

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## SECTION XI - Site Specific/Reporting Information

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Volatile Organic Compounds (P/G)..... 4.2557  
Volatile Organic Compounds (G/L)..... 510

## SECTION XII - Ingredients/Identity Information

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Ingredient #..... 01  
Ingredient Name..... MINERAL SPIRITS  
CAS Number..... 64742887  
Proprietary..... NO  
Percent..... 56  
OSHA PEL..... 100 PPM  
ACGIH TLV..... 100 PPM  
Ingredient #..... 02  
Ingredient Name..... MINERAL SPIRITS (ODORLESS  
CAS Number..... 64741657  
Proprietary..... NO  
Percent..... 5  
OSHA PEL..... 100 PPM  
ACGIH TLV..... 100 PPM  
Ingredient #..... 03  
Ingredient Name..... HEAVY NAPATHENIC PETROLEUM OIL  
CAS Number..... 64742525  
Proprietary..... NO  
Percent..... 8  
Ingredient #..... 04  
Ingredient Name..... HIGHLY REFINED NAPHTHENIC OIL  
CAS Number..... 64742536

Proprietary..... NO  
Percent..... 8

NOTICE: For additional information, contact BIOENVIRONMENTAL/7-4551

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HMMS Intranet - 03 Jul 2007 13:45 - web\_msd.display - Visit the Official HMMS Website at <http://www.hmms.com/>

# SAFETY DATA SHEET

211

## Section 1. Identification

**Product name** : MINWAX® WOOD FINISH®  
Provincial

**Product code** : 211

**Other means of identification** : Not available.

**Product type** : Liquid.

**Relevant identified uses of the substance or mixture and uses advised against**  
Not applicable.

**Manufacturer** : MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : (800) 523-9299

**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 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
TOXIC TO REPRODUCTION (Unborn child) - 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: 57.4%

### GHS label elements

**Hazard pictograms**



**Signal word**

: Danger

## Section 2. Hazards identification

**Hazard statements** : Flammable liquid and vapor.  
Causes serious eye irritation.  
Causes skin irritation.  
Suspected of damaging the unborn child.  
May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.

### 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. 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 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. Take off contaminated clothing and wash it 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** : 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

DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. 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.

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
Med. Aliphatic Hydrocarbon Solvent	≥25 - ≤50	64742-88-7
Heavy Naphthenic Petroleum Oil	≥10 - ≤25	64742-52-5
Aliphatic Solvent	≤10	64742-47-8
Toluene	≤0.3	108-88-3



## Section 3. Composition/information on ingredients

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

- |                     |  |
|---------------------|--|
| <b>Eye contact</b>  | : 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.  |
| <b>Inhalation</b>   | : 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.  |
| <b>Skin contact</b> | : 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.   |
| <b>Ingestion</b>    | : 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

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Causes serious eye irritation.  |
| <b>Inhalation</b>   | : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation. |
| <b>Skin contact</b> | : Causes skin irritation.   |
| <b>Ingestion</b>    | : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.                        |

#### Over-exposure signs/symptoms

- |                    |   |
|--------------------|---|
| <b>Eye contact</b> | : Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness  |
| <b>Inhalation</b>  | : Adverse symptoms may include the following:<br>respiratory tract irritation<br>coughing<br>nausea or vomiting<br>headache<br>drowsiness/fatigue<br>dizziness/vertigo<br>unconsciousness<br>reduced fetal weight<br>increase in fetal deaths |

## Section 4. First aid measures

- Skin contact** : skeletal malformations  
: Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
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** : 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.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, 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

- 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 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. 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. 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.

## 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

<b>Ingredient name</b>	<b>Exposure limits</b>
Med. Aliphatic Hydrocarbon Solvent	<b>OSHA PEL (United States, 2/2013).</b> TWA: 100 ppm 8 hours.
Heavy Naphthenic Petroleum Oil	TWA: 400 mg/m <sup>3</sup> 8 hours. <b>ACGIH TLV (United States, 3/2015).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction
Aliphatic Solvent	<b>NIOSH REL (United States, 10/2013).</b> TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.
Toluene	<b>ACGIH TLV (United States, 3/2015).</b> <b>Absorbed through skin.</b> TWA: 200 mg/m <sup>3</sup> , (as total hydrocarbon vapor) 8 hours. <b>OSHA PEL Z2 (United States, 2/2013).</b> TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes. <b>NIOSH REL (United States, 10/2013).</b> TWA: 100 ppm 10 hours. TWA: 375 mg/m <sup>3</sup> 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m <sup>3</sup> 15 minutes. <b>ACGIH TLV (United States, 3/2015).</b> TWA: 20 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.

## Section 8. Exposure controls/personal protection

<b>Eye/face protection</b>	: 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.
<b>Skin protection</b>	
<b>Hand protection</b>	: 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.
<b>Body protection</b>	: 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.
<b>Other skin protection</b>	: 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.
<b>Respiratory protection</b>	: 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

<b>Physical state</b>	: Liquid.
<b>Color</b>	: Not available.
<b>Odor</b>	: Not available.
<b>Odor threshold</b>	: Not available.
<b>pH</b>	: Not available.
<b>Melting point</b>	: Not available.
<b>Boiling point</b>	: 148°C (298.4°F)
<b>Flash point</b>	: Closed cup: 41°C (105.8°F) [Pensky-Martens Closed Cup]
<b>Evaporation rate</b>	: 0.13 (butyl acetate = 1)
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Lower: 1% Upper: 8.8%
<b>Vapor pressure</b>	: 0.023 kPa (0.169 mm Hg) [at 20°C]
<b>Vapor density</b>	: 5 [Air = 1]
<b>Relative density</b>	: 0.85
<b>Solubility</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (room temperature): <0.205 cm <sup>2</sup> /s (<20.5 cSt) Kinematic (40°C (104°F)): <0.205 cm <sup>2</sup> /s (<20.5 cSt)
<b>Molecular weight</b>	: Not applicable.
<b>Aerosol product</b>	
<b>Heat of combustion</b>	: 32.87 kJ/g

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: 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.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	: 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
Heavy Naphthenic Petroleum Oil	LD50 Oral	Rat	>5000 mg/kg	-
Toluene	LC50 Inhalation Vapor	Rat	49 g/m <sup>3</sup>	4 hours
	LD50 Oral	Rat	636 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Heavy Naphthenic Petroleum Oil	Skin - Severe irritant	Rabbit	-	500 milligrams	-
Toluene	Eyes - Mild irritant	Rabbit	-	0.5 minutes	-
				100 milligrams	
	Eyes - Mild irritant	Rabbit	-	870 Micrograms	-
	Eyes - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
	Skin - Mild irritant	Pig	-	24 hours 250 microliters	-
	Skin - Mild irritant	Rabbit	-	435 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	500 milligrams	-

#### Sensitization

Not available.

#### Mutagenicity

Not available.

#### Carcinogenicity

Not available.



## Section 11. Toxicological information

### Classification

Product/ingredient name	OSHA	IARC	NTP
Toluene	-	3	-

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Heavy Naphthenic Petroleum Oil	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Aliphatic Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Toluene	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Heavy Naphthenic Petroleum Oil	Category 2	Not determined	Not determined
Aliphatic Solvent	Category 2	Not determined	Not determined
Toluene	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Med. Aliphatic Hydrocarbon Solvent	ASPIRATION HAZARD - Category 1
Toluene	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 or dizziness. May cause respiratory irritation.

**Skin contact** : Causes skin irritation.

**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  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
 irritation  
 redness  
 reduced fetal weight  
 increase in fetal deaths  
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
 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.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : Suspected of damaging the unborn child.

**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
Aliphatic Solvent Toluene	Acute LC50 2200 µg/l Fresh water	Fish - Lepomis macrochirus	4 days
	Acute EC50 12500 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	72 hours
	Acute EC50 11600 µg/l Fresh water	Crustaceans - Gammarus pseudolimnaeus - Adult	48 hours
	Acute EC50 6000 µg/l Fresh water	Daphnia - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling)	48 hours
	Acute LC50 5500 µg/l Fresh water Chronic NOEC 1000 µg/l Fresh water	Fish - Oncorhynchus kisutch - Fry Daphnia - Daphnia magna	96 hours 21 days

### Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Toluene	-	-	Readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Toluene	-	90	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : 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	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	III	III	III	III	III
Environmental hazards	No.	No.	No.	No.	No.
Additional information	<p>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.</p> <p><b>Special provisions</b> Not Applicable</p> <p><b>ERG No.</b> 128</p>	<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).</p> <p><b>Special provisions</b> Not Applicable</p> <p><b>ERG No.</b> 128</p>	<p><b>Special provisions</b> Not Applicable</p> <p><b>ERG No.</b> 128</p>	<p><b>Special provisions</b> Not Applicable</p>	<p><b>Emergency schedules (EmS)</b> F-E, S-E</p> <p><b>Special provisions</b> Not Applicable</p>

**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	2
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**

FLAMMABLE LIQUIDS - Category 3  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
TOXIC TO REPRODUCTION (Unborn child) - 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

#### **Justification**

On basis of test data  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method

#### **History**

**Date of printing** : 3/27/2016

**Date of issue/Date of revision** : 3/27/2016

**Date of previous issue** : 11/27/2015

**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 = 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.

# SAFETY DATA SHEET

215

## Section 1. Identification

**Product name** : MINWAX® WOOD FINISH®  
Red Oak

**Product code** : 215

**Other means of identification** : Not available.

**Product type** : Liquid.

**Relevant identified uses of the substance or mixture and uses advised against**  
Not applicable.

**Manufacturer** : MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

**Emergency telephone number of the company** : (216) 566-2917

**Product Information Telephone Number** : (800) 523-9299

**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 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
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: 55.1%

### GHS label elements

**Hazard pictograms** :



**Signal word** :

**Hazard statements** :

Danger

Flammable liquid and vapor.  
Causes serious eye irritation.  
Causes skin irritation.  
May be fatal if swallowed and enters airways.  
May cause respiratory irritation.  
May cause drowsiness or dizziness.  
May cause damage to organs through prolonged or repeated exposure.

**Date of issue/Date of revision**

: 3/27/2016

**Date of previous issue**

: 10/28/2015

**Version** : 2

1/12

## Section 2. Hazards identification

### 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** : Wear protective gloves. Wear eye or face protection. 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 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. Take off contaminated clothing and wash it 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** : 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** : DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations. 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.
- 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
Med. Aliphatic Hydrocarbon Solvent	≥25 - ≤50	64742-88-7
Heavy Naphthenic Petroleum Oil	≥10 - ≤25	64742-52-5
Aliphatic Solvent	≤10	64742-47-8

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** : 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** : 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** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- 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 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



## Section 4. First aid measures

- 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.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, 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

**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 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



## 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). Do not breathe vapor or mist. Do not swallow. Avoid contact with eyes, skin and clothing. 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

<b>Ingredient name</b>	<b>Exposure limits</b>
Med. Aliphatic Hydrocarbon Solvent	<b>OSHA PEL (United States, 2/2013).</b> TWA: 100 ppm 8 hours. TWA: 400 mg/m <sup>3</sup> 8 hours.
Heavy Naphthenic Petroleum Oil	<b>ACGIH TLV (United States, 3/2015).</b> TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction <b>NIOSH REL (United States, 10/2013).</b> TWA: 5 mg/m <sup>3</sup> 10 hours. Form: Mist STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Mist <b>OSHA PEL (United States, 2/2013).</b> TWA: 5 mg/m <sup>3</sup> 8 hours.

## Section 8. Exposure controls/personal protection

Aliphatic Solvent

**ACGIH TLV (United States, 3/2015).**  
**Absorbed through skin.**

TWA: 200 mg/m<sup>3</sup>, (as total hydrocarbon vapor) 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.

### 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** : 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** : Not available.  
**Melting point** : Not available.

## Section 9. Physical and chemical properties

<b>Boiling point</b>	: 148°C (298.4°F)
<b>Flash point</b>	: Closed cup: 41°C (105.8°F) [Pensky-Martens Closed Cup]
<b>Evaporation rate</b>	: 0.13 (butyl acetate = 1)
<b>Flammability (solid, gas)</b>	: Not available.
<b>Lower and upper explosive (flammable) limits</b>	: Lower: 1% Upper: 8.8%
<b>Vapor pressure</b>	: 0.023 kPa (0.169 mm Hg) [at 20°C]
<b>Vapor density</b>	: 5 [Air = 1]
<b>Relative density</b>	: 0.86
<b>Solubility</b>	: Not available.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (room temperature): <0.205 cm <sup>2</sup> /s (<20.5 cSt) Kinematic (40°C (104°F)): <0.205 cm <sup>2</sup> /s (<20.5 cSt)
<b>Molecular weight</b>	: Not applicable.
<b><u>Aerosol product</u></b>	
<b>Heat of combustion</b>	: 32.09 kJ/g

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: 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.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing materials
<b>Hazardous decomposition products</b>	: 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
Heavy Naphthenic Petroleum Oil	LD50 Oral	Rat	>5000 mg/kg	-

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Heavy Naphthenic Petroleum Oil	Skin - Severe irritant	Rabbit	-	500 milligrams	-

## Section 11. Toxicological information

### Sensitization

Not available.

### Mutagenicity

Not available.

### Carcinogenicity

Not available.

### Reproductive toxicity

Not available.

### Teratogenicity

Not available.

### Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Heavy Naphthenic Petroleum Oil	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
Aliphatic Solvent	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Med. Aliphatic Hydrocarbon Solvent	Category 2	Not determined	Not determined
Heavy Naphthenic Petroleum Oil	Category 2	Not determined	Not determined
Aliphatic Solvent	Category 2	Not determined	Not determined

### Aspiration hazard

Name	Result
Med. Aliphatic Hydrocarbon Solvent	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 or dizziness. May cause respiratory irritation.

**Skin contact** : Causes skin irritation.

**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.

**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
Aliphatic Solvent	Acute LC50 2200 µg/l Fresh water	Fish - Lepomis macrochirus	4 days

##### Persistence and degradability

Not available.

##### Bioaccumulative potential

Not available.

##### Mobility in soil

## Section 12. Ecological information






**Soil/water partition coefficient (K<sub>oc</sub>)** : 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

	<b>DOT Classification</b>	<b>TDG Classification</b>	<b>Mexico Classification</b>	<b>IATA</b>	<b>IMDG</b>
<b>UN number</b>	UN1263	UN1263	UN1263	UN1263	UN1263
<b>UN proper shipping name</b>	PAINT	PAINT	PAINT	PAINT	PAINT
<b>Transport hazard class(es)</b>	3 	3 	3 	3 	3 
<b>Packing group</b>	III	III	III	III	III
<b>Environmental hazards</b>	No.	No.	No.	No.	No.
<b>Additional information</b>	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.  <b><u>Special provisions</u></b>	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.18-2.19 (Class 3).  <b><u>Special provisions</u></b> Not Applicable	<b><u>Special provisions</u></b> Not Applicable	<b><u>Special provisions</u></b> Not Applicable	<b><u>Emergency schedules (EmS)</u></b> F-E, S-E  <b><u>Special provisions</u></b> Not Applicable

## Section 14. Transport information

	Not Applicable <b>ERG No.</b>	<b>ERG No.</b>	<b>ERG No.</b>		
	128	128	128		

**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	2
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**

FLAMMABLE LIQUIDS - Category 3  
SKIN CORROSION/IRRITATION - Category 2  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A  
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

#### **Justification**

On basis of test data  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method  
Calculation method



## Section 16. Other information

### History

Date of printing	: 3/27/2016
Date of issue/Date of revision	: 3/27/2016
Date of previous issue	: 10/28/2015
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 = 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

221  
14 00

DATE OF PREPARATION  
May 2, 2016

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

221

### PRODUCT NAME

MINWAX® WOOD FINISH®, Ipswich Pine

### MANUFACTURER'S NAME

MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

### Telephone Numbers and Websites

Product Information	(800) 523-9299 www.minwax.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
57	64742-88-7	Med. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	1.27 mm
		OSHA PEL	100 PPM	
20	64742-52-5	Heavy Naphthenic Petroleum Oil		
		ACGIH TLV	5 mg/m3 as Mist	
		OSHA PEL	5 mg/m3 as Mist	
0.3	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

### 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.

### HMIS Codes

Health	2*
Flammability	2
Reactivity	0

## 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

<b>FLASH POINT</b>	<b>LEL</b>	<b>UEL</b>	<b>FLAMMABILITY CLASSIFICATION</b>
105 °F PMCC	1.0	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.

To minimize the possibility of spontaneous combustion: control the accumulation of overspray; soak wiping rags and waste immediately after use in a water-filled, closed metal container; air dry filters outside, far from any combustible material and separated by bricks or other non-combustible spacers; dispose of all contaminated materials and waste properly. Consult OSHA 29 CFR 1910.107(b)(5) and NFPA 33, Chapter 8 (8-9) for the proper procedures.

## 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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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

<b>PRODUCT WEIGHT</b>	7.11 lb/gal	851 g/l
<b>SPECIFIC GRAVITY</b>	0.86	
<b>BOILING POINT</b>	300 - 395 °F	148 - 201 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	64%	
<b>EVAPORATION RATE</b>	Slower than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
4.11 lb/gal	493 g/l	Less Water and Federally Exempt Solvents
4.11 lb/gal	493 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			
64742-88-7	Med. Aliphatic Hydrocarbon Solvent	LC50 RAT	4HR	Not Available
		LD50 RAT		>5000 mg/kg
64742-52-5	Heavy Naphthenic Petroleum Oil	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

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)

May be Classed as a Combustible Liquid for U.S. Ground.

UN1263, PAINT, 3, PG III, (ERG#128)

### Bulk Containers may be Shipped as:

UN1263, PAINT, 3, PG III, (ERG#128)

### Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.

UN1263, PAINT, 3, PG III, (ERG#128)

### IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT, 3, PG III, (41 C c.c.), EmS F-E, S-E

### IMO

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT, 3, PG III, (41 C c.c.), EmS F-E, S-E

### IATA/ICAO

UN1263, PAINT, 3, PG III

## 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	WOOD FINISH 224 WALNUT
National Stock Number	8010PSTAIN
CAGE Code	73820
Part Number Indicator	A
MSDS Number	10931
HAZ Code	B

---

### SECTION II - Manufacturer's Information

---

Manufacturer Name	MINWAX COMPANY INC
City	MENTVALE
State	NJ
Country	US

---

### MSDS Preparer's Information

---

Date MSDS Prepared/Revised	NONE
Active Indicator	N

---

**Alternate Vendors**

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**SECTION III - Physical/Chemical Characteristics**

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Container Pressure Code	4
Temperature Code	8
Product State Code	U

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**SECTION IV - Fire and Explosion Hazard Data**

---

Flash Point Method	UNK
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**SECTION V - Reactivity Data**

---

Stability	N/K
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---

**SECTION VI - Health Hazard Data**

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---

**SECTION VII - Precautions for Safe Handling and Use**

---

---

**SECTION VIII - Control Measures**

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---

**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**

---

Container Quantity	1
--------------------	---

Unit of Measure

GL

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**SECTION XI - Site Specific/Reporting Information**

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**SECTION XII - Ingredients/Identity Information**

---

---

# Material Safety Data Sheet

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## SECTION I - Material Identity

---

Item Name..... WOOD FINISH RED MAHOGANY ALKYD STAIN  
Part Number/Trade Name..... 225 MINWAX\* WOOD FINISH, RED MAHOGANY  
ALKYD STAIN  
National Stock Number..... 8010P225  
CAGE Code..... 0K1A4  
Part Number Indicator..... A  
MSDS Number..... 186745  
HAZ Code..... B

## SECTION II - Manufacturer's Information

---

Manufacturer Name..... MINWAX  
Street..... 66 WEST BEAVER CREEK RD  
City..... RICHMOND HILL  
Country..... CA  
Zip Code..... L4B 1G5  
Emergency Phone..... 800-424-9300 CHEMTREC  
Information Phone..... 216-566-2917 / 905-761-9185

## MSDS Preparer's Information

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Date MSDS Prepared/Revised..... 05JAN00  
Active Indicator..... Y

## Alternate Vendors

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## SECTION III - Physical/Chemical Characteristics

---

Hazard Storage Compatibility Code..... NR  
NRC License Number..... NR  
Net Propellant Weight (Ammo)..... NR  
Appearance/Odor..... NR  
Boiling Point..... 300 - 412 F  
Melting Point..... NA  
Vapor Pressure..... NR  
Vapor Density..... > THAN AIR  
Specific Gravity..... 0.83  
Decomposition Temperature..... NR  
Evaporation Rate..... < ETHER



Solubility in Water..... NA  
Percent Volatiles by Volume..... 79  
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..... 103  
Flash Point Method..... PMCC  
Lower Explosion Limit..... 1  
Upper Explosion Limit..... 7  
Extinguishing Media..... CARBON DIOXIDE, DRY CHEMICAL, FOAM  
Special Fire Fighting Procedures..... FULL PROTECTIVE EQUIPMENT INCLUDING SCBA SHOULD BE USED, WATER SORAY MAY BE INEFFECTIVE,. IF WATER IS USED, FOG SPRAY IS PREFERRED. WATER MAY BE USED TO COOL  
Unusual Fire/Explosion Hazards..... KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

## SECTION V - Reactivity Data

---

Stability..... YES  
Stability Conditions to Avoid..... NONE KNOWN  
Materials to Avoid..... NONE KNOWN  
Hazardous Decomposition Products..... CARBON DIOXIDE, CARBON MONOXIDE, OXIDES OF METALS  
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..... IRRITATION OF EYES, SKIN AND RESPIRATORY SYSTEM. MAY CAUSE NERVOUSE SYSTEM DEPRESSION. EXTREME OVEREXPOSURE MAY RESULT IN UNCONSCIOUSNESS AND POSSIBLY DEATH.  
Carcinogenity: NTP..... NO  
Carcinogenity: IARC..... NO  
Carcinogenity: OSHA..... NO  
Explanation of Carcinogenity..... NO INGREDIENT IN THIS PRODUCT IS AN IARC, NTP, OR OSHA LISTED CARCINOGEN.

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 Cond. Aggravated by Exposure.... NONE GENERALLY RECOGNIZED

Emergency/First Aid Procedures..... [INHAL] IF AFFECTED, REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET. [SKIN] WASH AFFECTED AREA THOROUGHLY WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND LAUNDRY BEFORE RE-USE. [EYE] FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. GET MED ATTEN [INGEST] NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT INDUCE VOMITING. GIVE CONSCIOUS PATIENT SEVERAL GLASSES OF WATER. SEEK MEDICAL ATTENTION.

## SECTION VII - Precautions for Safe Handling and Use

---

Steps if Material Released/Spilled..... REMOVE ALL SOURCES OF IGNITION. VENTILATE AND REMOVE WITH INERT ABSORBENT.

Neutralizing Agent..... NR

Waste Disposal Method..... WASTE FROM THIS PRODUCT MAY BE HAZARDOUS AS DEFINED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT. INCINERATE IN APPROVED FACILITY. DO NOT INCINERATE CLOSED CONTAINER. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

Handling and Storage Precautions..... CONTENTS ARE COMBUSTIBLE. KEEP AWAY FROM HEAT AND OPEN FLAME. 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.

Other Precautions..... INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

## SECTION VIII - Control Measures

---

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.

Ventilation..... LOCAL EXHAUST PREFERRED

Protective Gloves..... WEAR GLOVES RECOMMENDED BY GLOVE SUPPLR

Eye Protection..... SAFETY GLASSES/ SIDE SHIELDS

Other Protective Equipment..... NR

Work Hygienic Practices..... NR  
Supplemental Health/Safety Data..... NR

## SECTION IX - Label Data

---

Protect Eye..... YES  
Protect Skin..... YES  
Protect Respiratory..... YES  
Chronic Indicator..... YES  
Contact Code..... SLIGHT  
Fire Code..... UNKNOWN  
Health Code..... UNKNOWN  
React Code..... UNKNOWN  
Specific Hazard and Precaution..... TARGET ORGANS: LIVER, URINARY SYSTEM,  
CENTRAL NERVOUS SYSTEM

## SECTION X - Transportation Data

---

Container Quantity..... 1  
Unit of Measure..... QT

## SECTION XI - Site Specific/Reporting Information

---

Volatile Organic Compounds (P/G)..... 5.04  
Volatile Organic Compounds (G/L)..... 603.9877

## SECTION XII - Ingredients/Identity Information

---

Ingredient #..... 01  
Ingredient Name..... MINERAL SPIRITS  
CAS Number..... 64742887  
Proprietary..... NO  
Percent..... 71  
OSHA PEL..... 100 PPM  
ACGIH TLV..... 100 PPM  
Ingredient #..... 02  
Ingredient Name..... MINERAL SPIRITS (ODORLESS)  
CAS Number..... 64741657  
Proprietary..... NO  
Percent..... 1  
OSHA PEL..... 100 PPM  
ACGIH TLV..... 100 PPM  
Ingredient #..... 03  
Ingredient Name..... (BACPD) BARIUM  
CAS Number..... 7440393  
Proprietary..... NO  
Percent..... 0.13

NOTICE: For additional information, contact BIOENVIRONMENTAL/7-4551

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# Material Safety Data Sheet

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## SECTION I - Material Identity

---

Item Name..... WOOD FINISH  
Part Number/Trade Name..... 235 CHERRY, MINWAX\* WOOD FINISH  
National Stock Number..... 8010P235CHERRY  
CAGE Code..... 0K1A4  
Part Number Indicator..... A  
MSDS Number..... 190706  
HAZ Code..... B

## SECTION II - Manufacturer's Information

---

Manufacturer Name..... MINWAX/CON-LUX COATINGS INC  
Street..... 226 TALMADGE ROAD  
City..... EDISON  
Country..... US  
Zip Code..... 08818  
Emergency Phone..... 800-424-9300 CHEMTREC  
Information Phone..... 216-566-2902

## MSDS Preparer's Information

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Date MSDS Prepared/Revised..... 12OCT01  
Active Indicator..... Y

## Alternate Vendors

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## SECTION III - Physical/Chemical Characteristics

---

Hazard Storage Compatibility Code..... NR  
NRC License Number..... NR  
Net Propellant Weight (Ammo)..... NR  
Appearance/Odor..... NR  
Boiling Point..... 281 - 395 F  
Melting Point..... NA  
Vapor Pressure..... NR  
Vapor Density..... > THAN AIR  
Specific Gravity..... 1.2  
Decomposition Temperature..... NR  
Evaporation Rate..... < ETHER  
Solubility in Water..... NA

Percent Volatiles by Volume..... 47%  
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..... 105  
Flash Point Method..... PMCC  
Lower Explosion Limit..... 1  
Upper Explosion Limit..... 7  
Extinguishing Media..... CARBON DIOXIDE, DRY CHEMICAL, FOAM  
Special Fire Fighting Procedures..... FULL PROTECTIVE EQUIPMENT INCLUDING SCBA SHOULD BE USED, WATER SPRAY MAY BE INEFFECTIVE,. IF WATER IS USED, FOG SPRAY IS PREFERRED. WATER MAY BE USED TO COOL CLOSED CONTAINERS.  
Unusual Fire/Explosion Hazards..... KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.

## SECTION V - Reactivity Data

---

Stability..... YES  
Stability Conditions to Avoid..... NONE KNOWN  
Materials to Avoid..... NONE KNOWN  
Hazardous Decomposition Products..... CARBON DIOXIDE, CARBON MONOXIDE  
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..... IRRITATION OF EYES, SKIN AND RESPIRATORY SYSTEM. MAY CAUSE NERVOUSE SYSTEM DEPRESSION. EXTREME OVEREXPOSURE MAY RESULT IN UNCONSCIOUSNESS AND POSSIBLY DEATH.  
Carcinogenity: NTP..... NO  
Carcinogenity: IARC..... NO  
Carcinogenity: OSHA..... NO  
Explanation of Carcinogenity..... NO INGREDIENT IN THIS PRODUCT IS AN IARC, NTP, OR OSHA LISTED CARCINOGEN.  
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 Cond. Aggravated by Exposure.... NONE GENERALLY RECOGNIZED

Emergency/First Aid Procedures..... [INHAL] 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 RE-USE. [EYE] FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR 15 MINUTES. GET MED ATTEN [INGEST] NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. DO NOT INDUCE VOMITING. GIVE CONSCIOUS PATIENT SEVERAL GLASSES OF WATER. SEEK MEDICAL ATTENTION.

## SECTION VII - Precautions for Safe Handling and Use

---

Steps if Material Released/Spilled..... REMOVE ALL SOURCES OF IGNITION. VENTILATE AND REMOVE WITH INERT ABSORBENT.

Neutralizing Agent..... NR

Waste Disposal Method..... WASTE FROM THIS PRODUCT MAY BE HAZARDOUS AS DEFINED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT. INCINERATE IN APPROVED FACILITY. DO NOT INCINERATE CLOSED CONTAINER. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS

Handling and Storage Precautions..... CONTENTS ARE COMBUSTIBLE. KEEP AWAY FROM HEAT AND OPEN FLAME. 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.

Other Precautions..... INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

## SECTION VIII - Control Measures

---

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.

Ventilation..... LOCAL EXHAUST PREFERRABLE

Protective Gloves..... WEAR GLOVES RECOMMENDED BY GLOVE SUPPLR

Eye Protection..... SAFETY GLASSES/ SIDE SHIELDS

Other Protective Equipment..... NR

Work Hygienic Practices..... NR

Supplemental Health/Safety Data..... NR

**SECTION IX - Label Data**

---

Protect Eye..... YES  
Protect Skin..... YES  
Protect Respiratory..... YES  
Chronic Indicator..... YES  
Contact Code..... SLIGHT  
Fire Code..... UNKNOWN  
Health Code..... UNKNOWN  
React Code..... UNKNOWN  
Specific Hazard and Precaution..... TARGET ORGANS: LIVER, URINARY SYSTEM,  
REPRODUCTIVE SYSTEM, CENTRAL NERVOUS  
SYSTEM

**SECTION X - Transportation Data**

---

**SECTION XI - Site Specific/Reporting Information**

---

Volatile Organic Compounds (P/G)..... 3.0291  
Volatile Organic Compounds (G/L)..... 363.0038

**SECTION XII - Ingredients/Identity Information**

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Ingredient #..... 01  
Ingredient Name..... MINERAL SPIRITS  
CAS Number..... 64742887  
Proprietary..... NO  
Percent..... 29  
Ingredient #..... 02  
Ingredient Name..... BENZENE, ETHYL-  
CAS Number..... 100414  
Proprietary..... NO  
Percent..... 0.2  
OSHA PEL..... 100 PPM  
ACGIH TLV..... 100 PPM  
Ingredient #..... 03  
Ingredient Name..... XYLENE  
CAS Number..... 1330207  
Proprietary..... NO  
Percent..... 1  
Ingredient #..... 04  
Ingredient Name..... 1H-ISOINDOLE-1,3(2H)-DIONE,  
2-[(TRICHLOROMETHYL)THIO]-  
CAS Number..... 133073  
Proprietary..... NO  
Percent..... 1



Ingredient #..... 05  
Ingredient Name..... TITANIUM DIOXIDE  
CAS Number..... 13463677  
Proprietary..... NO  
Percent..... 30

NOTICE: For additional information, contact BIOENVIRONMENTAL/7-4551

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# MATERIAL SAFETY DATA SHEET

2718  
11 00

DATE OF PREPARATION  
Jul 19, 2014

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

2718

### PRODUCT NAME

MINWAX® WOOD FINISH®, Ebony

### MANUFACTURER'S NAME

MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

### Telephone Numbers and Websites

Product Information	(800) 523-9299 www.minwax.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
57	64742-88-7	Med. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	1.27 mm
		OSHA PEL	100 PPM	
16	64742-52-5	Heavy Naphthenic Petroleum Oil		
		ACGIH TLV	5 mg/m3 as Mist	
		OSHA PEL	5 mg/m3 as Mist	
3	14807-96-6	Talc		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	2 mg/m3 as Resp. Dust	
1	1333-86-4	Carbon Black		
		ACGIH TLV	3.5 MG/M3	
		OSHA PEL	3.5 MG/M3	

## 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.

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.

### HMIS Codes

Health	2*
Flammability	2
Reactivity	0

## 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

<b>FLASH POINT</b>	<b>LEL</b>	<b>UEL</b>	<b>FLAMMABILITY CLASSIFICATION</b>
105 °F PMCC	1.0	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.

To minimize the possibility of spontaneous combustion: control the accumulation of overspray; soak wiping rags and waste immediately after use in a water-filled, closed metal container; air dry filters outside, far from any combustible material and separated by bricks or other non-combustible spacers; dispose of all contaminated materials and waste properly. Consult OSHA 29 CFR 1910.107(b)(5) and NFPA 33, Chapter 8 (8-9) for the proper procedures.

## 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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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**

<b>PRODUCT WEIGHT</b>	7.28 lb/gal	872 g/l
<b>SPECIFIC GRAVITY</b>	0.88	
<b>BOILING POINT</b>	300 - 395 °F	148 - 201 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	65%	
<b>EVAPORATION RATE</b>	Slower than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
4.18 lb/gal	501 g/l	Less Water and Federally Exempt Solvents
4.18 lb/gal	501 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.

Carbon Black is classified by IARC as possibly carcinogenic to humans (group 2B) based on experimental animal data, however, there is insufficient evidence in humans for its carcinogenicity.

**TOXICOLOGY DATA**

<b>CAS No.</b>	<b>Ingredient Name</b>			
<b>64742-88-7</b>	<b>Med. Aliphatic Hydrocarbon Solvent</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>64742-52-5</b>	<b>Heavy Naphthenic Petroleum Oil</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>14807-96-6</b>	<b>Talc</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>1333-86-4</b>	<b>Carbon Black</b>	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

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)

May be Classed as a Combustible Liquid for U.S. Ground.

UN1263, PAINT, 3, PG III, (ERG#128)

### Bulk Containers may be Shipped as:

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

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT, CLASS 3, PG III, (41 C c.c.), EmS F-E, S-E

### IATA/ICAO

UN1263, PAINT, 3, PG III

## SECTION 15 — REGULATORY INFORMATION

### SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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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.

MINWAX CO, INC. -- ANTIQUE OIL FINISH -- 8010-00F013536

===== Product Identification =====

Product ID:ANTIQUE OIL FINISH  
MSDS Date:07/22/1988  
FSC:8010  
NIIN:00F013536  
MSDS Number: BJS LH  
=== Responsible Party ===  
Company Name:MINWAX CO, INC.  
Address:102 CHESTNUT RIDGE PLAZA  
City:MONTVALE  
State:NJ  
ZIP:07645  
Info Phone Num:(800) 424-9300  
Emergency Phone Num:(800) 424-9300  
CAGE:FO661  
=== Contractor Identification ===  
Company Name:MINWAX CO, INC.  
Address:102 CHESTNUT RIDGE PLAZA  
City:MONTVALE  
State:NJ  
ZIP:07645  
Phone:201-391-0253  
CAGE:FO661  
Company Name:MINWAX COMPANY  
Address:10 MOUNTAINVIEW ROAD  
Box:City:UPPER SADDLE RIVER  
State:NJ  
ZIP:07458  
Country:US  
Phone:800-523-9299/216-566-2917  
CAGE:0K1A4

===== Composition/Information on Ingredients =====

Ingred Name:STODDARD SOLVENT  
CAS:8052-41-3  
RTECS #:WJ8925000  
Fraction by Wt: 65%  
Other REC Limits:350 MG/CUM  
OSHA PEL:500 PPM  
ACGIH TLV:100 PPM; 9293

Ingred Name:VEHICLE  
Fraction by Wt: 34%

Ingred Name:ADDITIVES  
Fraction by Wt: 1.0%

===== 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: GASTROINTESTINAL  
IRRITATION/NAUSEA/VOMITING/DIARRHEA. SKIN:

DEFATTING/DRYING/IRRITATION/DERMATITIS. EYES: SEVERE  
IRRITATION/REDNESS/TEARING/BLURRED VISION/WATERING. INHALATION:  
NASAL/RESPIRATORY  
IRRITATION/DIZZINESS/FATIGUE/NAUSEA/HEADACHE/NERVOUS  
IRRITABILITY/UNCONSCIOUSNESS/ASPHYXIATION/PNEUMONITIS.

Explanation of Carcinogenicity:NONE

Effects of Overexposure:INGESTION: ASPIRATION OF MATERIAL INTO LUNGS  
DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.  
Medical Cond Aggravated by Exposure:DERMATITIS

===== First Aid Measures =====

First Aid:EYES: FLUSH W/PLENTY OF WATER FOR 15 MINS. SKIN: WASH  
THOROUGHLY W/SOAP & PLENTY OF WATER. INGESTION: DON'T INDUCE  
VOMITING. KEEP PATIENT WARM & QUIET. INHALATION: REMOVE TO FRESH  
AIR. MAINTAIN RESPIRATION. OBTAIN MEDICAL ATTENTION IN ALL CASES.

===== Fire Fighting Measures =====

Flash Point Method:PMCC  
Flash Point:105F  
Lower Limits:0.9%  
Upper Limits:6.0%  
Extinguishing Media:CO2, DRY CHEMICAL, ALCOHOL FOAM, WATER FOG  
Fire Fighting Procedures:WEAR SELF-CONTAINED BREATHING APPARATUS & FULL  
PROTECTIVE CLOTHING W/FULL FACE PIECE. WATER ISN'T NORMALLY AN  
EFFECTIVE EXTINGUISHING AGENT.  
Unusual Fire/Explosion Hazard:AUTOIGNITION TEMPERATURE: 450F.  
COMBUSTIBLE LIQUID.

===== Accidental Release Measures =====

Spill Release Procedures:PROVIDE ADEQUATE VENTILATION. REMOVE IGNITION  
SOURCES FROM SPILL AREA. UTILIZE SAND, RAGS, PAPER, VERMICULITE,  
FLOOR ABSORBENT & MATERIAL. PLACE IN LEAK-PROOF DRUMS FOR DISPOSAL.

===== Handling and Storage =====

Handling and Storage Precautions:STORE ONLY IN ORIGINAL CONTAINER. WASH  
W/SOAP & WATER BEFORE EATING/DRINKING/SMOKING/USING TOILET  
FACILITIES. REMOVE CONTACT LENSES.  
Other Precautions:CLOSE CONTAINER AFTER EACH USE. KEEP OUT OF REACH OF  
CHILDREN. AVOID SPONTANEOUS COMBUSTION OF CONTAMINATED RAGS. DON'T  
CUT/PUNCTURE/WELD. AVOID INHALATION OF SMOKE/GASES. DON'T TAKE  
INTERNALLY. USE ONLY W/ADEQUATE VENTILATION.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:IF ADEQUATE VENTILATION CAN'T BE MAINTAINED, USE  
RESPIRATORY PROTECTION (NIOSH/MSHA TC 23C OR EQUIVALENT).  
Ventilation:PROVIDE CONSTANT FLOW OF FRESH AIR TO MEET TLV  
REQUIREMENTS. OPEN WINDOWS/DOORS TO PERMIT FRESH AIR ENTRY.  
Protective Gloves:RUBBER, NEOPRENE, VITRON  
Eye Protection:SAFETY GLASSES, FACE SHIELD  
Other Protective Equipment:EYE BATH, SAFETY SHOWER  
Work Hygienic Practices:REMOVE/LAUNDER CONTAMINATED CLOTHING BEFORE  
REUSE. WASH W/SOAP & WATER BEFORE EATING, DRINKING, & SMOKING.

## Supplemental Safety and Health

### ===== Physical/Chemical Properties =====

Boiling Pt:B.P. Text:313F  
Vapor Pres:2.00  
Vapor Density:4.8  
Spec Gravity:0.834  
Evaporation Rate & Reference:(BU AC =1): 0.09  
Solubility in Water:NIL  
Appearance and Odor:CLEAR AMBER LIQUID W/MILD HYDROCARBON ODOR.  
Percent Volatiles by Volume:67.2%

### ===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES  
STRONG OXIDIZING AGENTS  
Stability Condition to Avoid:IGNITION SOURCES, HEAT, SPARKS, OPEN  
FLAMES  
Hazardous Decomposition Products:CO, CO2, UNIDENTIFIED ORGANIC  
COMPOUNDS, SMOKE, GASES

### ===== Disposal Considerations =====

Waste Disposal Methods:DISPOSE OF IN ACCORDANCE W/LOCAL, STATE, &  
FEDERAL REGULATIONS. INCINERATION IS PREFERRED. D 001 (IGNITABLE).

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,  
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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

33050  
05 00

DATE OF PREPARATION  
Jan 18, 2016

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NUMBER**

33050

**PRODUCT NAME**

MINWAX® Fast-Drying Polyurethane Spray, Clear Gloss

**MANUFACTURER'S NAME**

MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

**Telephone Numbers and Websites**

<b>Product Information</b>	(800) 523-9299 www.minwax.com
<b>Regulatory Information</b>	(216) 566-2902 www.paintdocs.com
<b>Medical Emergency</b>	(216) 566-2917
<b>Transportation Emergency*</b>	(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
14	74-98-6	Propane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	1000 PPM	
13	106-97-8	Butane		
		ACGIH TLV	1000 PPM	760 mm
		OSHA PEL	800 PPM	
2	64742-89-8	Lt. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	300 PPM	12 mm
		OSHA PEL	300 PPM	
3	64742-49-0	Light Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	Not Available	45.997 mm
		OSHA PEL	Not Available	
3	68410-97-9	Light Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	Not Available	100 mm
		OSHA PEL	Not Available	
15	64742-88-7	Med. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	1.27 mm
		OSHA PEL	100 PPM	
39	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	

## 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.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

**HMIS Codes**

<b>Health</b>	2
<b>Flammability</b>	4
<b>Reactivity</b>	0

**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 laundry 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**

Propellant < 0 °F

**LEL**

0.8

**UEL**

12.8

**EXTINGUISHING MEDIA**

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.

To minimize the possibility of spontaneous combustion: control the accumulation of overspray; soak wiping rags and waste immediately after use in a water-filled, closed metal container; air dry filters outside, far from any combustible material and separated by bricks or other non-combustible spacers; dispose of all contaminated materials and waste properly. Consult OSHA 29 CFR 1910.107(b)(5) and NFPA 33, Chapter 8 (8-9) for the proper procedures.

**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**

<b>PRODUCT WEIGHT</b>	5.88 lb/gal	705 g/l
<b>SPECIFIC GRAVITY</b>	0.71	
<b>BOILING POINT</b>	<0 - 395 °F	<-18 - 201 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	92%	
<b>EVAPORATION RATE</b>	Faster than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>pH</b>	> 2.0, < 11.5	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
	Volatile Weight 50.21%	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**

<b>CAS No.</b>	<b>Ingredient Name</b>			
<b>74-98-6</b>	<b>Propane</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>106-97-8</b>	<b>Butane</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>64742-89-8</b>	<b>Lt. Aliphatic Hydrocarbon Solvent</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>64742-49-0</b>	<b>Light Aliphatic Hydrocarbon Solvent</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>68410-97-9</b>	<b>Light Aliphatic Hydrocarbon Solvent</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>64742-88-7</b>	<b>Med. Aliphatic Hydrocarbon Solvent</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		>5000 mg/kg
<b>67-64-1</b>	<b>Acetone</b>	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

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)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

### Canada (TDG)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

### IMO

May be shipped as Limited Quantity

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, EmS F-D, S-U

### IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

## SECTION 15 — REGULATORY INFORMATION

### SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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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

71028  
06 00

## Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	HMIS CODES
71028	Health 2
	Flammability 2
	Reactivity 0

PRODUCT NAME  
MINWAX\* Fast-Drying Polyurethane Clear Satin

MANUFACTURER'S NAME MINWAX Company 10 Mountainview Road Upper Saddle River, NJ 07458	EMERGENCY TELEPHONE NO. (216) 566-2917
---	---

DATE OF PREPARATION 01-APR-07

	INFORMATION TELEPHONE NO. (800) 523-9299
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## Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
45	64742-88-7	Mineral Spirits		
		ACGIH TLV	100 ppm	2 mm
		OSHA PEL	100 ppm	
3	64741-65-7	Mineral Spirits (Odorless)		
		ACGIH TLV	100 ppm	1 mm
		OSHA PEL	100 ppm	
3	112926-00-8	Amorphous Precipitated Silica		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	6 mg/m3 as 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.

### 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  
112 F PMCC

LEL	UEL
1.0	7.0

FLAMMABILITY CLASSIFICATION  
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.

To minimize the possibility of spontaneous combustion: control the accumulation of overspray; soak wiping rags and waste immediately after use in a water-filled, closed metal container; air dry filters outside, far from any combustible material and separated by bricks or other non-combustible spacers; dispose of all contaminated materials and waste properly. Consult OSHA 29 CFR 1910.107(b)(5) and NFPA 33, Chapter 8 (8-9) for the proper procedures.

## =====

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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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.

Continued on page 4

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Section 9 -- PHYSICAL AND CHEMICAL PROPERTIES

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PRODUCT WEIGHT	7.55 lb/gal	904 g/l
SPECIFIC GRAVITY	0.91	
BOILING POINT	300 - 412 F	148 - 211 C
MELTING POINT	Not Available	
VOLATILE VOLUME	58 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS	(VOC Theoretical - As Packaged)	
3.72 lb/gal	445 g/l	Less Water and Federally Exempt Solvents
3.71 lb/gal	445 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.

Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

=====

TOXICOLOGY DATA

CAS No.	Ingredient Name				
64742-88-7	Mineral Spirits				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
64741-65-7	Mineral Spirits (Odorless)				
		LC50	RAT	4HR	Not Available
		LD50	RAT		Not Available
112926-00-8	Amorphous Precipitated Silica				
		LC50	RAT	4HR	Not Available
		LD50	RAT		4999 mg/kg

=====

Section 12 -- ECOLOGICAL INFORMATION

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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 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)

## Bulk Containers may be Shipped as:

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, (44 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
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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

71090  
06 00

DATE OF PREPARATION  
Mar 18, 2009

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

71090

### PRODUCT NAME

MINWAX® High Build Polyurethane, Gloss

### MANUFACTURER'S NAME

MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

### Telephone Numbers and Websites

Product Information	(800) 523-9299
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
29	64742-88-7	Mineral Spirits		
		ACGIH TLV	100 PPM	2 mm
		OSHA PEL	100 PPM	
7	64741-65-7	Mineral Spirits (Odorless)		
		ACGIH TLV	100 PPM	1 mm
		OSHA PEL	100 PPM	

## 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.

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 and urinary 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.

### HMIS Codes

Health	2
Flammability	2
Reactivity	0

## 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

<b>FLASH POINT</b>	<b>LEL</b>	<b>UEL</b>	<b>FLAMMABILITY CLASSIFICATION</b>
110 °F PMCC	1.0	7.0	Combustible, Flash above 99 and below 200 °F
Carbon Dioxide, Dry Chemical, Foam			<b>EXTINGUISHING MEDIA</b>

**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.

To minimize the possibility of spontaneous combustion: control the accumulation of overspray; soak wiping rags and waste immediately after use in a water-filled, closed metal container; air dry filters outside, far from any combustible material and separated by bricks or other non-combustible spacers; dispose of all contaminated materials and waste properly. Consult OSHA 29 CFR 1910.107(b)(5) and NFPA 33, Chapter 8 (8-9) for the proper procedures.

**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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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

<b>PRODUCT WEIGHT</b>	7.58 lb/gal	908 g/l
<b>SPECIFIC GRAVITY</b>	0.91	
<b>BOILING POINT</b>	300 - 412 °F	148 - 211 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	43%	
<b>EVAPORATION RATE</b>	Slower than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	N.A.	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
2.81lb/gal	337g/l	Less Water and Federally Exempt Solvents
2.81lb/gal	337g/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			
64742-88-7	Mineral Spirits	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
64741-65-7	Mineral Spirits (Odorless)	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)

**Bulk Containers may be Shipped as:**

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, (43 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
---------	-------------------	---------	-----------

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

71091  
08 00

DATE OF PREPARATION  
May 24, 2014

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

71091

### PRODUCT NAME

MINWAX® High Build Polyurethane, Semi-Gloss

### MANUFACTURER'S NAME

MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

### Telephone Numbers and Websites

Product Information	(800) 523-9299 www.minwax.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
21	64742-88-7	Med. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	Not Available	2 mm
		OSHA PEL	Not Available	
10	64741-65-7	Mineral Spirits (Odorless)		
		ACGIH TLV	100 PPM	1 mm
		OSHA PEL	100 PPM	
12	98-56-6	p-Chlorobenzotrifluoride		
		ACGIH TLV	Not Available	5.3 mm
		OSHA PEL	Not Available	

## 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.

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.

### HMIS Codes

Health	2
Flammability	2
Reactivity	0

## 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

<b>FLASH POINT</b>	<b>LEL</b>	<b>UEL</b>	<b>FLAMMABILITY CLASSIFICATION</b>
101 °F PMCC	0.9	10.5	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.

To minimize the possibility of spontaneous combustion: control the accumulation of overspray; soak wiping rags and waste immediately after use in a water-filled, closed metal container; air dry filters outside, far from any combustible material and separated by bricks or other non-combustible spacers; dispose of all contaminated materials and waste properly. Consult OSHA 29 CFR 1910.107(b)(5) and NFPA 33, Chapter 8 (8-9) for the proper procedures.

## 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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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**

<b>PRODUCT WEIGHT</b>	8.01 lb/gal	959 g/l
<b>SPECIFIC GRAVITY</b>	0.96	
<b>BOILING POINT</b>	282 - 425 °F	138 - 218 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	48%	
<b>EVAPORATION RATE</b>	Slower than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
	2.80 lb/gal 336 g/l	Less Water and Federally Exempt Solvents
	2.56 lb/gal 307 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**

<b>CAS No.</b>	<b>Ingredient Name</b>			
<b>64742-88-7</b>	<b>Med. Aliphatic Hydrocarbon Solvent</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>64741-65-7</b>	<b>Mineral Spirits (Odorless)</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>98-56-6</b>	<b>p-Chlorobenzotrifluoride</b>	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

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)

May be Classed as a Combustible Liquid for U.S. Ground.

UN1263, PAINT, 3, PG III, (ERG#128)

### Bulk Containers may be Shipped as:

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

5 Liters (1.3 Gallons) and Less may be Shipped as Limited Quantity.

UN1263, PAINT, CLASS 3, PG III, (38 C c.c.), EmS F-E, S-E

### IATA/ICAO

UN1263, PAINT, 3, PG III

## SECTION 15 — REGULATORY INFORMATION

### SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
	Cobalt Compound	0.1	0.01

### 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

78500  
08 00

DATE OF PREPARATION  
Feb 24, 2015

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

78500

### PRODUCT NAME

MINWAX® Paste Finishing Wax, Natural

### MANUFACTURER'S NAME

MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

### Telephone Numbers and Websites

Product Information	(800) 523-9299 www.minwax.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
68	64742-88-7	Med. Aliphatic Hydrocarbon Solvent		
		ACGIH TLV	100 PPM	1.27 mm
		OSHA PEL	100 PPM	

## 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.

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.

### HMIS Codes

Health	2
Flammability	2
Reactivity	0

## 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

<b>FLASH POINT</b> 108 °F PMCC	<b>LEL</b> 1.0	<b>UEL</b> 6.0	<b>FLAMMABILITY CLASSIFICATION</b> Combustible, Flash above 99 and below 200 °F
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**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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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

<b>PRODUCT WEIGHT</b>	6.80 lb/gal	814 g/l
<b>SPECIFIC GRAVITY</b>	0.82	
<b>BOILING POINT</b>	300 - 395 °F	148 - 201 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	72%	
<b>EVAPORATION RATE</b>	Slower than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
4.64 lb/gal	556 g/l	Less Water and Federally Exempt Solvents
4.64 lb/gal	556 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			
64742-88-7	Med. Aliphatic Hydrocarbon Solvent			
	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

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)

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),  
4.1, PG II, (ERG#133)

### Bulk Containers may be Shipped as:

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),  
4.1, PG II, (ERG#133)

### Canada (TDG)

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),  
CLASS 4.1, PG II, (ERG#133)

**IMO**

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),  
CLASS 4.1, PG II, EmS F-A,S-G

**IMO**

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),  
CLASS 4.1, PG II, EmS F-A,S-G

**IATA/ICAO**

UN1325, FLAMMABLE SOLIDS, ORGANIC, N.O.S. (PETROLEUM DISTILLATES),  
4.1, PG II

**SECTION 15 — REGULATORY INFORMATION****SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION**

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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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

4444  
14 00

DATE OF PREPARATION  
Feb 26, 2015

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

4444

### PRODUCT NAME

MINWAX® POLYCRYLIC® Water-Based Protective Finish, Clear Semi-Gloss

### MANUFACTURER'S NAME

MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

### Telephone Numbers and Websites

Product Information	(800) 523-9299 www.minwax.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	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	
2	29911-28-2	1-(2-Butoxymethylethoxy)-propanol		
		ACGIH TLV	Not Available	0.06 mm
		OSHA PEL	Not Available	
3	5131-66-8	Butoxypropanol		
		ACGIH TLV	Not Available	0.6 mm
		OSHA PEL	Not Available	
2	107-21-1	Ethylene Glycol		
		ACGIH TLV	100 MG/M3 CEILING (aerosol)	0.12 mm
		OSHA PEL	50 PPM CEILING	
1	9014-85-1	Decylpoly(ethyleneoxy)ethanol		
		ACGIH TLV	Not Available	
		OSHA PEL	Not Available	
2	872-50-4	1-Methyl-2-Pyrrolidone		
		ACGIH TLV	Not Available	1 mm
		OSHA PEL	Not Available	

## 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.

### HMIS Codes

Health	2
Flammability	0
Reactivity	0

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 laundry 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**

> 200 °F PMCC

**LEL**

Not

Applicable

**UEL**

Not

Applicable

**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**

DOL Storage Class IIIB

**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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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	8.55 lb/gal	1024 g/l
SPECIFIC GRAVITY	1.03	
BOILING POINT	212 - 449 °F	100 - 231 °C
MELTING POINT	Not Available	
VOLATILE VOLUME	71%	
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)		
	2.19 lb/gal	262 g/l
	0.86 lb/gal	103 g/l
	Less Water and Federally Exempt Solvents	
	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.

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**

<b>CAS No.</b>	<b>Ingredient Name</b>			
<b>34590-94-8</b>	<b>2-Methoxymethylethoxypropanol</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		5135 mg/kg
<b>29911-28-2</b>	<b>1-(2-Butoxymethylethoxy)-propanol</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>5131-66-8</b>	<b>Butoxypropanol</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		1900 mg/kg
<b>107-21-1</b>	<b>Ethylene Glycol</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		4700 mg/kg
<b>9014-85-1</b>	<b>Decylpoly(ethyleneoxy)ethanol</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
<b>872-50-4</b>	<b>1-Methyl-2-Pyrrolidone</b>	LC50 RAT	4HR	Not Available
		LD50 RAT		4200 mg/kg

**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.

### 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	2	
872-50-4	1-Methyl-2-Pyrrolidone	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.

The Thompson Minwax Company  
MINMAX COMPANY Div.  
P.O. Box 438  
Montvale, NJ 07645

SECTION #1 - IDENTIFICATION

Product: MINMAX (R) POLYSHADES (R) ALL SHADES & SHEENS (3 NEW SHADES)

TELEPHONE CONTACTS:

NON-MEDICAL, PRODUCT INFORMATION (DAY): 1-800-523-9299  
TRANSPORTATION (DOT) EMERGENCIES ONLY (CHEMTREC): 1-800-424-9300  
MEDICAL EMERGENCIES ONLY: 1-800-228-5635, EXTENSION 218

THIS MSDS APPLIES TO THE FOLLOWING:

SHADE	GLOSS	SATIN	GLOSS FORMULA	SATIN FORMULA
Honey Pine	410	310	M060378	M060533
Pecan	420	320	M060379	M060534
Olde Maple	430	330	M060380	M060535
Antique Walnut	440	340	M060381	M060536
Royal Walnut	450	350	M060382	M060537
Tudor	460	360	M060383	M060538
Classic Oak	470	370	M060755	M060775
Bombay Mahogany	480	380	M060751	M060752
Natural Cherry	490	390	M060753	M060754

Special Hazards: Dangerous: Harmful or fatal if swallowed. Skin irritant.  
Combustible.

HAZARD RATINGS:

NFPA - Health:	2	Moderate	HMIS - Health:	2	Moderate
- Fire:	2	Moderate	- Flammability:	2	Moderate
- Reactivity:	0	Negligible	- Reactivity:	0	Minimal

Product Description: Wood stain and polyurethane topcoat in one-step.

SECTION #2 - HAZARDOUS CHEMICAL COMPONENTS

Component: DISTILLATES (PETROLEUM), HYDROTREATED LIGHT  
CAS Number: 64742-47-8  
Percent of Mixture: 27.0 to 33.0  
RECOMMEND USE OF EXPOSURE LIMITS  
FOR STODDARD SOLVENT:  
ACGIH TLV-TWA: 100 ppm  
OSHA PEL-TWA: 500 ppm

Component: SOLVENT NAPHTHA (PETROLEUM), MEDIUM ALIPHATIC  
CAS Number: 64742-68-7  
Percent of Mixture: 14.0 to 19.0  
RECOMMEND USE OF EXPOSURE LIMITS  
FOR STODDARD SOLVENT:  
ACGIH TLV-TWA: 100 ppm  
OSHA PEL-TWA: 500 ppm

Component: STODDARD SOLVENT  
CAS Number: 8052-41-3  
Percent of Mixture: 0 to 1.5  
ACGIH TLV-TWA: 100 ppm  
OSHA PEL-TWA: 500 ppm

SECTION #3 - PHYSICAL DATA

Vapor Pressure: Not Determined  
Vapor Density (Air=1): Not F  
Specific Gravity: 0.8954.92  
Solubility (H2O): Insoluble

POLYSHADES SATIN CLASS.OAK, OT  
VENDOR: RIGHT-WAY DEALER WAREHOUSE  
VENDOR PART#: 61370

SECTION #3 - PHYSICAL DATA Continued...

Pounds Per Gallon: 7.47 - 7.75  
PH: Not applicable  
Viscosity: 175 +/- 25 cps  
VOC (g/l): 450 maximum

Appearance

Clear, slightly viscous liquid with characteristic color  
(see Section 1) and hydrocarbon odor.

SECTION #4 - FIRE FIGHTING & EXPLOSION DATA

Flash Point: >101°F SETA

Lower Explosive Limit (%): Not Determined  
Upper Explosive Limit (%): Not Determined

Fire and Explosion Hazards

DANGER: Contains mineral spirits. Combustible. Do not use or store near  
heat, sparks, flame or other sources of ignition. Containers exposed to  
intense heat from fires should be cooled with water to prevent vapor pressure  
build-up which could result in container rupture.

Extinguishing Media

Water spray, foam, dry chemical or carbon dioxide. Do not use a direct  
stream of water. Product may float and may be reignited on surface of water.

Special Fire Fighting Instructions

Wear self-contained breathing apparatus and protective clothing appropriate  
for fighting a typical chemical fire. Use water spray to cool fire-exposed  
containers.

SECTION #5 - EXPOSURE EFFECTS and FIRST AID

Route of Exposure - Inhalation

Avoid inhalation and use only with adequate ventilation.

First Aid - Inhalation

If affected by inhalation, remove to fresh air. Get medical attention if  
needed.

Route of Exposure - Skin

Skin irritant. Avoid contact with skin. Wear rubber gloves when handling.

First Aid - Skin

Wash thoroughly with soap and water. If irritation persists, get medical  
attention.

Route of Exposure - Eyes

Avoid contact with eyes.

First Aid - Eyes

case of eye contact, flush with plenty of water. Call physician.

SECTION #5 - EXPOSURE EFFECTS AND FIRST AID Continued...

Route of Exposure - Ingestion  
Harmful or fatal if swallowed. Do not take internally. Contains mineral spirits.  
First Aid - Ingestion  
If swallowed, do not induce vomiting. Call physician immediately.

Miscellaneous Toxicological Information  
Carcinogenicity: NTP: No IARC: No OSHA: No

SECTION #6 - REACTIVITY & POLYMERIZATION

Stability: Stable.  
Conditions to Avoid (Stability)  
Heat, sparks, open flame, all sources of heat or ignition.  
Incompatible Materials  
Strong oxidizing agents.  
Hazardous Decomposition Products

Hydrocarbon fumes, smoke, carbon monoxide (where combustion is incomplete) may be formed during thermal decomposition.  
Hazardous Polymerization: Will not occur.

SECTION #7 - SPILL, LEAK, & DISPOSAL PROCEDURES

Steps to be Taken in The Event of Spills, Leaks, or Release  
Absorb small spills with sand or other suitable absorbent material and place in a container for disposal. For large spills, area may be slippery, dike around spill with absorbent material. Transfer liquids and contaminated diking material to separate, suitable containers for recovery or disposal.

Waste Disposal Methods

Dispose of in accordance with local, state, and federal regulations.  
Other Environmental Information  
None of the ingredients in this product meet the reporting requirements of the SARA Title III, Section 313 List of Toxic Chemicals.

SECTION #8 - SPECIAL PROTECTIVE MEASURES

Ventilation  
Use only with adequate ventilation. If using indoors, open all windows and doors to make sure there is fresh air movement.  
Eye Protection  
Avoid contact with eyes. Wear safety glasses when handling.  
Skin Protection  
Wear rubber gloves when handling.

SECTION #8 - SPECIAL PROTECTIVE MEASURES Continued...

Respiratory Protection  
Avoid inhalation.

SECTION #9 - SPECIAL PRECAUTIONS - STORAGE & HANDLING

Storage & Handling Conditions  
DANGER: Contains mineral spirits. Harmful or fatal if swallowed. Do not take internally. Skin irritant. Avoid contact with skin and eyes. Wear rubber gloves and safety glasses when handling. Use only with adequate ventilation and avoid inhalation. If using indoors, open all windows and doors to make sure there is fresh air movement. Do not use or store near heat, sparks, flame, or other sources of ignition. KEEP OUT OF REACH OF CHILDREN.

SECTION #11 - OTHER INFORMATION

NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW ACT:  
The following information is provided to assist employers in the state of New Jersey to label products in the workplace in accordance with the Worker and Community Right to Know Act (N.J.A.C. 8:59)  
Ingredient CAS#

SOYA OIL URETHANE ALKYD RESIN 68188-21-6  
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT 64742-47-8  
SOLVENT NAPHTHA (PETROLEUM), MEDIUM ALIPHATIC 64742-86-7  
AMORPHOUS SILICA 112926-00-8  
DICHLORODIMETHYL SILANE (reaction product with silica) 68611-44-9  
STODDARD SOLVENT 8052-41-3

STATE REGULATED COMPONENTS

Component: STODDARD SOLVENT Percent of Mixture: 0 to 1.5  
CAS Number: 8052-41-3  
State Regulations: ILL MAS NJM PAW  
ILL - Illinois Toxic Substance  
MAS - Massachusetts Hazardous Substance  
NJM - New Jersey Environmental Hazardous Substance  
NJL - New Jersey Special Health Hazardous Substance  
NJH - New Jersey Workplace Hazardous Substance  
PAW - Pennsylvania Environmental Hazardous Substance  
PAS - Pennsylvania Special Hazardous Substance  
PAW - Pennsylvania Workplace Hazardous Substance  
P65 - California Proposition 65

# Material Safety Data Sheet

[\[Home\]](#) [\[Manufacturer\]](#) [\[Part Number\]](#) [\[NSN\]](#) [\[Help\]](#)

---

## SECTION I - Material Identity

---

Item Name..... 1500 MINWAX (R) PRE-STAIN WOOD  
CONDITIONER  
Part Number/Trade Name..... 1500 MINWAX (R) PRE-STAIN WOOD  
CONDITIONER  
National Stock Number..... 8010P400658F  
CAGE Code..... 0K1A4  
Part Number Indicator..... A  
MSDS Number..... 196523  
HAZ Code..... B

## SECTION II - Manufacturer's Information

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Manufacturer Name..... MINWAX COMPANY  
Street..... 10 MOUNTAINVIEW ROAD  
City..... UPPER SADDLE RIVER  
State..... NJ  
Country..... US  
Zip Code..... 07458  
Emergency Phone..... 216-566-2917  
Information Phone..... 800-523-9299

## MSDS Preparer's Information

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Date MSDS Prepared/Revised..... 27NOV04  
Active Indicator..... Y

## Alternate Vendors

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## SECTION III - Physical/Chemical Characteristics

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Specification Number..... NR  
Specification Type/Grade/Class..... NR  
Hazard Storage Compatibility Code..... NR  
Appearance/Odor..... PRE-STAIN WOOD CONDITIONER.  
Boiling Point..... 300 - 412 F  
Vapor Density..... > 1  
Specific Gravity..... 0.78  
Evaporation Rate..... < ETHER  
Percent Volatiles by Volume..... 92

Container Type..... R  
Container Pressure Code..... 1  
Temperature Code..... 4  
Product State Code..... L

## SECTION IV - Fire and Explosion Hazard Data

---

Flash Point..... 101  
Flash Point Method..... TCC  
Lower Explosion Limit..... 1  
Upper Explosion Limit..... 7  
Extinguishing Media..... CARBON DIOXIDE, DRY CHEMICAL, FOAM  
Special Fire Fighting Procedures..... KEEP CONTAINERS TIGHTLY CLOSED. ISOLATE FROM HEAT, ELECTRICAL EQUIPMENT, SPARKS, AND OPEN FLAME. CLOSED CONTAINERS MAY EXPLODE WHEN EXPOSED TO EXTREME HEAT.  
Unusual Fire/Explosion Hazards..... APPLICATION TO HOT SURFACES REQUIRES SPECIAL PRECAUTIONS. DURING EMERGENCY CONDITIONS OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD.

## SECTION V - Reactivity Data

---

Stability..... YES  
Stability Conditions to Avoid..... STABLE  
Materials to Avoid..... NONE KNOWN  
Hazardous Decomposition Products..... BY FIRE: CARBON DIOXIDE, CARBON MONOXIDE.  
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..... NO  
Route of Entry: Inhalation..... YES  
Health Hazards - Acute and Chronic..... IRRITATION OF EYES, SKIN AND RESPIRATORY SYSTEM. MAY CAUSE NERVOUS SYSTEM DEPRESSION. EXTREME OVEREXPOSURE MAY RESULT IN UNCONSCIOUSNESS AND POSSIBLY DEATH. PROLONGED OVEREXPOSURE TO SOLVENT MAY CAUSE ADVERSE EFFECTS TO THE LIVER AND URINARY SYSTEMS. OVEREXPOSURE MAY CAUSE PERMANENT BRAIN / NERVOUS SYSTEM DAMAGE.  
Carcinogenity: NTP..... NO  
Carcinogenity: IARC..... NO  
Carcinogenity: OSHA..... NO  
Explanation of Carcinogenity..... NONE  
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 Cond. Aggravated by Exposure.... NONE GENERALLY RECOGNIZED.

Emergency/First Aid Procedures..... [INHAL] IF AFFECTED, REMOVE FROM EXPOSURE. RESTORE BREATHING. KEEP WARM AND QUIET [SKIN] WASH AFFECTED AREA THOROUGHLY WITH SOAP/WATER. REMOVE CONTAMINATED CLOTHING AND LAUNDRY BEFORE RE-USE. [ EYE] FLUSH WITH LARGE AMOUNTS OF WATER FOR 15 MIN GET MEDICAL ATTENTION [ INGEST]GET MEDICAL ATTENTION

## SECTION VII - Precautions for Safe Handling and Use

---

Steps if Material Released/Spilled..... REMOVE ALL SOURCES OF IGNITION. VENTILATE AND REMOVE WITH INERT ABSORBENT.

Neutralizing Agent..... NR

Waste Disposal Method..... WASTE FROM THIS PRODUCT MAY BE HAZARDOUS AS DEFINED UNDER THE 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.

Handling and Storage Precautions..... 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. DO NOT TAKE INTERNALLY. KEEP AWAY FROM CHILDREN

Other Precautions..... INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS CAN BE HARMFUL OR FATAL.

## SECTION VIII - Control Measures

---

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. WHEN SANDING OR ABRADING THE DRY FILM WEAR A DUST/MIST RESPIRATOR APPROVED BY NIOSH/MSHA FOR PROTECTION AGAINST DUST WHICH MAY BE GENERATED.

Ventilation..... LOCAL EXHAUST PREFERRED. GENERAL EXHAUST ACCEPTABLE IF THE EXPOSURE TO MATERIALS IS MAINTAINED BELOW APPLICABLE EXPOSURE

Protective Gloves..... WEAR GLOVES

Eye Protection..... WEAR SAFETY GLASSES/ UNPERFORATED SIDES  
Other Protective Equipment..... NR  
Work Hygienic Practices..... NR  
Supplemental Health/Safety Data..... NR

## SECTION IX - Label Data

---

Protect Eye..... YES  
Protect Skin..... YES  
Protect Respiratory..... YES  
Chronic Indicator..... YES  
Contact Code..... SLIGHT  
Fire Code..... UNKNOWN  
Health Code..... UNKNOWN  
React Code..... UNKNOWN  
Specific Hazard and Precaution..... TARGET ORGANS: LIVER, URINARY SYSTEM,  
CENTRAL NERVOUS SYSTEM

## SECTION X - Transportation Data

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## SECTION XI - Site Specific/Reporting Information

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Volatile Organic Compounds (P/G)..... 5.8495  
Volatile Organic Compounds (G/L)..... 701

## SECTION XII - Ingredients/Identity Information

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Ingredient #..... 01  
Ingredient Name..... MINERAL SPIRITS  
CAS Number..... 64742887  
Proprietary..... NO  
Percent..... 88  
OSHA PEL..... 100 PPM  
ACGIH TLV..... 100 PPM  
Recommended Limit..... NR  
Ingredient #..... 02  
Ingredient Name..... MINERAL SPIRITS  
CAS Number..... 64741657  
Proprietary..... NO  
Percent..... 1  
OSHA PEL..... 100 PPM  
ACGIH TLV..... 100 PPM

NOTICE: For additional information, contact BIOENVIRONMENTAL/7-4551

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HMMS Intranet - 12 Apr 2007 13:15 - web\_msd.display - Visit the Official HMMS Website at <http://www.hmms.com/>



# MATERIAL SAFETY DATA SHEET

5600  
04 00

## Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER	DATE OF PREPARATION	HMIS CODES	
5600	19-FEB-08	Health	2
		Flammability	2
		Reactivity	1

PRODUCT NAME  
MINWAX® Sanding Sealer

MANUFACTURER'S NAME  
MINWAX Company  
10 Mountainview Road  
Upper Saddle River, NJ 07458

TELEPHONE NUMBERS and WEBSITES  
 Product Information  
 (800) 523-9299  
 Regulatory Information  
 (216) 566-2902      [www.paintdocs.com](http://www.paintdocs.com)  
 Medical Emergency  
 (216) 566-2917  
 Transportation Emergency      for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)  
 (800) 424-9300

## Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
60	64742-88-7	Mineral Spirits		
		ACGIH TLV	100 ppm	2 mm
		OSHA PEL	100 ppm	
1	25013-15-4	Vinyl Toluene		
		ACGIH TLV	50 ppm	1.1 mm
		ACGIH TLV	100 ppm STEL	
		OSHA PEL	100 ppm	

## 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.

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 and urinary systems.

Continued on page 2



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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
102 F PMCC	0.9	11.0

## FLAMMABILITY CLASSIFICATION

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.

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Continued on page 3

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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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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

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PRODUCT WEIGHT	7.05 lb/gal	844 g/l
SPECIFIC GRAVITY	0.85	
BOILING POINT	300 - 395 F	148 - 201 C
MELTING POINT	Not Available	
VOLATILE VOLUME	68 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)		
4.43 lb/gal	530 g/l	Less Water and Federally Exempt Solvents
4.43 lb/gal	530 g/l	Emitted VOC

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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

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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.

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TOXICOLOGY DATA

CAS No.	Ingredient Name				
64742-88-7	Mineral Spirits				
	LC50	RAT	4HR	Not Available	
	LD50	RAT		Not Available	
25013-15-4	Vinyl Toluene				
	LC50	RAT	4HR	Not Available	
	LD50	RAT		2255 mg/kg	

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Section 12 -- ECOLOGICAL INFORMATION

---

ECOTOXICOLOGICAL INFORMATION

No data available.

Continued on page 5

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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 RELATED MATERIAL, 3, PG III, (ERG#128)

## Bulk Containers may be Shipped as:

UN1263, PAINT RELATED MATERIAL, COMBUSTIBLE LIQUID, PG III, (ERG#128)

## Canada (TDG)

May be Classed as a Combustible Liquid for Canadian Ground.  
UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, (ERG#128)

## IMO

UN1263, PAINT RELATED MATERIAL, CLASS 3, PG III, (39 C c.c.), EmS F-E, S-E

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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.

# MATERIAL SAFETY DATA SHEET

61807  
02 00

## Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NUMBER

61807

HMIS CODES

Health	1
Flammability	0
Reactivity	0

PRODUCT NAME

MINWAX® Water-Based Wood Stain, Clear Tint Base

MANUFACTURER'S NAME

MINWAX

200 Confederation Pkwy

Vaughan, ON L4K 4T8

EMERGENCY TELEPHONE NO.

(216) 566-2917

DATE OF PREPARATION

07-MAR-06

INFORMATION TELEPHONE NO.

(800) 523-9299

## Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
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No ingredients in this product are hazardous as defined by the Department of Labor.

## 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.

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.

Continued on page 2

=====  
Section 5 -- FIRE FIGHTING MEASURES  
=====

FLASH POINT  
    >200 F PMCC  
LEL  
N.A.

UEL  
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

DOL Storage Class IIIB

## 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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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	8.55 lb/gal	1024 g/l
SPECIFIC GRAVITY	1.03	
BOILING POINT	212 - 369 F	100 - 187 C
MELTING POINT	Not Available	
VOLATILE VOLUME	86 %	
EVAPORATION RATE	Slower than ether	
VAPOR DENSITY	Heavier than air	
SOLUBILITY IN WATER	N.A.	
pH	7.6	
VOLATILE ORGANIC COMPOUNDS	(VOC Theoretical)	
3.48 lb/gal	417 g/l	Less Water and Federally Exempt Solvents
0.78 lb/gal	94 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
---------	-----------------

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  
=====

No data available.

=====  
Section 15 -- REGULATORY INFORMATION  
=====

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
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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.

Continued on page 5



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Section 16 -- OTHER INFORMATION  
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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.

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

Misty Contact & Circuit Board Cleaner III

## Section 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Misty Contact & Circuit Board Cleaner III  
**Product Number:** A00368  
**Product Use:** Specialty Cleaner.  
**Manufacturer/Supplier:** Amrep, Inc.  
990 Industrial Park Drive  
Marietta, GA 30062  
**Phone Number:** (770) 422-2071 (Mon - Fri / 8am - 5pm ET)  
**D.O.T. Emergency Phone:** CHEM TEL (800) 255-3924  
INTERNATIONAL: +01-813-248-0584  
**Date of Preparation:** September 24, 2010  
**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. Harmful: may cause lung damage if swallowed.  
**Inhalation:** Harmful by inhalation. May cause respiratory tract irritation. 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 possible redness and swelling. Symptoms may include redness and drying 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.

# MATERIAL SAFETY DATA SHEET

Misty Contact & Circuit Board Cleaner III

## Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Heptane	142-82-5	40 - 70
2-Methylpentane	107-83-5	7 - 13
Isopropanol	67-63-0	7 - 13
Carbon dioxide	124-38-9	1 - 5
3-Methylpentane	96-14-0	1 - 5
2,3-Dimethylbutane	79-29-8	1 - 5
Neohexane	75-83-2	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:** Extremely flammable by OSHA criteria.

**Means of Extinction:**

**Suitable Extinguishing Media:** Treat for surrounding material.

**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). This material is a water pollutant. Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.

# MATERIAL SAFETY DATA SHEET

Misty Contact & Circuit Board Cleaner III

**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. Keep away from food, drink and animal foodstuffs.

## Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Guidelines

Ingredient	Exposure Limits
	OSHA-PEL
Heptane	400 ppm
2-Methylpentane	500 ppm
Isopropanol	400 ppm
Carbon dioxide	5000 ppm
3-Methylpentane	Not available.
2,3-Dimethylbutane	500 ppm
Neohexane	500 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

<b>Appearance:</b>	Clear.
<b>Color:</b>	Colorless.
<b>Odour:</b>	Characteristic.
<b>Odour Threshold:</b>	Not available.
<b>Physical State:</b>	Gas/Pressurized Liquid.
<b>pH:</b>	Not applicable.
<b>Viscosity:</b>	Not available.

# MATERIAL SAFETY DATA SHEET

Misty Contact & Circuit Board Cleaner III

<b>Freezing Point:</b>	Not available.
<b>Boiling Point:</b>	Not available.
<b>Flash Point:</b>	Not available.
<b>Evaporation Rate:</b>	Not available.
<b>Lower Flammability Limit:</b>	Not available.
<b>Upper Flammability Limit:</b>	Not available.
<b>Vapor Pressure:</b>	Not available.
<b>Vapor Density:</b>	Not available.
<b>Specific Gravity:</b>	0.695 (Concentrate only)
<b>Solubility in Water:</b>	Insoluble.
<b>Coefficient of Water/Oil Distribution:</b>	Not available.
<b>Auto-ignition Temperature:</b>	Not available.
<b>Percent Volatile, wt. %:</b>	Not available.
<b>VOC content, wt. %:</b>	96.3% (US federal/CARB/OTC/LADCO)
<b>VOC content, g/L:</b>	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

<b>Ingredient</b>	<b>LD<sub>50</sub> (oral)</b>	<b>LC<sub>50</sub></b>
Heptane	5000 mg/kg, mouse	103 g/m <sup>3</sup> 4hr, rat
2-Methylpentane	Not available.	Not available.
Isopropanol	4396 mg/kg, rat	72.6 mg/L 4hr, rat
Carbon dioxide	Not available.	Not available.
3-Methylpentane	Not available.	Not available.
2,3-Dimethylbutane	Not available.	Not available.
Neohexane	Not available.	Not available.

**Eye:** May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

**Skin:** May cause skin irritation. Symptoms may include redness and drying of the skin.

**Ingestion:** Not a normal route of exposure. Harmful: may cause lung damage if swallowed.

**Inhalation:** Harmful by inhalation. May cause respiratory tract irritation. This product may be aspirated into the lungs and cause chemical pneumonitis. Vapours may cause drowsiness and dizziness.

# MATERIAL SAFETY DATA SHEET

Misty Contact & Circuit Board Cleaner III

## 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 \*

Heptane	Not listed.
2-Methylpentane	Not listed.
Isopropanol	G-A4, I-3
Carbon dioxide	Not listed.
3-Methylpentane	Not listed.
2,3-Dimethylbutane	Not listed.
Neohexane	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).

# MATERIAL SAFETY DATA SHEET

Misty Contact & Circuit Board Cleaner III

## SARA Title III

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Heptane	Not listed.	Not listed.	Not listed.	Not listed.
2-Methylpentane	Not listed.	Not listed.	Not listed.	Not listed.
Isopropanol	Not listed.	Not listed.	Not listed.	Yes.
Carbon dioxide	Not listed.	Not listed.	Not listed.	Not listed.
3-Methylpentane	Not listed.	Not listed.	Not listed.	Not listed.
2,3-Dimethylbutane	Not listed.	Not listed.	Not listed.	Not listed.
Neohexane	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
Heptane	Yes.
2-Methylpentane	Yes.
Isopropanol	Yes.
Carbon dioxide	Yes.
3-Methylpentane	Yes.
2,3-Dimethylbutane	Yes.
Neohexane	Yes.

## HMIS - Hazardous Materials Identification System

Health - 2      Flammability - 3      Physical Hazard - 0      PPE – B

## NFPA - National Fire Protection Association:

Health - 2      Fire - 3      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.

# MATERIAL SAFETY DATA SHEET

Misty Contact & Circuit Board Cleaner III

## 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:** Amrep, Inc.

Phone: (770) 422-2071 (Mon - Fri / 8am - 5pm ET)



# 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

<b>NFPA Rating:</b> Health-2; Flammability-2; Reactivity-0; Special- -	<b>HMIS Rating:</b> Health-2; Flammability-2; Reactivity-0; Personal Protection-B
<b>Manufacturer's Name:</b> Amrep, Inc.	<b>DOT Hazard Classification:</b>
<b>Address:</b> 990 Industrial Park Dr.	For ground transport: Combustible (CFR173.150F)(in bulk container less than 110 gallons)
<b>Address:</b> Marietta, GA 30062	For ocean vessel or air transport: Flammable Liquid, 3
	<b>Identity</b> (trade name as used on label): <b>MISTY REPCO-KILL LF</b>
<b>Date Prepared:</b> 05/16/07 <b>Prepared By:</b> RC/IB	<b>MSDS Number:</b> B00577 <b>Revision -</b> 2
<b>Information Calls:</b> (770)422-2071	<b>NOTICE:</b> JUDGMENT BASED ON INDIRECT TEST DATA
<b>EMERGENCY RESPONSE NUMBER:</b> 1-800-255-3924	

## 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 **
<b>PETROLEUM DISTILLATE</b>	68476-30-2 / 64742-94-5 / 64742-47-8	No	500	500	d
<b>NAPHTHALENE</b>	91-20-3	Yes	10	10	d
<b>2-BUTOXYETHANOL (glycol ether)</b>	111-76-2	Yes	50	25(skin)	d
<b>2,4-D ISOCTYL ESTER</b>	1928-43-4	Yes	10mg/m3	10mg/m3	e
<b>5-BROMO-3-SEC-BUTYL METHYLURACIL</b>	314-40-9	Yes	10mg/m3	10mg/m3	e

**WARNING:** This product contains a chemical or chemicals known to the State of California to cause cancer.

## SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

<b>Boiling Point:</b> Initial 430°F	<b>Specific Gravity</b> (H2O=1): 0.90
<b>Vapor Pressure:</b> PSIG @ 70°F (Aerosols): N/A	<b>Vapor Pressure</b> (Non-Aerosols)(mm Hg and Temperature): 0.3
<b>Vapor Density</b> (Air = 1): greater than 1	<b>Evaporation Rate</b> (BUAC = 1): 0.07
<b>Solubility in Water:</b> Insoluble	<b>Water Reactive:</b> Negligible
<b>Appearance and Odor:</b> Colorless to amber fluid with aromatic odor.	

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols):N/A	Auto Ignition Temperature:N/A	Flammability Limits in Air by% in Volume:%LEL=1.0; %UEL= 6.0
FLASH POINT AND METHOD USED (non-aerosols): approx.140°F TCC (may vary due to variation in petroleum)		EXTINGUISHER MEDIA: Carbon dioxide, sand, dry chemical, water fog.
SPECIAL FIRE FIGHTING PROCEDURES: Do not enter confined space w/o full bunker gear including positive pressure		
NIOSH approved SCBA. Cool fire exposed containers w/water.		
Unusual Fire & Explosion Hazards: Oxidation & thermal decomposition can liberate noxious & toxic fumes.		

## SECTION 4 - REACTIVITY HAZARD DATA

<b>STABILITY</b> [ X ] STABLE [ ] UNSTABLE	<b>HAZARDOUS POLYMERIZATION</b> [ ] WILL [ X ] WILL NOT OCCUR
<b>Incompatibility</b> (Mat. to avoid): Strong oxidizing agents.	<b>Conditions to Avoid:</b> Excessive heat, sparks, open flame.
<b>Hazardous Decomposition Products:</b> Oxides of carbon & nitrogen, hydrogen chloride, hydrogen bromide, unidentified organics.	

## SECTION 5 - HEALTH HAZARD DATA

<b>PRIMARY ROUTES OF ENTRY:</b> [ X ] INHALATION [ ] INGESTION [ X ] SKIN ABSORPTION [ ] EYE [ ] NOT HAZARDOUS
<b>ACUTE EFFECTS:</b> CNS symptoms: giddiness, headache, dizziness, nausea, unconsciousness.
<b>Inhalation:</b> High vapor or spray mist concentrations may produce nose, throat & respiratory irritation & may cause CNS depression (see symptoms above).
<b>Eye Contact:</b> Slightly irritating. High vapor concentrations may be irritating. <b>Skin Contact:</b> Prolonged/repeated contact can result drying of skin, irritation & dermatitis.
<b>Ingestion:</b> Not highly toxic, but may result in vomiting. Aspiration of vomitus may result in pneumonitis.
<b>CHRONIC EFFECTS:</b> This product may cause skin sensitization reactions in some people.
<b>Medical Conditions Generally Aggravated by Exposure:</b> Pre-existing eye, skin and respiratory disorders.

## EMERGENCY FIRST AID PROCEDURES

<b>Eye Contact:</b> Flush with water 15 minutes while holding lids open. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention.
<b>Skin Contact:</b> Remove contaminated clothing. (Launder clothing before re-use.) Wipe excess from skin. Wash with soap and water. If irritation persists, get medical attention.
<b>Inhalation:</b> Remove to fresh air. If CNS symptoms occur, get medical attention.
<b>Ingestion:</b> Immediately call poison control center or doctor. <b>DO NOT INDUCE VOMITING</b> unless told to by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. <b>NOTE TO PHYSICIAN:</b> May pose an aspiration pneumonia hazard. Contains petroleum distillates. (National Poison Control is 1-800-222-1222)

## SECTION 6 - CONTROL AND PROTECTIVE MEASURES

<b>Respiratory Protection (specify type):</b> Avoid prolonged or repeated breathing of vapors or spray mist. Respirator not required with adequate ventilation.
<b>Protective Gloves:</b> Chemical resistant (barrier laminate, nitrile rubber, viton, selection category E) <b>Eye Protection:</b> Safety glasses, goggles / face shield as appropriate.
<b>Ventilation Requirements:</b> Normal room ventilation is adequate for normal handling & storage. For large spills, use explosion-proof ventilation to control vapor concentration.
<b>Other Protective Clothing &amp; Equipment:</b> Long-sleeved shirt, long pants, socks, and shoes. Chemical resistant clothing as needed to minimize contact. If container is over one gallon must also wear coveralls or a chemical resistant apron. Eyewash stations & safety showers recommended.
<b>Hygienic Work Practices:</b> Wash hands after handling. Wash the outside of gloves before removing. As soon as possible, after work, remove all clothing & shower using soap & water. Do not reuse clothing worn during application of this product without cleaning first. Clothing must be kept & washed separately from other household laundry.

## SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

<b>Steps To Be Taken If Material Is Spilled Or Released:</b> Contain spill. Do not contaminate sewers, ground waters or surface waters. Soak up in inert absorbent material & place into properly labeled & sealed non-leaking containers for disposal in authorized manner as hazardous waste.
<b>Waste Disposal Methods:</b> Dispose of in accordance with all local, state and federal regulations. <b>PESTICIDE DISPOSAL:</b> Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law and may contaminate ground water. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at your EPA Regional Office for guidance. <b>CONTAINER DISPOSAL:</b> (For 1 gallon plastic containers): Triple rinse (or equivalent). Then offer for recycling, or reconditioning, or puncture and dispose of in a sanitary landfill, or if allowed by state and local authorities, by burning. If burned, stay out of smoke. (For 5 to 55 gallon metal containers): Triple rinse (or equivalent). Then offer for recycling, or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.
<b>Precautions To Be Taken In Handling &amp; Storage:</b> Store in original shipping containers. Keep container tightly closed when not in use. Do not contaminate water, food, feed or fertilizer by storage or disposal. If container is damaged or leaking, contain spill. Keep away from sources of heat, sparks or open flame.
<b>Other Precautions &amp;/or Special Hazards:</b> <b>KEEP OUT OF REACH OF CHILDREN.</b> Read & follow label directions. If this container is five gallons or more in capacity, do not open pour product from this container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of this container. Do not cut or weld on full, part full or empty drums because explosive mixtures of air & vapor may be present. Do not enter or allow others to enter the treated area until sprays have dried.

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  
Misty Wasp & Hornet Killer IIB

Section 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Misty Wasp & Hornet Killer IIB  
**Product Number:** A00437  
**Product Use:** Insecticide.  
**Manufacturer/Supplier:** Amrep, Inc.  
990 Industrial Park Drive  
Marietta, GA 30062  
**Phone Number:** (770) 422-2071 (Mon - Fri / 8am - 5pm ET)  
**D.O.T. Emergency Phone:** CHEM TEL (800) 255-3924  
INTERNATIONAL: +01-813-248-0584  
**Date of Preparation:** January 27, 2008      **Revision #:** 1.0

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. %
Distillates (petroleum), hydrotreated light	64742-47-8	60 - 100
Carbon dioxide	124-38-9	1 - 5

# MATERIAL SAFETY DATA SHEET

Misty Wasp & Hornet Killer IIB

## 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.
- 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.

# MATERIAL SAFETY DATA SHEET

Misty Wasp & Hornet Killer IIB

## 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
Distillates (petroleum), hydrotreated light	100 ppm	200 mg/m <sup>3</sup>
Carbon dioxide	5000 ppm	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

<b>Appearance:</b>	Clear.
<b>Color:</b>	Colorless to light yellow.
<b>Odour:</b>	Solvent.
<b>Odour Threshold:</b>	Not available.
<b>Physical State:</b>	Gas/Pressurized Liquid.
<b>pH:</b>	Not applicable.
<b>Viscosity:</b>	Not available.
<b>Freezing Point:</b>	Not available.
<b>Boiling Point:</b>	Not available.
<b>Flash Point:</b>	Not available.
<b>Evaporation Rate:</b>	Not available.
<b>Lower Flammability Limit:</b>	Not available.
<b>Upper Flammability Limit:</b>	Not available.

# MATERIAL SAFETY DATA SHEET

Misty Wasp & Hornet Killer IIB

Vapor Pressure:	Not available.
Vapor Density:	Not available.
Specific Gravity:	0.800 (Liquid Concentrate)
Solubility in Water:	Insoluble.
Coefficient of Water/Oil Distribution:	Not available.
Auto-ignition Temperature:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	0.2% (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:** 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 <sub>50</sub> (oral)	LC <sub>50</sub>
Distillates (petroleum), hydrotreated light	> 5000 mg/kg, rat	Not available.
Carbon dioxide	Not available.	Not available.

<b>Eye:</b>	May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
<b>Skin:</b>	May cause skin irritation. Handling can cause dry skin.
<b>Ingestion:</b>	Not a normal route of exposure. Harmful: may cause lung damage if swallowed.
<b>Inhalation:</b>	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 cardiac abnormalities, central nervous system depression, lung, kidney or liver damage, inhibits cholinesterase.

**Carcinogenicity:** Not hazardous by WHMIS/OSHA criteria.

# MATERIAL SAFETY DATA SHEET

Misty Wasp & Hornet Killer IIB

## Ingredient

Distillates (petroleum), hydrotreated light  
Carbon dioxide

## Chemical Listed as Carcinogen or Potential Carcinogen \*

I -3, G-A3  
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

### 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).

# MATERIAL SAFETY DATA SHEET

Misty Wasp & Hornet Killer IIB

## 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.
Carbon dioxide	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
Distillates (petroleum), hydrotreated light	DSL	Yes.
Carbon dioxide	DSL	Yes.

## HMIS - Hazardous Materials Identification System

Health - 1      Flammability - 2      Physical Hazard - 0      PPE – B

## NFPA - National Fire Protection Association:

Health - 1      Fire - 2      Reactivity - 0

**Hazard Rating:** 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

## WHMIS Classification(s):

Exempt under WHMIS.

## 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.

# MATERIAL SAFETY DATA SHEET

Misty Wasp & Hornet Killer IIB

## 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 27, 2011

**Prepared by:** Nexreg Compliance Inc.

**Prepared for:** Amrep, Inc.

Phone: (770) 422-2071 (Mon - Fri / 8am - 5pm ET)



MATERIAL SAFETY DATA SHEET MKO PLUS AEROSOL

DATE OF ISSUE: 08/27/2001

SUPPERCEDES: 05/02/2001

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SECTION I - GENERAL INFORMATION

Chemical Name & Synonyms:  
N/A

Trade Name & Synonyms:  
MKO PLUS AEROSOL

Chemical Family:  
PETROLEUM DISTILLATE

Formula Mixture:  
X

Manufacturer's Name:  
MANTEK, DIVISION OF NCH CORP.

Address:  
BOX 152170  
IRVING, TEXAS 75015  
Prepared By: K Dickinson/Chemist  
Product Code Number: 5388  
Emergency Phone Number: 800-424-9300

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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 (H2O=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
H2O Solubility:	NEGLIGIBLE
Viscosity:	NON-VISCOUS

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#### 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 ENDOTRACHEAL TUBE WILL PREVENT ASPIRATION.

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## 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.

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## 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 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:

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.

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#### 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.

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SECTION XI - REGULATORY INFORMATION

Chemical Name	CAS Number	Upper % Limit
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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 CONTAINS BENZENE (1,2) AND TOLUENE (2) AS TRACE CONTAMINANTS.

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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:ASPHYXIAN, PPOS: 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.

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.

Product Name: MOBIL 1 10W-30  
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## MATERIAL SAFETY DATA SHEET

### SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT

**Product Name:** MOBIL 1 10W-30  
**Product Description:** Synthetic Base Stocks and Additives  
**Product Code:** 2015101010J2, 481176-00, 972273  
**Intended Use:** Engine oil

#### COMPANY IDENTIFICATION

**Supplier:** EXXON MOBIL CORPORATION  
3225 GALLOWS RD.  
FAIRFAX, VA. 22037 USA  
**24 Hour Health Emergency** 609-737-4411  
**Transportation Emergency Phone** 800-424-9300  
**ExxonMobil Transportation No.** 281-834-3296  
**Product Technical Information** 800-662-4525, 800-947-9147  
**MSDS Internet Address** <http://www.exxon.com>, <http://www.mobil.com>

### SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

No Reportable Hazardous Substance(s) or Complex Substance(s).

### SECTION 3 HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

#### POTENTIAL HEALTH EFFECTS

Low order of toxicity. Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

<b>NFPA Hazard ID:</b>	Health: 0	Flammability: 1	Reactivity: 0
<b>HMIS Hazard ID:</b>	Health: 0	Flammability: 1	Reactivity: 0

**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

### SECTION 4 FIRST AID MEASURES

#### INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use

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mouth-to-mouth resuscitation.

#### SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

#### EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

#### INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

<b>SECTION 5</b>	<b>FIRE FIGHTING MEASURES</b>
------------------	-------------------------------

#### EXTINGUISHING MEDIA

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight Streams of Water

#### FIRE FIGHTING

**Fire Fighting Instructions:** Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Hazardous Combustion Products:** Smoke, Fume, Sulfur oxides, Oxides of carbon, Incomplete combustion products, Aldehydes

#### FLAMMABILITY PROPERTIES

**Flash Point [Method]:** >200C (392F) [ASTM D-92]

**Flammable Limits (Approximate volume % in air):** LEL: 0.9 UEL: 7.0

**Autoignition Temperature:** N/D

<b>SECTION 6</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
------------------	------------------------------------

#### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

#### SPILL MANAGEMENT

**Land Spill:** Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.



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**Water Spill:** Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted.

Note: Local regulations may prescribe or limit action to be taken.

## ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

## SECTION 7

## HANDLING AND STORAGE

### HANDLING

Avoid contact with used product. Prevent small spills and leakage to avoid slip hazard.

**Static Accumulator:** This material is a static accumulator.

### STORAGE

Do not store in open or unlabelled containers.

## SECTION 8

## EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure limits/standards for materials that can be formed when handling this product:** When mists / aerosols can occur, the following are recommended: 5 mg/m<sup>3</sup> - ACGIH TLV, 10 mg/m<sup>3</sup> - ACGIH STEL, 5 mg/m<sup>3</sup> - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

### ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

### PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of

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respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

**Eye Protection:** If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

**Specific Hygiene Measures:** 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. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

## ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

SECTION 9	PHYSICAL AND CHEMICAL PROPERTIES
-----------	----------------------------------

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

### GENERAL INFORMATION

**Physical State:** Liquid

**Color:** Amber

**Odor:** Characteristic

**Odor Threshold:** N/D

### IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

**Relative Density (at 15 C):** 0.81

**Flash Point [Method]:** >200C (392F) [ASTM D-92]

**Flammable Limits (Approximate volume % in air):** LEL: 0.9 UEL: 7.0

**Autoignition Temperature:** N/D

**Boiling Point / Range:** N/D

**Vapor Density (Air = 1):** > 2 at 101 kPa

**Vapor Pressure:** < 0.013 kPa (0.1 mm Hg) at 20 C

**Evaporation Rate (n-butyl acetate = 1):** N/D

**pH:** N/A

**Log Pow (n-Octanol/Water Partition Coefficient):** N/D

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**Solubility in Water:** Negligible

**Viscosity:** 67.4 cSt (67.4 mm<sup>2</sup>/sec) at 40 C | 10.7 cSt (10.7 mm<sup>2</sup>/sec) at 100C

**Oxidizing Properties:** See Sections 3, 15, 16.

## OTHER INFORMATION

**Freezing Point:** N/D

**Melting Point:** N/A

**Pour Point:** -36°C (-33°F)

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Material is stable under normal conditions.

**CONDITIONS TO AVOID:** Excessive heat. High energy sources of ignition.

**MATERIALS TO AVOID:** Strong oxidizers

**HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## SECTION 11 TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY

<u>Route of Exposure</u>	<u>Conclusion / Remarks</u>
<b>Inhalation</b>	
Toxicity (Rat): LC50 > 5000 mg/m3	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: No end point data.	Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
<b>Ingestion</b>	
Toxicity (Rat): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
<b>Skin</b>	
Toxicity (Rabbit): LD50 > 5000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
<b>Eye</b>	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

### CHRONIC/OTHER EFFECTS

#### For the product itself:

Diesel engine oils: Not carcinogenic in animals tests. Used and unused diesel engine oils did not produce any carcinogenic effects in chronic mouse skin painting studies.

Oils that are used in gasoline engines may become hazardous and display the following properties:

Carcinogenic in animal tests. Caused mutations in vitro. Possible allergen and photoallergen. Contains polycyclic aromatic compounds (PAC) from combustion products of gasoline and/or thermal degradation products.

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**Contains:**

Synthetic base oils: Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitizing in test animals and humans.

Additional information is available by request.

**The following ingredients are cited on the lists below:** None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC

3 = IARC 1

5 = IARC 2B

2 = NTP SUS

4 = IARC 2A

6 = OSHA CARC

<b>SECTION 12</b>
-------------------

<b>ECOLOGICAL INFORMATION</b>
-------------------------------

The information given is based on data available for the material, the components of the material, and similar materials.

**ECOTOXICITY**

Material -- Not expected to be harmful to aquatic organisms.

**MOBILITY**

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

<b>SECTION 13</b>
-------------------

<b>DISPOSAL CONSIDERATIONS</b>
--------------------------------

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

**DISPOSAL RECOMMENDATIONS**

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

**REGULATORY DISPOSAL INFORMATION**

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

**Empty Container Warning** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental

Product Name: MOBIL 1 10W-30

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regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

<b>SECTION 14</b>	<b>TRANSPORT INFORMATION</b>
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**LAND (DOT) :** Not Regulated for Land Transport

**LAND (TDG) :** Not Regulated for Land Transport

**SEA (IMDG) :** Not Regulated for Sea Transport according to IMDG-Code

**AIR (IATA) :** Not Regulated for Air Transport

<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>
-------------------	-------------------------------

**OSHA HAZARD COMMUNICATION STANDARD:** When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

**NATIONAL CHEMICAL INVENTORY LISTING:** PICCS, DSL, ENCS, AICS, IECSC, KECI, TSCA

**Special Cases:**

Inventory	Status
ELINCS	Restrictions Apply

**EPCRA:** This material contains no extremely hazardous substances.

**SARA (311/312) REPORTABLE HAZARD CATEGORIES:** None.

**SARA (313) TOXIC RELEASE INVENTORY:** This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

**The Following Ingredients are Cited on the Lists Below:**

Chemical Name	CAS Number	List Citations
DIPHENYLAMINE	122-39-4	5
PHENOL, 4,4-METHYLENEBIS(2,6-BIS(1,1-DIMETHYLETHYL)-	118-82-1	5

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

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Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16	OTHER INFORMATION
------------	-------------------

N/D = Not determined, N/A = Not applicable

**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:**

Revision Changes:

Section 06: Notification Procedures - Header was modified.

Section 01: Product Code was modified.

Section 13: Empty Container Warning was modified.

Section 09: Pour Point C(F) was modified.

Section 08: Hand Protection was modified.

Section 09: Vapor Pressure was modified.

Section 11: Dermal Lethality Test Data was modified.

Section 11: Oral Lethality Test Data was modified.

Section 11: Inhalation Lethality Test Data was modified.

Section 06: Accidental Release - Spill Management - Water was modified.

Section 09: Relative Density - Header was modified.

Section 09: Flash Point C(F) was modified.

Section 09: Viscosity was modified.

Section 09: Viscosity was modified.

Section 15: List Citation Table - Header was modified.

Section 15: National Chemical Inventory Listing was modified.

Section 06: Accidental Release Measures - Environmental Precautions was modified.

Section 16: Code to MHCs was modified.

Section 16: MSN, MAT ID was modified.

Section 06: Notification Procedures was modified.

Section 01: Company Contact Methods Sorted by Priority was modified.

Section 15: Chemical Name - Header was added.

Section 15: CAS Number - Header was added.

Section 15: List Citations - Header was added.

Section 15: List Citations Table was added.

Section 15: Special Cases - Header was added.

Section 15: Special Cases Table was added.

Section 15: Inventory - Header was added.

Section 15: Status - Header was added.

Section 16: Global Disclaimer was added.

Section 15: TSCA Class 2 Statement was deleted.

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Internal Use Only

MHC: 0B, 0B, 0, 0, 0, 0

PPEC: A

DGN: 7004362XUS (1005845)

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Product Name: MOBIL DTE OIL EXTRA HEAVY  
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## MATERIAL SAFETY DATA SHEET

### SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT

**Product Name:** MOBIL DTE OIL EXTRA HEAVY  
**Product Description:** Base Oil and Additives  
**Product Code:** 201560501595, 600205-00, 970010  
**Intended Use:** Circulating oil

#### COMPANY IDENTIFICATION

**Supplier:** EXXON MOBIL CORPORATION  
3225 GALLOWS RD.  
FAIRFAX, VA. 22037 USA  
**24 Hour Health Emergency** 609-737-4411  
**Transportation Emergency Phone** 800-424-9300  
**ExxonMobil Transportation No.** 281-834-3296  
**MSDS Requests** 713-613-3661  
**Product Technical Information** 800-662-4525, 800-947-9147  
**MSDS Internet Address** <http://www.exxon.com>, <http://www.mobil.com>

### SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

No Reportable Hazardous Substance(s) or Complex Substance(s).

### SECTION 3 HAZARDS IDENTIFICATION

This material is not considered to be hazardous according to regulatory guidelines (see (M)SDS Section 15).

#### POTENTIAL HEALTH EFFECTS

Low order of toxicity. Excessive exposure may result in eye, skin, or respiratory irritation. High-pressure injection under skin may cause serious damage.

<b>NFPA Hazard ID:</b>	Health: 0	Flammability: 1	Reactivity: 0
<b>HMIS Hazard ID:</b>	Health: 0	Flammability: 1	Reactivity: 0

**NOTE:** This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

### SECTION 4 FIRST AID MEASURES

#### INHALATION

Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respiratory irritation, dizziness, nausea, or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use



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mouth-to-mouth resuscitation.

#### SKIN CONTACT

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

#### EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

#### INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

<b>SECTION 5</b>	<b>FIRE FIGHTING MEASURES</b>
------------------	-------------------------------

#### EXTINGUISHING MEDIA

**Appropriate Extinguishing Media:** Use water fog, foam, dry chemical or carbon dioxide (CO<sub>2</sub>) to extinguish flames.

**Inappropriate Extinguishing Media:** Straight Streams of Water

#### FIRE FIGHTING

**Fire Fighting Instructions:** Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**Hazardous Combustion Products:** Incomplete combustion products, Smoke, Fume, Sulfur oxides, Aldehydes, Oxides of carbon

#### FLAMMABILITY PROPERTIES

**Flash Point [Method]:** >227C (441F) [ASTM D-92]

**Flammable Limits (Approximate volume % in air):** LEL: 0.9 UEL: 7.0

**Autoignition Temperature:** N/D

<b>SECTION 6</b>	<b>ACCIDENTAL RELEASE MEASURES</b>
------------------	------------------------------------

#### NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

#### SPILL MANAGEMENT

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**Land Spill:** Stop leak if you can do it without risk. Recover by pumping or with suitable absorbent.

**Water Spill:** Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Remove from the surface by skimming or with suitable absorbents. Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

#### ENVIRONMENTAL PRECAUTIONS

Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

### SECTION 7

### HANDLING AND STORAGE

#### HANDLING

Prevent small spills and leakage to avoid slip hazard.

**Static Accumulator:** This material is a static accumulator.

#### STORAGE

Do not store in open or unlabelled containers.

### SECTION 8

### EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure limits/standards for materials that can be formed when handling this product:** When mists / aerosols can occur, the following are recommended: 5 mg/m<sup>3</sup> - ACGIH TLV, 10 mg/m<sup>3</sup> - ACGIH STEL, 5 mg/m<sup>3</sup> - OSHA PEL.

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

#### ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

#### PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

**Respiratory Protection:** If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator

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selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include:

No special requirements under ordinary conditions of use and with adequate ventilation.

For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

**Hand Protection:** Any specific glove information provided is based on published literature and glove manufacturer data. Work conditions can greatly affect glove durability; inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

**Eye Protection:** If contact is likely, safety glasses with side shields are recommended.

**Skin and Body Protection:** Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

**Specific Hygiene Measures:** 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. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

## ENVIRONMENTAL CONTROLS

See Sections 6, 7, 12, 13.

## SECTION 9

## PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the Supplier in Section 1 for additional data.

### GENERAL INFORMATION

**Physical State:** Liquid

**Form:** Clear

**Color:** Amber

**Odor:** Characteristic

**Odor Threshold:** N/D

### IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

**Relative Density (at 15 C):** 0.89

**Flash Point [Method]:** >227C (441F) [ASTM D-92]

**Flammable Limits (Approximate volume % in air):** LEL: 0.9 UEL: 7.0

**Autoignition Temperature:** N/D

**Boiling Point / Range:** > 316C (600F)

**Vapor Density (Air = 1):** > 2 at 101 kPa

**Vapor Pressure:** < 0.013 kPa (0.1 mm Hg) at 20 C

**Evaporation Rate (n-butyl acetate = 1):** N/D

**pH:** N/A

**Log Pow (n-Octanol/Water Partition Coefficient):** > 3.5

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**Solubility in Water:** Negligible

**Viscosity:** 146.2 cSt (146.2 mm<sup>2</sup>/sec) at 40 C | 14.4 cSt (14.4 mm<sup>2</sup>/sec) at 100C

**Oxidizing Properties:** See Sections 3, 15, 16.

#### OTHER INFORMATION

**Freezing Point:** N/D

**Melting Point:** N/A

**Pour Point:** -12°C (10°F)

**DMSO Extract (mineral oil only), IP-346:** < 3 %wt

#### SECTION 10

#### STABILITY AND REACTIVITY

**STABILITY:** Material is stable under normal conditions.

**CONDITIONS TO AVOID:** Excessive heat. High energy sources of ignition.

**MATERIALS TO AVOID:** Strong oxidizers

**HAZARDOUS DECOMPOSITION PRODUCTS:** Material does not decompose at ambient temperatures.

**HAZARDOUS POLYMERIZATION:** Will not occur.

#### SECTION 11

#### TOXICOLOGICAL INFORMATION

##### ACUTE TOXICITY

<u>Route of Exposure</u>	<u>Conclusion / Remarks</u>
<b>Inhalation</b>	
Toxicity (Rat): LC50 > 5000 mg/m3	Minimally Toxic. Based on test data for structurally similar materials.
Irritation: No end point data.	Negligible hazard at ambient/normal handling temperatures. Based on assessment of the components.
<b>Ingestion</b>	
Toxicity (Rat): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
<b>Skin</b>	
Toxicity (Rabbit): LD50 > 2000 mg/kg	Minimally Toxic. Based on test data for structurally similar materials.
Irritation (Rabbit): Data available.	Negligible irritation to skin at ambient temperatures. Based on test data for structurally similar materials.
<b>Eye</b>	
Irritation (Rabbit): Data available.	May cause mild, short-lasting discomfort to eyes. Based on test data for structurally similar materials.

##### CHRONIC/OTHER EFFECTS

###### Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

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Additional information is available by request.

The following ingredients are cited on the lists below: None.

1 = NTP CARC	--REGULATORY LISTS SEARCHED--	5 = IARC 2B
2 = NTP SUS	3 = IARC 1	6 = OSHA CARC
	4 = IARC 2A	

## SECTION 12 ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

### ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.

### MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land.  
Expected to partition to sediment and wastewater solids.

### PERSISTENCE AND DEGRADABILITY

#### Biodegradation:

Base oil component -- Expected to be inherently biodegradable

### BIOACCUMULATION POTENTIAL

Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

## SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

### DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

### REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

**Empty Container Warning** Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken

Product Name: MOBIL DTE OIL EXTRA HEAVY

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for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

## SECTION 14 TRANSPORT INFORMATION

**LAND (DOT) :** Not Regulated for Land Transport

**LAND (TDG) :** Not Regulated for Land Transport

**SEA (IMDG) :** Not Regulated for Sea Transport according to IMDG-Code

**AIR (IATA) :** Not Regulated for Air Transport

## SECTION 15 REGULATORY INFORMATION

**OSHA HAZARD COMMUNICATION STANDARD:** When used for its intended purposes, this material is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

**NATIONAL CHEMICAL INVENTORY LISTING:** AICS, IECSC, DSL, EINECS, ENCS, KECI, PICCS, TSCA

**EPCRA:** This material contains no extremely hazardous substances.

**SARA (311/312) REPORTABLE HAZARD CATEGORIES:** None.

**SARA (313) TOXIC RELEASE INVENTORY:** This material contains no chemicals subject to the supplier notification requirements of the SARA 313 Toxic Release Program.

**The Following Ingredients are Cited on the Lists Below:**

Chemical Name	CAS Number	List Citations
PHOSPHORODITHOIC ACID, O,O-DI C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP)	68649-42-3	15

### --REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

## SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

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**THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:**

No revision information is available.

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MHC: 0, 0, 0, 0, 0, 0

PPEC: A

DGN: 2007114XUS (1013921)

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**530550-00 MOBILGREASE XHP 222 SPECIAL**  
**MATERIAL SAFETY DATA BULLETIN -----**

**1. PRODUCT AND COMPANY IDENTIFICATION -----**

PRODUCT NAME: MOBILGREASE XHP 222 SPECIAL  
SUPPLIER: EXXONMOBIL CORPORATION 3225 GALLOWS RD. FAIRFAX, VA 22037  
24 - Hour Health and Safety Emergency (call collect): 609-737-4411  
24 - Hour Transportation Emergency (Primary)  
CHEMTREC: 800-424-9300 (Secondary) 281-834-3296 Product and Technical Information: Lubricants and  
Specialties: 800-662-4525 800-443-9966 Fuels Products: 800-947-9147 MSDS Fax on Demand: 613-228-1467  
MSDS Internet Website: <http://emmsds.ihssolutions.com/>

**2. COMPOSITION/INFORMATION ON INGREDIENTS -----**

CHEMICAL NAMES AND SYNONYMS: SEVERE TREAT MIN. OILS & ADDITIVES  
GLOBALLY REPORTABLE MSDS INGREDIENTS: Substance Name Approx. Wt% -----  
ZINC DIALKYL DITHIOPHOSPHATE 1-5 (68649-42-3) See Section 8 for exposure limits (if applicable).

**3. HAZARDS IDENTIFICATION -----**

Under normal conditions of use, this product is not considered hazardous according to regulatory guidelines  
(See section 15).  
EMERGENCY OVERVIEW: Gray to Black Grease.  
DOT ERG No. : NA POTENTIAL HEALTH EFFECTS: Under normal conditions of intended use, this product  
does not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. For further  
health effects/toxicological data, see Section 11.

**4. FIRST AID MEASURES -----**

EYE CONTACT: Flush thoroughly with water. If irritation occurs, call a physician.  
SKIN CONTACT: Wash contact areas with soap and water. Remove and clean oil soaked clothing daily and  
wash affected area.  
INJECTION INJURY WARNING: If product is injected into or under the skin, or into any part of the body,  
regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a  
physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal  
or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of  
injury.  
INHALATION: Remove from further exposure. If respiratory irritation, dizziness, nausea, or unconsciousness  
occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with mechanical device  
or use mouth-to-mouth resuscitation.  
INGESTION: Not expected to be a problem. Seek medical attention if discomfort occurs. Do not induce  
vomiting.

**5. FIRE-FIGHTING MEASURES -----**

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.  
SPECIAL FIRE FIGHTING PROCEDURES: Water or foam may cause frothing. Use water to keep fire  
exposed containers cool. Water spray may be used to flush spills away from exposure. Prevent runoff from fire  
control or dilution from entering streams, sewers, or drinking water supply.  
SPECIAL PROTECTIVE EQUIPMENT: For fires in enclosed areas, fire fighters must use self-contained  
breathing apparatus.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: None.  
COMBUSTION PRODUCTS: Fumes, smoke, carbon monoxide, sulfur oxides, aldehydes and other  
decomposition products, in the case of incomplete combustion. Flash Point C(F): > 204(400) (ESTIMATED  
FOR OIL, ASTM D-92 (COC)). Flammable Limits (approx.% vol.in air) - LEL: NE, UEL: NE NFPA  
HAZARD ID: Health: 0, Flammability: 1, Reactivity: 0



## 6. ACCIDENTAL RELEASE MEASURES -----

NOTIFICATION PROCEDURES: Report spills/releases as required to appropriate authorities. U.S. Coast Guard and EPA regulations require immediate reporting of spills/releases that could reach any waterway including intermittent dry creeks. Report spill/release to Coast Guard National Response Center toll free number (800)424-8802. In case of accident or road spill notify CHEMTREC (800) 424-9300.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: LAND SPILL: Shut off source taking normal safety precautions. Take measures to minimize the effects on ground water. Recover by pumping or contain spilled material with sand or other suitable absorbent and remove mechanically into containers. If necessary, dispose of adsorbed residues as directed in Section 13. WATER SPILL: Confine the spill immediately with booms. Warn other ships in the vicinity. Notify port and other relevant authorities. Remove from the surface by skimming or with suitable absorbents. If permitted by regulatory authorities the use of suitable dispersants should be considered where recommended in local oil spill procedures.

ENVIRONMENTAL PRECAUTIONS: Prevent material from entering sewers, water sources or low lying areas; advise the relevant authorities if it has, or if it contaminates soil/vegetation.

PERSONAL PRECAUTIONS: See Section 8

## 7. HANDLING AND STORAGE -----

HANDLING: High pressure injection under the skin may occur due to the rupture of pressurized lines. Always seek medical attention. No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.

STORAGE: Keep containers closed when not in use. Do not store in open or unlabelled containers. Store away from strong oxidizing agents and combustible materials. Do not store near heat, sparks, flame or strong oxidants.

SPECIAL PRECAUTIONS: Prevent small spills and leakages to avoid slip hazard.

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, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to refill or clean container since residue is difficult to remove. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION -----

OCCUPATIONAL EXPOSURE LIMITS: This product does not contain any components which have recognized exposure limits.

VENTILATION: Use adequate ventilation.

RESPIRATORY PROTECTION: No special requirements under ordinary conditions of use and with adequate ventilation.

EYE PROTECTION: Generally eye contact is unlikely with this type material. If eye contact is likely, safety glasses with side shields or chemical type goggles should be worn.

SKIN PROTECTION: If prolonged or repeated skin contact is likely, oil impervious gloves should be worn. Good personal hygiene practices should always be followed.

## 9. PHYSICAL AND CHEMICAL PROPERTIES -----

Typical physical properties are given below. Consult Product Data Sheet for specific details.

APPEARANCE: Grease

COLOR: Gray to Black

ODOR: Mild ODOR

THRESHOLD-ppm: NE pH: NA BOILING POINT C(F): > 316(600) DROP POINT C(F): > 260(500)

FLASH POINT C(F): > 204(400) (ESTIMATED FOR OIL, ASTM D-92 (COC)) FLAMMABILITY (solids):

NE AUTO FLAMMABILITY C(F): NA EXPLOSIVE PROPERTIES: NA OXIDIZING PROPERTIES: NA

VAPOR PRESSURE-mmHg 20 C: < 0.1

VAPOR DENSITY: NE EVAPORATION RATE: NE RELATIVE DENSITY, 15/4 C: 0.914

SOLUBILITY IN WATER: Negligible PARTITION COEFFICIENT: > 3.5 VISCOSITY AT 40 C, cSt: 220.0

VISCOSITY AT 100 C, cSt: > 16.0 POUR POINT C(F): NA FREEZING POINT C(F): NE VOLATILE

ORGANIC COMPOUND: NE NOTE: MOST PHYSICAL PROPERTIES FOR OIL COMPONENT. DMSO EXTRACT, IP-346 (WT.%): <3, for mineral oil only NA=NOT APPLICABLE NE=NOT ESTABLISHED D=DECOMPOSES FOR FURTHER TECHNICAL INFORMATION, CONTACT YOUR MARKETING REPRESENTATIVE

## 10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable.

CONDITIONS TO AVOID: Extreme heat and high energy sources of ignition.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Product does not decompose at ambient temperatures.

HAZARDOUS POLYMERIZATION: Will not occur.

## 11. TOXICOLOGICAL DATA

ACUTE TOXICOLOGY--- ORAL TOXICITY (RATS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.

DERMAL TOXICITY (RABBITS): Practically non-toxic (LD50: greater than 2000 mg/kg). ---Based on testing of similar products and/or the components.

INHALATION TOXICITY (RATS): Practically non-toxic (LC50: greater than 5 mg/l). ---Based on testing of similar products and/or the components.

EYE IRRITATION (RABBITS): Practically non-irritating. (Draize score: greater than 6 but 15 or less). ---Based on testing of similar products and/or the components.

SKIN IRRITATION (RABBITS): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3). ---Based on testing of similar products and/or the components.

OTHER ACUTE TOXICITY DATA: Although an acute inhalation study was not performed with this product, a variety of mineral oils and synthetic base oils, such as those in this product have been tested. These samples had virtually no effect other than a nonspecific inflammatory response in the lung to the aerosolized mineral oil. The presence of additives in other tested formulations (in approximately the same amounts as in the present formulation) did not alter the observed effects.

---SUBCHRONIC TOXICOLOGY (SUMMARY)--- No significant adverse effects were found in studies using repeated dermal applications of similar formulations to the skin of laboratory animals for 13 weeks at doses significantly higher than those expected during normal industrial exposure. The animals were evaluated extensively for effects of exposure (hematology, serum chemistry, urinalysis, organ weights, microscopic examination of tissues etc.). ---REPRODUCTIVE TOXICOLOGY (SUMMARY)--- No teratogenic effects would be expected from dermal exposure, based on laboratory developmental toxicity studies of major components in this formulation and/or materials of similar composition. ---CHRONIC TOXICOLOGY (SUMMARY)--- Repeated and/or prolonged exposure may cause irritation to the skin, eyes or respiratory tract. For mineral base oils: Base oils in this product are severely solvent refined and/or severely hydrotreated. Chronic mouse skin painting studies of severely treated oils showed no evidence of carcinogenic effects. These results are confirmed on a continuing basis using various screening methods such as Modified Ames Test, IP-346, and/or other analytical methods. For synthetic base oils: The base oils in this product have been tested in the Ames assay and other tests of mutagenicity with negative results. These base oils are not expected to be carcinogenic with chronic dermal exposures. ---SENSITIZATION (SUMMARY)--- Not expected to be sensitizing based on tests of this product, components, or similar products.

## 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE AND EFFECTS: This environmental assessment was conducted using information on the individual components as no test data was available for this specific formulation.

ECOTOXICITY: The major components in the formulation show no aquatic toxicity at 1000 mg/L loading, therefore long-term adverse effects in the aquatic environment are not expected.

MOBILITY: Not established.

PERSISTENCE AND DEGRADABILITY: This product is expected to be inherently biodegradable, as the principal components have been shown to degrade at slow to moderate rates.

BIOACCUMULATIVE POTENTIAL: Not established.

## 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Product is suitable for burning in an enclosed, controlled burner for fuel value. Such

burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed of at an appropriate government waste disposal facility. Use of these methods is subject to user compliance with applicable laws and regulations and consideration of product characteristics at time of disposal. RCRA INFORMATION: The unused product, in our opinion, is not specifically listed by the EPA as a hazardous waste (40 CFR, Part 261D), nor is it formulated to contain materials which are listed hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrosivity, or reactivity. The unused product is not formulated with substances covered by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

#### 14. TRANSPORT INFORMATION

USA DOT: NOT REGULATED BY USA DOT. RID/ADR: NOT REGULATED BY RID/ADR. IMO: NOT REGULATED BY IMO. IATA: NOT REGULATED BY IATA.

#### 15. REGULATORY INFORMATION

US OSHA HAZARD COMMUNICATION STANDARD: When used for its intended purposes, this product is not classified as hazardous in accordance with OSHA 29 CFR 1910.1200. EU Labeling: Product is not dangerous as defined by the European Union Dangerous Substances/Preparations Directives. EU labeling not required. Governmental Inventory Status: All components comply with TSCA, EINECS/ELINCS and AICS. U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This product contains no "EXTREMELY HAZARDOUS SUBSTANCES". SARA (311/312) REPORTABLE HAZARD CATEGORIES: None. This product contains the following SARA (313) Toxic Release Chemicals:

CHEMICAL NAME	CAS NUMBER	CONC.
PHOSPHORODITHOIC ACID, O,O-DI	68649-42-3	1.3%
C1-14-ALKYL ESTERS, ZINC SALTS (2:1) (ZDDP)		

The following product ingredients are cited on the lists below:

CHEMICAL NAME	CAS NUMBER	LIST CITATIONS
LITHIUM HYDROXIDE MONOHYDRATE	1310-66-3	22 (0.05%)
TRICRESYL PHOSPHATE (>0.01%)	1330-78-5	22 ZINC (ELEMENTAL ANALYSIS) (0.18%)
7440-66-6	22 LITHIUM-SOAP THICKENER (6.14%)	7620-77-1
22 ZINC DINONYLNAPHTHALENE SULFONATE	28016-00-4	22 (0.40%)
PHOSPHORODITHOIC ACID, O,O-DI	68649-42-3	18, 20, 21, 22, 24, C1-14-ALKYL ESTERS, ZINC SALTS (2: 25 1) (ZDDP) (1.29%)
FATTY ACIDS, C16-22, LITHIUM SALTS	68783-36-8	22 (0.76%)

--- REGULATORY LISTS SEARCHED --- 1=ACGIH ALL 6=IARC 1 11=TSCA 4 16=CA P65 CARC 21=LA RTK 2=ACGIH A1 7=IARC 2A 12=TSCA 5a2 17=CA P65 REPRO 22=MI 293 3=ACGIH A2 8=IARC 2B 13=TSCA 5e 18=CA RTK 23=MN RTK 4=NTP CARC 9=OSHA CARC 14=TSCA 6 19=FL RTK 24=NJ RTK 5=NTP SUS 10=OSHA Z 15=TSCA 12b 20=IL RTK 25=PA RTK 26=RI RTK Code key: CARC=Carcinogen; SUS=Suspected Carcinogen; REPRO=Reproductive

#### 16. OTHER INFORMATION

USE: AUTOMOTIVE GREASE NOTE: PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES ARE NOT FORMULATED TO CONTAIN PCBS. Health studies have shown that many hydrocarbons pose potential human health risks which may vary from person to person. Information provided on this MSDS reflects intended use. This product should not be used for other applications. In any case, the following advice should be considered: INDUSTRIAL LABEL Under normal conditions of intended use, this product does not pose a risk to health. Excessive exposure may result in eye, skin or respiratory irritation. Always observe good hygiene measures. First Aid: Wash skin with soap and water. Flush eyes with water. If overcome by fumes or vapor, remove to fresh air. If ingested do not induce vomiting. If symptoms persist seek medical assistance. Read and understand the MSDS before using this product.

\*\*\*\*\* For Internal Use Only: MHC: 1\* 1\* 1\* 1\* 1\*, MPPEC: A, TRN: 530550-00, CMCS97: 97G870, REQ: US - MARKETING, SAFE USE: L EHS Approval Date: 21AUG2001

\*\*\*\*\*

\*\*\*\*\* Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate

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MOP ON DRESSING

# MOD MOP ON DRESSING

## 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: MOD Laminator & Maintainer  
Supplier's Name: INDCCO, Inc.  
Supplier's Address: N. Railroad & Essex St., Gloucester City, NJ 08030  
HMIS Hazard Code: Health:1 Flammability:0 Reactivity:0 Other:0  
Chemical Family: Restorer  
D.O.T. Shipping Name: N/A

Emergency Phone #: (856)456-6100  
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 NO.

% Concentrate Range

Hazard Ratings (TLV/PEL)

None

### SECTION 3-PHYSICAL DATA

Boiling Point (F): Approx. = 212°  
Vapor Pressure: = To Water  
Vapor Density: = To Water  
Solubility In Water: Disperses  
Appearance: Liquid Emulsion  
Odor: Citrus

Specific Gravity: 0.97  
Evaporation Rate: = To Water

### SECTION 4-FIRE AND EXPLOSION DATA

Flash Point (F): None to boiling (TOC)  
Flammable Limits: N/A  
Unusual Fire & Explosion Hazards: None

### SECTION 5-HEALTH HAZARD DATA

Route(s) of Entry: Inhalation: No Skin: Yes Ingestion: Yes  
Effects of Overexposure: May cause skin and eye irritation. If ingested, may cause gastric distress and blockage.  
Emergency & First Aid Procedures: For Eyes: Flush with water for at least fifteen minutes. If irritation persists get medical aid.  
For Skin: Wash with soap and water. If ingested: Induce vomiting. Give large quantities of water. Get medical aid.  
Conditions Aggravated by Exposure: None

Threshold Limit Value: Not Established

Listed Carcinogen, Mutagen, Teratogen (Ingredient Source Amount): None

### SECTION 6-REACTIVITY DATA

Stability: Stable  
Conditions to Avoid: None  
Incompatibility: Avoid contact with strong acids and oxidizers.  
Hazardous Decomposition Products: Carbon Oxides and Acrylates  
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 using a suitable absorbent. Rinse remaining material to drains.  
Waste disposal method: Follow local, state, and federal regulations.

### SECTION 8-SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not required.  
Ventilation: Local.  
Protective Gloves: Not required  
Eye Protection: Safety glasses  
Other Protective Equipment: None

### SECTION 9-SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store between 40° and 140° F. Do not freeze.  
Other Precautions: 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-10/5/00 By: G.C.

# MATERIAL SAFETY DATA SHEET

Date Printed: 08/05/16

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: MS-CS11273 - 79  
PRODUCT NAME: MOD PODGE COLORS

PLAID ENTERPRISES, INC.  
3225 WESTECH DRIVE  
NORCROSS, GA 30092

PHONE: 678-291-8100      CHEMTREC 24 HOUR PHONE: 800-424-9300

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT/EXPOSURE LIMITS	CAS#	% BY WT.
-----		
* RESIDUAL VINYL ACETATE OSHA PEL: 10 PPM, ACGIH TLV: 10 PPM	108-05-4	.5

## 3. HAZARDS IDENTIFICATION

### POTENTIAL HEALTH EFFECTS

EYE: Direct contact with material may cause slight irritation.

SKIN: Prolonged or repeated contact may cause slight skin irritation.

INGESTION: Not an anticipated route of exposure. Small amounts are not anticipated to be harmful.

INHALATION: Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and respiratory tract.

CHRONIC (CANCER) INFORMATION: Vinyl acetate is listed as a potential carcinogen by IARC. Overexposure to vinyl acetate is not expected to occur during normal handling and use of this product.

TERATOLOGY (BIRTH DEFECT) INFORMATION: Product does not contain chemicals at levels known to cause birth defects.

REPRODUCTION INFORMATION: No Data.

## 4. FIRST AID MEASURES

# MATERIAL SAFETY DATA SHEET

Date Printed: 08/05/16

**EYES:** Flush eyes with a large amount of water for at least 15 minutes. Consult a physician if irritation persists.

**SKIN:** Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.

**INGESTION:** Small amounts are not anticipated to be harmful. Give 2 glasses of water to drink.

**INHALATION:** Remove to fresh air. Get medical attention if breathing is difficult.

**NOTE TO PHYSICIANS:** Please contact your local poison control center for information regarding this product.

## 5. FIRE FIGHTING MEASURES

**FLAMMABLE PROPERTIES:**

**FLASH POINT:** Non Flammable      **METHOD:** Not Determined

**FLAMMABLE LIMITS:**

**LOWER FLAMMABLE LIMIT:** Not Determined

**UPPER FLAMMABLE LIMIT:** Not Determined

**AUTOIGNITION TEMPERATURE:** Not Applicable.

**HAZARDOUS COMBUSTION PRODUCTS:** Thermal decomposition may form carbon dioxide, carbon monoxide, and various hydrocarbons.

**EXTINGUISHING MEDIA:** Use extinguishing media appropriate for surrounding fire, water spray, foam, carbon dioxide, or dry chemical.

**FIREFIGHTING INSTRUCTIONS:** Use water spray to cool containers not actively involved in fire. Self-contained breathing apparatus recommended for fire fighters.

## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Keep unnecessary personnel away, dike and contain spill with inert material such as sand or earth. Transfer material into a container for proper disposal. Keep spill out of sewers and open bodies of water. Floors may become slippery.

# **MATERIAL SAFETY DATA SHEET**

Date Printed: 08/05/16

**LARGE SPILL:** Floor may be slippery, use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Caution: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

## **7. HANDLING AND STORAGE**

**HANDLING:** Avoid employee exposure through the use of appropriate engineering controls, adequate personal protective equipment, and good industrial hygiene practices. Wash thoroughly after handling. Handle in well-ventilated workspace.

**STORAGE:** Store in a moderate cool, dry, well ventilated area away from direct sources of heat. Avoid freezing (32F). Position containers so that any labeling information is visible. Keep containers closed.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** The use of local exhaust ventilation is recommended to control emissions near the source. Additional engineering controls should be used as necessary.

**RESPIRATORY PROTECTION:** Respiratory protection is generally not required. A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**SKIN PROTECTION:** Impervious clothing should be worn when gross contact is likely, such as when cleaning up large spills. Neoprene gloves may provide protection against permeation.

**EYE PROTECTION:** Use safety glasses with side shields (ANSI Z87.1 or approved equivalent).

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

**BOILING POINT:** 212 Deg. F

**MELTING POINT:** Not determined.

**VAPOR PRESSURE:** Not Determined

**VAPOR DENSITY:** Not Determined.

**SOLUBILITY IN WATER:** 100% Soluble or dispersible.

**SPECIFIC GRAVITY:** 1.07

**PH:** 4.5 to 5.0

**ODOR:** Mild, sweet.

**APPEARANCE:** Blue white.



# MATERIAL SAFETY DATA SHEET

Date Printed: 08/05/16

COATING VOC: . lb/gl  
MATERIAL VOC: . lb/gl

## 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY (CONDITIONS TO AVOID): This material is considered stable.

INCOMPATIBILITY: Not established

HAZARDOUS DECOMPOSITION PRODUCTS: Not established

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

## 11. TOXICOLOGICAL INFORMATION

As packaged for consumers, this product is certified in a toxicological evaluation by a medical expert to contain no materials in sufficient quantities to be toxic or injurious to humans, including children, or to cause acute or chronic health problems.

## 12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No applicable data.

CHEMICAL FATE INFORMATION: Appreciable evaporation from water to air is expected in the environment. No appreciable bioconcentration is expected in the environment.

## 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Local, State, and Federal waste disposal regulations.

## 14. TRANSPORT INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE

US DOT Hazard Class.....Nonregulated

## 15. REGULATORY INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE - SELECTED REGULATIONS REPRESENTED

U.S. FEDERAL REGULATIONS: The components of this product are included on the TSCA inventory.

# **MATERIAL SAFETY DATA SHEET**

Date Printed: 08/05/16

OSHA: This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200)

CERCLA: SARA HAZARD CATEGORY: Release of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

SECTION 313: \* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

## **INTERNATIONAL REGULATIONS:**

CANADIAN WHMIS: This product is not a controlled product under the Canadian Workplace Hazardous Materials Information System (WHMIS).

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All components of this product are on the Domestic Substances List (DSL), and acceptable for use under the provisions of CEPA.

EINECS: All the components of this product are on the European Inventory of Existing Commercial Chemical Substances.

## **STATE REGULATIONS:**

VOLATILE ORGANIC COMPOUNDS: The Volatile Organic Compounds (VOCs) are below the emission limits as regulated by The Environmental Protection Agency (EPA) and state regulations.

## **16. OTHER INFORMATION**

NAME OF PREPARER: Jim Stanley

REVISION DATE: 02/28/08

HMIS CODES: H F R P  
1 0 0 A

HMIS HAZARD RATINGS: H=HEALTH, F=FIRE, R=REACTIVITY, P=PERSONAL

SCALE: 0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=SERIOUS, 4=SEVERE

## **MATERIAL SAFETY DATA SHEET**

Date Printed: 08/05/16

PERSONAL PROTECTION: See Section 8, Exposure Controls/Personal Protection for recommended handling of material as supplied; check with supervisor for your actual use condition.

HMIS is a registered trademark of the National Paint and Coatings Association.

### LIST OF ACRONYMS:

ACGIH: American Conference of Government Industrial Hygienists

IARC: International Agency for Research on Cancer

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

PPM: Parts Per Million

SARA: Superfund Amendment Reauthorization Act

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Please note that this MSDS applies to industrial handling of this material. Consumers should read product label. The information and recommendations set forth herein are believed to be accurate. The data is derived from information provided to Plaid Enterprises, Inc. from its raw material suppliers. Plaid Enterprises, Inc. makes no guarantee or warranty, expressed or implied, regarding the accuracy, reliability, or completeness of the data or the results to be obtained from the use thereof. It is the responsibility of the user of the product to comply with all applicable federal, state, and local laws and regulations.

# **MATERIAL SAFETY DATA SHEET**

Date Printed: 08/05/16

# MATERIAL SAFETY DATA SHEET

Date Printed: 05/03/16

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: MS-11200'S  
PRODUCT NAME: MOD PODGE GLOSS SERIES

PLAID ENTERPRISES, INC.  
3225 WESTECH DRIVE  
NORCROSS, GA 30092

PHONE: 678-291-8100      CHEMTREC 24-HOUR PHONE: 800-424-9300

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT/EXPOSURE LIMITS	CAS#	% BY WT.
-----		
* RESIDUAL VINYL ACETATE OSHA PEL: 10 PPM, ACGIH TLV: 10 PPM	108-05-4	.5

## 3. HAZARDS IDENTIFICATION

### POTENTIAL HEALTH EFFECTS

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SKIN: Prolonged or repeated contact may cause slight skin irritation.

INGESTION: Not an anticipated route of exposure. Small amounts are not anticipated to be harmful.

INHALATION: Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and respiratory tract.

CHRONIC (CANCER) INFORMATION: Vinyl acetate is listed as a potential carcinogen by IARC. Overexposure to vinyl acetate is not expected to occur during normal handling and use of this product.

TERATOLOGY (BIRTH DEFECT) INFORMATION: Product does not contain chemicals at levels known to cause birth defects.

REPRODUCTION INFORMATION: No Data.

## 4. FIRST AID MEASURES

# **MATERIAL SAFETY DATA SHEET**

Date Printed: 05/03/16

**EYES:** Flush eyes with a large amount of water for at least 15 minutes. Consult a physician if irritation persists.

**SKIN:** Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.

**INGESTION:** Small amounts are not anticipated to be harmful. Give 2 glasses of water to drink.

**INHALATION:** Remove to fresh air. Get medical attention if breathing is difficult.

**NOTE TO PHYSICIANS:** Please contact your local poison control center for information regarding this product.

## **5. FIRE FIGHTING MEASURES**

**FLAMMABLE PROPERTIES:**

**FLASH POINT:** Non Flammable      **METHOD:** Not Determined

**FLAMMABLE LIMITS:**

**LOWER FLAMMABLE LIMIT:** Not Determined

**UPPER FLAMMABLE LIMIT:** Not Determined

**AUTOIGNITION TEMPERATURE:** Not Applicable.

**HAZARDOUS COMBUSTION PRODUCTS:** Thermal decomposition may form carbon dioxide, carbon monoxide, and various hydrocarbons.

**EXTINGUISHING MEDIA:** Use extinguishing media appropriate for surrounding fire, water spray, foam, carbon dioxide, or dry chemical.

**FIREFIGHTING INSTRUCTIONS:** Use water spray to cool containers not actively involved in fire. Self-contained breathing apparatus recommended for fire fighters.

## **6. ACCIDENTAL RELEASE MEASURES**

**SMALL SPILL:** Keep unnecessary personnel away, dike and contain spill with inert material such as sand or earth. Transfer material into a container for proper disposal. Keep spill out of sewers and open bodies of water. Floors may become slippery.

# **MATERIAL SAFETY DATA SHEET**

Date Printed: 05/03/16

**LARGE SPILL:** Floor may be slippery, use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Caution: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

## **7. HANDLING AND STORAGE**

**HANDLING:** Avoid employee exposure through the use of appropriate engineering controls, adequate personal protective equipment, and good industrial hygiene practices. Wash thoroughly after handling. Handle in well-ventilated workspace.

**STORAGE:** Store in a moderate cool, dry, well ventilated area away from direct sources of heat. Avoid freezing (32F). Position containers so that any labeling information is visible. Keep containers closed.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** The use of local exhaust ventilation is recommended to control emissions near the source. Additional engineering controls should be used as necessary.

**RESPIRATORY PROTECTION:** Respiratory protection is generally not required. A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**SKIN PROTECTION:** Impervious clothing should be worn when gross contact is likely, such as when cleaning up large spills. Neoprene gloves may provide protection against permeation.

**EYE PROTECTION:** Use safety glasses with side shields (ANSI Z87.1 or approved equivalent).

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

**BOILING POINT:** 212 Deg. F

**MELTING POINT:** Not determined.

**VAPOR PRESSURE:** Not Determined

**VAPOR DENSITY:** Not Determined.

**SOLUBILITY IN WATER:** 100% Soluble or dispersible.

**SPECIFIC GRAVITY:** 1.06

**PH:** 4.5 to 5.0

**ODOR:** Mild, sweet.

**APPEARANCE:** Blue white.

# MATERIAL SAFETY DATA SHEET

Date Printed: 05/03/16

COATING VOC: .2 lb/gl  
MATERIAL VOC: .09 lb/gl

## 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY (CONDITIONS TO AVOID): This material is considered stable.

INCOMPATIBILITY: Not established

HAZARDOUS DECOMPOSITION PRODUCTS: Not established

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

## 11. TOXICOLOGICAL INFORMATION

As packaged for consumers, this product is certified in a toxicological evaluation by a medical expert to contain no materials in sufficient quantities to be toxic or injurious to humans, including children, or to cause acute or chronic health problems.

## 12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No applicable data.

CHEMICAL FATE INFORMATION: Appreciable evaporation from water to air is expected in the environment. No appreciable bioconcentration is expected in the environment.

## 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Local, State, and Federal waste disposal regulations.

## 14. TRANSPORT INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE

US DOT Hazard Class.....Nonregulated

## 15. REGULATORY INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE - SELECTED REGULATIONS REPRESENTED

U.S. FEDERAL REGULATIONS: The components of this product are included on the TSCA inventory.



# MATERIAL SAFETY DATA SHEET

Date Printed: 05/03/16

OSHA: This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200)

CERCLA: SARA HAZARD CATEGORY: Release of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

SECTION 313: \* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

## INTERNATIONAL REGULATIONS:

CANADIAN WHMIS: This product is not a controlled product under the Canadian Workplace Hazardous Materials Information System (WHMIS).

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All components of this product are on the Domestic Substances List (DSL), and acceptable for use under the provisions of CEPA.

EINECS: All the components of this product are on the European Inventory of Existing Commercial Chemical Substances.

## STATE REGULATIONS:

VOLATILE ORGANIC COMPOUNDS: The Volatile Organic Compounds (VOCs) are below the emission limits as regulated by The Environmental Protection Agency (EPA) and state regulations.

## 16. OTHER INFORMATION

NAME OF PREPARER: Dewey Wright

REVISION DATE: 01/14/03

HMIS CODES: H F R P  
1 0 0 A

HMIS HAZARD RATINGS: H=HEALTH, F=FIRE, R=REACTIVITY, P=PERSONAL

SCALE: 0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=SERIOUS, 4=SEVERE

## **MATERIAL SAFETY DATA SHEET**

Date Printed: 05/03/16

PERSONAL PROTECTION: See Section 8, Exposure Controls/Personal Protection for recommended handling of material as supplied; check with supervisor for your actual use condition.

HMIS is a registered trademark of the National Paint and Coatings Association.

### LIST OF ACRONYMS:

ACGIH: American Conference of Government Industrial Hygienists

IARC: International Agency for Research on Cancer

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

PPM: Parts Per Million

SARA: Superfund Amendment Reauthorization Act

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Please note that this MSDS applies to industrial handling of this material. Consumers should read product label. The information and recommendations set forth herein are believed to be accurate. The data is derived from information provided to Plaid Enterprises, Inc. from its raw material suppliers. Plaid Enterprises, Inc. makes no guarantee or warranty, expressed or implied, regarding the accuracy, reliability, or completeness of the data or the results to be obtained from the use thereof. It is the responsibility of the user of the product to comply with all applicable federal, state, and local laws and regulations.

# **MATERIAL SAFETY DATA SHEET**

Date Printed: 05/03/16

# MATERIAL SAFETY DATA SHEET

Date Printed: 05/03/16

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: MS-11300'S  
PRODUCT NAME: MOD PODGE MATTE SERIES

PLAID ENTERPRISES, INC.  
3225 WESTECH DRIVE  
NORCROSS, GA 30092

PHONE: 678-291-8100      CHEMTREC 24-HOUR PHONE: 800-424-9300

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT/EXPOSURE LIMITS	CAS#	% BY WT.
-----		
* RESIDUAL VINYL ACETATE OSHA PEL: 10 PPM, ACGIH TLV: 10 PPM	108-05-4	.5

## 3. HAZARDS IDENTIFICATION

### POTENTIAL HEALTH EFFECTS

EYE: Direct contact with material may cause slight irritation.

SKIN: Prolonged or repeated contact may cause slight skin irritation.

INGESTION: Not an anticipated route of exposure. Small amounts are not anticipated to be harmful.

INHALATION: Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and respiratory tract.

CHRONIC (CANCER) INFORMATION: Vinyl acetate is listed as a potential carcinogen by IARC. Overexposure to vinyl acetate is not expected to occur during normal handling and use of this product.

TERATOLOGY (BIRTH DEFECT) INFORMATION: Product does not contain chemicals at levels known to cause birth defects.

REPRODUCTION INFORMATION: No Data.

## 4. FIRST AID MEASURES

# MATERIAL SAFETY DATA SHEET

Date Printed: 05/03/16

**EYES:** Flush eyes with a large amount of water for at least 15 minutes. Consult a physician if irritation persists.

**SKIN:** Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.

**INGESTION:** Small amounts are not anticipated to be harmful. Give 2 glasses of water to drink.

**INHALATION:** Remove to fresh air. Get medical attention if breathing is difficult.

**NOTE TO PHYSICIANS:** Please contact your local poison control center for information regarding this product.

## 5. FIRE FIGHTING MEASURES

**FLAMMABLE PROPERTIES:**

**FLASH POINT:** Non Flammable      **METHOD:** Not Determined

**FLAMMABLE LIMITS:**

**LOWER FLAMMABLE LIMIT:** Not Determined

**UPPER FLAMMABLE LIMIT:** Not Determined

**AUTOIGNITION TEMPERATURE:** Not Applicable.

**HAZARDOUS COMBUSTION PRODUCTS:** Thermal decomposition may form carbon dioxide, carbon monoxide, and various hydrocarbons.

**EXTINGUISHING MEDIA:** Use extinguishing media appropriate for surrounding fire, water spray, foam, carbon dioxide, or dry chemical.

**FIREFIGHTING INSTRUCTIONS:** Use water spray to cool containers not actively involved in fire. Self-contained breathing apparatus recommended for fire fighters.

## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Keep unnecessary personnel away, dike and contain spill with inert material such as sand or earth. Transfer material into a container for proper disposal. Keep spill out of sewers and open bodies of water. Floors may become slippery.

# **MATERIAL SAFETY DATA SHEET**

Date Printed: 05/03/16

**LARGE SPILL:** Floor may be slippery, use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Caution: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

## **7. HANDLING AND STORAGE**

**HANDLING:** Avoid employee exposure through the use of appropriate engineering controls, adequate personal protective equipment, and good industrial hygiene practices. Wash thoroughly after handling. Handle in well-ventilated workspace.

**STORAGE:** Store in a moderate cool, dry, well ventilated area away from direct sources of heat. Avoid freezing (32F). Position containers so that any labeling information is visible. Keep containers closed.

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** The use of local exhaust ventilation is recommended to control emissions near the source. Additional engineering controls should be used as necessary.

**RESPIRATORY PROTECTION:** Respiratory protection is generally not required. A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**SKIN PROTECTION:** Impervious clothing should be worn when gross contact is likely, such as when cleaning up large spills. Neoprene gloves may provide protection against permeation.

**EYE PROTECTION:** Use safety glasses with side shields (ANSI Z87.1 or approved equivalent).

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

**BOILING POINT:** 212 Deg. F

**MELTING POINT:** Not determined.

**VAPOR PRESSURE:** Not Determined

**VAPOR DENSITY:** Not Determined.

**SOLUBILITY IN WATER:** 100% Soluble or dispersible.

**SPECIFIC GRAVITY:** 1.06

**PH:** 4.5 to 5.0

**ODOR:** Mild, sweet.

**APPEARANCE:** Blue white.

# MATERIAL SAFETY DATA SHEET

Date Printed: 05/03/16

COATING VOC: .2 lb/gl  
MATERIAL VOC: .09 lb/gl

## 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY (CONDITIONS TO AVOID): This material is considered stable.

INCOMPATIBILITY: Not established

HAZARDOUS DECOMPOSITION PRODUCTS: Not established

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

## 11. TOXICOLOGICAL INFORMATION

As packaged for consumers, this product is certified in a toxicological evaluation by a medical expert to contain no materials in sufficient quantities to be toxic or injurious to humans, including children, or to cause acute or chronic health problems.

## 12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No applicable data.

CHEMICAL FATE INFORMATION: Appreciable evaporation from water to air is expected in the environment. No appreciable bioconcentration is expected in the environment.

## 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Local, State, and Federal waste disposal regulations.

## 14. TRANSPORT INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE

US DOT Hazard Class.....Nonregulated

## 15. REGULATORY INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE - SELECTED REGULATIONS REPRESENTED

U.S. FEDERAL REGULATIONS: The components of this product are included on the TSCA inventory.

# MATERIAL SAFETY DATA SHEET

Date Printed: 05/03/16

OSHA: This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200)

CERCLA: SARA HAZARD CATEGORY: Release of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

SECTION 313: \* Indicates toxic chemical(s) subject to the reporting requirements of section 313 of Title III and of 40 CFR 372.

## INTERNATIONAL REGULATIONS:

CANADIAN WHMIS: This product is not a controlled product under the Canadian Workplace Hazardous Materials Information System (WHMIS).

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All components of this product are on the Domestic Substances List (DSL), and acceptable for use under the provisions of CEPA.

EINECS: All the components of this product are on the European Inventory of Existing Commercial Chemical Substances.

## STATE REGULATIONS:

VOLATILE ORGANIC COMPOUNDS: The Volatile Organic Compounds (VOCs) are below the emission limits as regulated by The Environmental Protection Agency (EPA) and state regulations.

## 16. OTHER INFORMATION

NAME OF PREPARER: Dewey Wright

REVISION DATE: 01/14/03

HMIS CODES: H F R P  
1 0 0 A

HMIS HAZARD RATINGS: H=HEALTH, F=FIRE, R=REACTIVITY, P=PERSONAL

SCALE: 0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=SERIOUS, 4=SEVERE



## **MATERIAL SAFETY DATA SHEET**

Date Printed: 05/03/16

PERSONAL PROTECTION: See Section 8, Exposure Controls/Personal Protection for recommended handling of material as supplied; check with supervisor for your actual use condition.

HMIS is a registered trademark of the National Paint and Coatings Association.

### LIST OF ACRONYMS:

ACGIH: American Conference of Government Industrial Hygienists

IARC: International Agency for Research on Cancer

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

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PPM: Parts Per Million

SARA: Superfund Amendment Reauthorization Act

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Please note that this MSDS applies to industrial handling of this material. Consumers should read product label. The information and recommendations set forth herein are believed to be accurate. The data is derived from information provided to Plaid Enterprises, Inc. from its raw material suppliers. Plaid Enterprises, Inc. makes no guarantee or warranty, expressed or implied, regarding the accuracy, reliability, or completeness of the data or the results to be obtained from the use thereof. It is the responsibility of the user of the product to comply with all applicable federal, state, and local laws and regulations.

# **MATERIAL SAFETY DATA SHEET**

Date Printed: 05/03/16

2-21-05

MATERIAL SAFETY DATA SHEET

02916-1005

Date Printed: 02/18/05

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: MS-CS11209, 11, 17  
PRODUCT NAME: MOD PODGE SPARKLE

PLAID ENTERPRISES, INC.  
3225 WESTECH DRIVE  
NORCROSS, GA 30092

PHONE: 678-291-8100      CHEMTREC 24 HOUR PHONE: 800-424-9300

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT/EXPOSURE LIMITS	CAS#	% BY WT.
* RESIDUAL VINYL ACETATE OSHA PEL: 10 PPM, ACGIH TLV: 10 PPM	108-05-4	.5

## 3. HAZARDS IDENTIFICATION

## POTENTIAL HEALTH EFFECTS

EYE: Direct contact with material may cause slight irritation.

SKIN: Prolonged or repeated contact may cause slight skin irritation.

INGESTION: Not an anticipated route of exposure. Small amounts are not anticipated to be harmful.

INHALATION: Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and respiratory tract.

CHRONIC (CANCER) INFORMATION: Vinyl acetate is listed as a potential carcinogen by IARC. Overexposure to vinyl acetate is not expected to occur during normal handling and use of this product.

TERATOLOGY (BIRTH DEFECT) INFORMATION: Product does not contain chemicals at levels known to cause birth defects.

REPRODUCTION INFORMATION: No Data.

## 4. FIRST AID MEASURES

**MATERIAL SAFETY DATA SHEET**

Date Printed: 02/18/05

EYES: Flush eyes with a large amount of water for at least 15 minutes. Consult a physician if irritation persists.

SKIN: Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.

INGESTION: Small amounts are not anticipated to be harmful. Give 2 glasses of water to drink.

INHALATION: Remove to fresh air. Get medical attention if breathing is difficult.

NOTE TO PHYSICIANS: Please contact your local poison control center for information regarding this product.

**5. FIRE FIGHTING MEASURES****FLAMMABLE PROPERTIES:**

FLASH POINT: Non Flammable      METHOD: Not Determined

**FLAMMABLE LIMITS:**

LOWER FLAMMABLE LIMIT: Not Determined

UPPER FLAMMABLE LIMIT: Not Determined

AUTOIGNITION TEMPERATURE: Not Applicable.

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition may form carbon dioxide, carbon monoxide, and various hydrocarbons.

EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire, water spray, foam, carbon dioxide, or dry chemical.

FIREFIGHTING INSTRUCTIONS: Use water spray to cool containers not actively involved in fire. Self-contained breathing apparatus recommended for fire fighters.

**6. ACCIDENTAL RELEASE MEASURES**

SMALL SPILL: Keep unnecessary personnel away, dike and contain spill with inert material such as sand or earth. Transfer material into a container for proper disposal. Keep spill out of sewers and open bodies of water. Floors may become slippery.

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Date Printed: 02/18/05

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

**BOILING POINT:** 212 Deg. F

**MELTING POINT:** Not determined.

**VAPOR PRESSURE:** Not Determined

**VAPOR DENSITY:** Not Determined.

**SOLUBILITY IN WATER:** 100% Soluble or dispersible.

**SPECIFIC GRAVITY:** 1.07

**PH:** 4.5 to 5.0

**ODOR:** Mild, sweet.

**APPEARANCE:** Blue white.

**M A T E R I A L   S A F E T Y   D A T A   S H E E T**

Date Printed: 02/18/05

COATING VOC: . lb/gl

MATERIAL VOC: . lb/gl

**10. STABILITY AND REACTIVITY**

CHEMICAL STABILITY (CONDITIONS TO AVOID): This material is considered stable.

INCOMPATIBILITY: Not established

HAZARDOUS DECOMPOSITION PRODUCTS: Not established

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

**11. TOXICOLOGICAL INFORMATION**

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CHEMICAL FATE INFORMATION: Appreciable evaporation from water to air is expected in the environment. No appreciable bioconcentration is expected in the environment.

**13. DISPOSAL CONSIDERATIONS**

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**14. TRANSPORT INFORMATION:**

NOT MEANT TO BE ALL INCLUSIVE

US DOT Hazard Class.....Nonregulated

**15. REGULATORY INFORMATION:**

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U.S. FEDERAL REGULATIONS: The components of this product are included on the TSCA inventory.

**M A T E R I A L   S A F E T Y   D A T A   S H E E T**

Date Printed: 02/18/05

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VOLATILE ORGANIC COMPOUNDS: The Volatile Organic Compounds (VOCs) are below the emission limits as regulated by The Environmental Protection Agency (EPA) and state regulations.

**16. OTHER INFORMATION**

NAME OF PREPARER: Dewey Wright

REVISION DATE: 01/14/03

HMIS CODES: H F R P  
1 0 0 A

HMIS HAZARD RATINGS: H=HEALTH, F=FIRE, R=REACTIVITY, P=PERSONAL

SCALE: 0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=SERIOUS, 4=SEVERE

**M A T E R I A L   S A F E T Y   D A T A   S H E E T**

Date Printed: 02/18/05

PERSONAL PROTECTION: See Section 8, Exposure Controls/Personal Protection for recommended handling of material as supplied; check with supervisor for your actual use condition.

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LIST OF ACRONYMS:

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IARC: International Agency for Research on Cancer

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

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SARA: Superfund Amendment Reauthorization Act

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act



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# MATERIAL SAFETY DATA SHEET

Page 1 of 5

## SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

<b>PRODUCT NAME:</b> Estes Model Rocket Engines	
<b>PRODUCT NUMBER:</b>	
<b>TRADE NAME:</b> Estes Model Rocket Engines <b>GENERAL USE:</b> Model Rocket Propulsion <b>CHEMICAL FAMILY:</b> Insensitive Explosive (Class 1.4) <b>PRODUCT DESCRIPTION:</b> Kraft paper cylinder with light gray clay at ends, one end has a small orifice with black material inside. Sulfur odor.	
<b>MANUFACTURED FOR:</b> Estes-Cox Corp. d/b/a Estes Industries	<b>DATE PREPARED:</b> January 7, 2011 <b>SUPERSEDES:</b> August 5, 2010
<b>ADDRESS (NUMBER, STREET, P.O. BOX)</b> P.O. Box 227, 1295 H Street	<b>TELEPHONE NUMBER FOR GENERAL INFORMATION</b> 719-372-6565
<b>(CITY, STATE AND ZIP CODE)</b> Penrose, CO 81240 <b>COUNTRY</b> USA	<b>CHEMTEL 24-HOUR EMERGENCY TELEPHONE NUMBER</b> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  </div> <div> <b>1-800-255-3924</b>                      North America Toll Free                 </div> <div> <b>01-813-248-0585</b>                      International                 </div> </div>

## SECTION 2 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW**

**WARNING! THIS DEVICE CONTAINS A FAST BURNING CHARGE. KEEP AWAY FROM FIRE AND HEAT SOURCES. SEVERE MECHANICAL IMPACT MAY DEFORM PRODUCT.** Individual cartridges may ignite if the unit is exposed to extreme heat as seen with fire conditions. Oxides of Nitrogen, Carbon, and Sulfur may be formed. Keep out of the reach of young children and pets. Adult supervision is strongly encouraged when product is used, especially by young children. Product contents are harmful by ingestion. Ignition of product when confined may lead to an explosion.

**POTENTIAL HEALTH EFFECTS**

**INHALATION:**  
Normal handling of the unused product poses no exposure hazards. When the product is used, particles and vapors may be generated which may cause temporary slight irritation to the respiratory tract; this is a rare occurrence when the product is used as directed..

**SKIN:**  
Unlikely to cause irritation to skin. Particles from ignited product may cause thermal burns.

**EYES:**  
Unlikely to cause irritation to eyes; In unusual cases, particulates from used product may cause irritation.

**INGESTION:**  
Ingestion of product is highly unlikely. Components of product are harmful and will cause irritation to gastro-intestinal tract.

**CARCINOGENICITY:**  
Product contains silica, which is considered carcinogenic by the State of California (Proposition 65).

## SECTION 3 - HAZARDOUS INGREDIENTS

Hazardous Components	% (wt)	CAS #	EINECS #	EU Hazard Symbol(s)	EU RISK PHRASES (Full Text Sections 15 & 16)
Potassium nitrate	60-80	7757-79-1	231-818-8	Xn, O	R8, R36/37/38
Sulfur	10-20	7704-34-9	231-722-6	F, Xi	R11, R36/37/38
Charcoal	10-20	16291-96-6	240-383-3	None	None
Graphite	NR	7782-42-5	231-955-3	None	None

**NOTES:** This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS), and European Union Directives. Hazard symbols and risk phrases are based on maximum listed concentration of each hazardous ingredient. Unlisted ingredients are not "hazardous" per the OSHA Hazard Communication Standard (29 CFR 1910.1200), the Canadian Workplace Hazardous Materials Information System (WHMIS) or the European (GHS) directives and are considered trade secrets under US Federal Law (29CFR and 40CFR), Canadian Law (Health Canada Legislation), and European Union Directives.

# MATERIAL SAFETY DATA SHEET

Page 2 of 5

**PRODUCT NAME:** Estes Model Rocket Engines

**PRODUCT NUMBER:**

## SECTION 4 - FIRST AID MEASURES

### INHALATION:

If symptoms of lung irritation occur (coughing, wheezing or breathing difficulty), remove from exposure area to fresh air immediately. Get medical attention in the unusual event of severe distress.

### EYES:

Remove contact lenses, then wash for 15 minutes with clean potable water lifting upper and lower lids occasionally. Seek medical attention if irritation persists.

### SKIN:

Wash with plenty of soap and water. Seek medical attention if delayed dermatitis develops (a rare condition).

### INGESTION:

**Contact medical authorities immediately. Do not induce vomiting unless directed to do so by medical personnel.** If vomiting occurs naturally, have victim lean forward to avoid aspiration of regurgitant. Give 1-2 glasses of water to victim if victim is conscious and able to swallow and seek immediate medical assistance. Never give anything by mouth to an unconscious person. **Note to Physician: This product contains nitrates, which may produce methemoglobinemia. Methylene blue may be required for treatment. Treatment should be aimed at reducing methemoglobin levels, as well as providing respiratory and metabolic support. As product contains charcoal, gastric lavage may be of benefit within 30-60 minutes post-ingestion.**

## SECTION 5 - FIRE FIGHTING MEASURES

### GENERAL HAZARDS:

Flammability Classification: (defined by 29 CFR 1910.1200) Class 1.4 Explosive. Can rapidly burn or explode (if confined in metal or similar situations) under fire conditions. Individual devices will randomly burn and/or explode. Product will not mass explode if multiple devices are involved. Burning material may produce toxic and irritating vapors. See Emergency Response Guidebook for further information. Mechanical impacts or electrical discharges are highly unlikely to cause product to ignite.

### EXTINGUISHING MEDIA:

Where large quantities are affected, flood area with water; if fire is already consuming product, incident command should base fire-fighting decisions on capabilities and total quantity of product. If no water is available, carbon dioxide, dry chemical or earth may be used.

### FIRE FIGHTING PROCEDURES:

In case of fire, use normal fire fighting equipment. Protection concerns must also address the potential of the physical characteristic of this product as explosive. Quarantine area for fires involving large quantities of product.

### UNUSUAL FIRE AND EXPLOSION HAZARDS:

If fire reaches a large quantity of product, consider a withdrawal of personnel to a safe distance. Evacuate all persons, including emergency responders from the area for at least 500 feet (1/10 mile) in all directions.

### HAZARDOUS COMBUSTION PRODUCTS:

Carbon Monoxide, Carbon Dioxide, Nitrous Oxides, Sulfur Oxides

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Model rocket engines are devices in a solid state. Simply pick up and place in containers approved for storage and transport. Wipe up any dust with wet cloths. **IF PRODUCT IS DAMAGED, DO NOT USE PRODUCT; DISCARD IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. SEE SECTION 13.**

## SECTION 7 - HANDLING AND STORAGE

### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

**HANDLING:** Product may burn/explode if exposed to extreme heat. Do not smoke while handling product. **DO NOT ATTEMPT TO DISMANTLE PRODUCT!!**

**STORAGE:** Avoid storage near extreme heat, ignition sources or open flame. Store at 32° - 140° F (0°-60° C). Store away from living quarters.

**CONDITIONS TO AVOID:** Heat/flame/sparks, Severe mechanical impact (which may deform product, rendering it unsafe for use).

# MATERIAL SAFETY DATA SHEET

Page 3 of 5

<b>PRODUCT NAME:</b> Estes Model Rocket Engines			
<b>PRODUCT NUMBER:</b>			
<b>SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION</b>			
Hazardous Components	CAS #	ACGIH Exposure Limits	OSHA Exposure Limits
Potassium nitrate	7757-79-1	NE	NE
Sulfur	7704-34-9	15 mg/m3	15 mg/m3
Charcoal	16291-96-6	NE	NE
Graphite	7782-42-5	2 mg/m3	2.5 mg/m3 (respirable dust)
<b>PERSONAL PROTECTION</b>			
<b>RESPIRATORY PROTECTION:</b> A vapor respirator may be advisable or required under emergency conditions.			
<b>PROTECTIVE GLOVES:</b> None generally required.			
<b>EYE PROTECTION:</b> Always follow the National Association of Rocketry (NAR) Model Rocketry Safety Code and all applicable laws and regulations.			
<b>OTHER PROTECTIVE CLOTHING OR EQUIPMENT:</b> Not required when product is used as directed by manufacturer.			
<b>WORK / HYGIENIC PRACTICES:</b> Avoid breathing fumes from ignition. Do not smoke while handling product; eating and drinking are also to be avoided.			
<b>SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES</b>			
<b>DESCRIPTION:</b> Sulfur Odor - See Note for Appearance.		<b>CONDITIONS TO AVOID:</b> Not applicable.	
pH Not applicable.		SPECIFIC GRAVITY (WATER = 1) Not applicable	
MELTING POINT Not applicable.		SOLUBILITY IN WATER Insoluble - some components are soluble in water	
FLASH POINT Not applicable.		VISCOSITY Not applicable	
FLAMMABLE LIMITS LEL: None                      UEL: None		VAPOR DENSITY (AIR = 1) Not applicable.	
AUTOIGNITION TEMPERATURE NR		EVAPORATION RATE (WATER = 1) Not applicable.	
<b>VOLATILE ORGANIC COMPOUND (VOC) INFORMATION</b> Not applicable.			
<b>NOTES:</b> Appearance and Odor: Kraft paper cylinder with light gray clay at ends, one end has a small orifice with black material inside			
<b>SECTION 10 - STABILITY AND REACTIVITY</b>			
<b>STABILITY:</b> Stable under normal temperatures and pressure.		<b>CONDITIONS TO AVOID:</b> Extreme heat; extreme mechanical impacts.	
<b>INCOMPATIBILITY (MATERIALS TO AVOID):</b> Acids, Class A & B explosives, strong oxidizers.			
<b>HAZARDOUS DECOMPOSITION OR BYPRODUCTS:</b> Carbon Monoxide, Carbon Dioxide, Nitrous Oxides, Sulfur Oxides under fire conditions only.			
<b>HAZARDOUS POLYMERIZATION:</b> Will not occur.		<b>CONDITIONS TO AVOID:</b> None related to polymerization.	
<b>SECTION 11 - TOXICOLOGICAL INFORMATION</b>			
<b>Complete Product</b>			
<b>Oral LD<sub>50</sub></b>	Product contents are harmful; ingestion of used product is highly unlikely.		
<b>Dermal LD<sub>50</sub></b>	Product is unlikely to cause skin irritation. Ignited particles may cause thermal burns.		
<b>Inhalation LC<sub>50</sub></b>	Unused product is harmless. Vapors/particles from deployed product may be irritating.		
<b>Irritation</b>	Not a skin or eye irritant in unused form. Particulates and vapors from ignited product are possibly irritating to eyes and respiratory system in unusual cases.		

# MATERIAL SAFETY DATA SHEET

Page 4 of 5

**PRODUCT NAME:** Estes Model Rocket Engines

**PRODUCT NUMBER:**

## SECTION 11 - TOXICOLOGICAL INFORMATION Continued

### Product Components

Hazardous Components	CAS #	LD50 of Ingredient (Oral, Rat - unless otherwise specified)	LC50 of Ingredient (Inhalation, Rat - unless otherwise specified)
Potassium nitrate	7757-79-1	Not Established	Not Established
Graphite	7782-42-5	Not Established	Not Established
Charcoal	16291-96-6	Not Established	Not Established
Sulfur	7704-34-9	> 8437 mg/kg	Not Established

## SECTION 12 - ECOLOGICAL INFORMATION

No data is available on this product, but both unused and used engines may be harmful if ingested by animals. Collection and careful disposal of spent engines is highly advisable; soak used engines in water until disintegration occurs, then discard with normal trash.

## SECTION 13 - DISPOSAL CONSIDERATIONS

### WASTE DISPOSAL METHOD:

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous. Damaged materials may pose a danger. To dispose of a small quantity of product, soak in water until the engine disintegrates, then dispose of remnants in an ordinary manner. For large quantities, incineration in a licensed facility is preferable.

## SECTION 14 - TRANSPORT INFORMATION

### DOMESTIC SHIPPING WITHIN THE USA

**PROPER SHIPPING NAME:** Flammable solid, organic, n.o.s. (Model rocket kits containing motors with or without un-installed igniters), UN 1325, Div. 4.1, PG II (CARGO AIRCRAFT ONLY if shipped by air)

**DOT HAZARD CLASS / Pack Group:** Class 4.1 / PG II

**REFERENCE:** DOT SP-7887

**UN / NA IDENTIFICATION NUMBER:** UN1325

**LABEL:** Flammable Solid or Explosives 1.4S

**NOTES:** Shipped via the United States Postal Service via Surface Mail Only as: Toy Propellant Devices, NA0323, Class 1.4S/ PG II for engines with ≤30 g of propellant. Engines with more than 30g of propellant may not be shipped by the USPS.

**HAZARD SYMBOLS:** See notes for correct symbols



### INTERNATIONAL SHIPPING

**PROPER SHIPPING NAME:** Articles, Pyrotechnic, UN 0432, Div. 1.4S, PG II (Engines with ≤30 g of propellant)  
Cartridges, Power Device, UN 0276, Div. 1.4C, PG II (Engines with >30 g of propellant)

**IMDG HAZARD CLASS / Pack Group:** Class 1.4S or 1.4C PG II (Category 05 - UN 0432; Category 06 - UN 0276) EmS: F-B, S-X

**IATA HAZARD CLASS / Pack Group:** Class 1.4S / PG II or 1.4C PG II (See Notes)

**RID/ADR HAZARD CLASS / Pack Group:** Class 1.4S / PG II or 1.4C PG II, EAC=1Y

**TDG (Canada) HAZARD CLASS / Pack Group:** Class 1.4S / PG II or 1.4C PG II

**REFERENCE:** IMDG, IATA, RID/ADR, TDG

**UN / NA IDENTIFICATION NUMBER:** UN 0432 or UN 0276

**LABEL:** Explosive, Class 1.4 (C or S), CAO (1.4C only)

**NOTES:** Engines with >30g propellant (Class 1.4C) may not be shipped on a passenger aircraft; 75 kg is the maximum load per Cargo Only Aircraft (CAO). For engines with ≤30 g of propellant, 25kg is the maximum load for passenger aircraft, 100 kg is the maximum for CAO.

**HAZARD SYMBOLS:** See notes for correct symbols



Note: Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100 - 177, IMDG, IATA, EU, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

# MATERIAL SAFETY DATA SHEET

Page 5 of 5

**PRODUCT NAME:** Estes Model Rocket Engines

**PRODUCT NUMBER:**

## SECTION 15 - REGULATORY INFORMATION

TSCA (USA - Toxic Substance Control Act): **Components are listed under Section 8b.**

SARA TITLE III (USA - Superfund Amendments and Reauthorization Act):

Acute Health: <b>YES</b>	Chronic Health: <b>NO</b>
Fire: <b>YES</b>	Sudden Release of Pressure: <b>YES</b>
Reactive: <b>NO</b>	* - Only if confined under fire conditions

SARA 313 REPORTABLE INGREDIENTS: **None**

CERCLA (USA - Comprehensive Response Compensation and Liability Act): **Potassium Nitrate is CERCLA reportable.**

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986: **WARNING: This product contains silica, a chemical known to the state of California to cause cancer.**

State Right To Know Laws: **This product contains chemicals listed on the RTK Laws of CA, FL, MA, MI, MN, NJ, PA, & RI.**

CPR (Canadian Controlled Products Regulations): **Exempt under WHMIS regulations as explosive.**

IDL (Canadian Ingredient Disclosure List): **Components are listed in Section 2.**

DSL / NDSL (Canadian Domestic Substances List / Non-Domestic Substances List): **Listed or exempt on both CDSL and NDSL.**

EINECS (European Inventory of Existing Commercial Chemical Substances): **Referenced**

WGK Water Quality Index: **NA for product.**

EUROPEAN (GHS) HAZARD SYMBOLS



EU RISK PHRASES

**R2: Risk of explosion by shock, friction, fire or other sources of ignition.**

**R22: Harmful if swallowed.**

EU SAFETY PHRASES

**S1/2: Keep locked up and out of the reach of children.**

## SECTION 16 - OTHER INFORMATION

HMIS HAZARD RATINGS

0 = INSIGNIFICANT , 1 = SLIGHT

2 = MODERATE, 3 = HIGH

4 = EXTREME

HEALTH:	1
FLAMMABILITY:	3
PHYSICAL HAZARD:	1

**Personal Protective Equipment: See Section 8**

**Legend:**

ACGIH - American Congress of Government Industrial Hygienists , CAS - Chemical Abstracts Service

EINECS- European Inventory of Existing Commercial Chemical Substances

HMIS - Hazardous Materials Identification System, IARC - International Agency for Research on Cancer

NA - Not Available , ND - Not Determined, NE - Not Established, NR - Not Reported

NIOSH - National Institute for Occupational Safety and Health, NTP - National Toxicology Program

OSHA - Occupational Safety and Health Administration

**Full R-Phrases (Not listed in Section 15):** R8 Contact with combustible material may cause fire. R11 Highly Flammable. R36/37/38 Irritating to eyes, respiratory system and skin.

REVISION SUMMARY: Revised 1/4/2011 - LB.

**MSDS Prepared by:**

ChemTel Inc.

1305 North Florida Avenue

Tampa, Florida USA 33602-2902

Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573

Website: www.chemtelinc.com



The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

1/6/2009

**MATERIAL SAFETY DATA SHEET**



PRODUCT / MATERIAL: CLAY or GLAZE  
MANUFACTURER / DISTRIBUTOR: LAGUNA CLAY COMPANY  
ADDRESS: 14400 Lomitas Avenue, City of Industry, CA 91746  
PHONE / FAX / EMAIL: (626) 330-0631 / (626) 333-7694 / MSDS@lagunaclay.com

**SECTION I - PRODUCT INFORMATION**

TRADE NAME: EM100  
SYNONYM: 10  
CHEMICAL FAMILY: Ceramic Blend

**SECTION II - HAZARDOUS INGREDIENTS**

INGREDIENT NAME	Maximum Percent	CAS NUMBER	OSHA PEL TWA: (mg/m3)	NIOSH REL TWA: (mg/m3)	ACGIH TLV TWA: (mg/m3)
Calcium Carbonate	6	1317-65-3	5	5	10
Silica, Crystalline (Quartz)	36	14808-60-7	10 mg/m3 / %SiO <sub>2</sub> + 2	0.05	0.05
Titanium Dioxide	2	13463-67-7	15		10

**SECTION III - PHYSICAL DATA**

BOILING POINT (°F) Not Applicable  
VAPOR PRESSURE Not Applicable  
VAPOR DENSITY Not Applicable  
SOLUBILITY IN WATER Insoluble  
SPECIFIC GRAVITY 1.7 – 3.7  
PERCENT VOLATILE BY WEIGHT 0  
EVAPORATION RATE 0  
APPEARANCE AND ODOR Color varies between moist and dry state; no odor.

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT Not Flammable  
EXTINGUISHING MEDIA Water  
UNUSUAL FIRE OR EXPLOSION HAZARDS None  
SPECIAL FIRE FIGHTING PROCEDURES None

**SECTION V - REACTIVITY DATA**

STABILITY FACTOR Product is stable.  
INCOMPATIBILITY None  
HAZARDOUS DECOMPOSITION PRODUCTS None. Hazardous polymerization will not occur.  
CONDITIONS TO AVOID Inhalation of dust.

**SECTION VI - HEALTH HAZARD DATA**

PRIMARY ROUTES OF ENTRY: Inhalation (dry form only), ingestion and dermal.



SUMMARY OF RISKS:	Individuals with a lung disease/condition (e.g.: bronchitis, emphysema, chronic pulmonary disease) can be aggravated by exposure.
EMERGENCY FIRST AID:	No specific first aid is necessary since the adverse health effects associated with this compound results from chronic exposures.
Eye Contact	May be an irritant, flush eyes with generous amounts of water for at least 15 minutes; call a physician if irritation persists.
Skin Contact	May cause local dermatitis, which is relieved when removed.
Ingestion	Toxicity due to ingestion is low.
Inhalation	Remove to fresh air, call a physician if irritation due to inhalation persists.
Physician's Note	None.

#### SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Spills or Release Procedure	Follow normal clean-up procedures. Care should be taken to avoid causing dust to become airborne. Vacuum or use wet clean-up techniques.
Waste Disposal Procedure	Dispose material in accordance with Federal, State, and Local regulations.

#### SECTION VIII - CONTROL MEASURES

Provide adequate ventilation to keep dust or vapor concentrations below acceptable exposure limits. Use gloves as needed for handling material containers. Wear safety glasses when needed. Appropriate respiratory protection may be required to protect from certain dusts. Respirators must be selected and used in accordance with OSHA Subpart 1 of (29 CFR 1910.134).

#### SECTION IX - TOXICOLOGICAL INFORMATION

This product (and all of it's components) is in compliance with the U.S. EPA 15 U.S. C.2604 regulation.

This product is designated a HEALTH CAUTION under ASTM D-4236 and C-1023 under the federal Labeling of Hazardous Art Materials Act (LHAMA). Specific Toxicology information on materials is available upon

#### SECTION X - REGULATORY

This product may contain materials that are reportable under Section 313 of the Emergency Planning and Community Right-To-Know Act (Superfund Amendments and Reauthorization Act – SARA), and 40 CFR Part 372.

SARA Title III Data:

These levels are "typical quantities" and may change slightly with different lots.

THIS PRODUCT CONTAINS SUBSTANCES REGULATED UNDER CALIFORNIA'S SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65).



**SECTION XI - DISCLAIMER**

The information provided in this MSDS document has been provided to Laguna Clay Company by its material suppliers and is represented by those suppliers as accurate and reliable.

Laguna Clay Company is not liable for injury, loss, or damage, direct or consequential, arising out of the use or inability to properly use this product. This product is intended only for use in traditional ceramic applications.

This MSDS conforms to the ASTM D-4236 and C-1023 requirements defined by LHAMA, the Federal Labeling of Hazardous Art Materials Act. LHAMA was developed by the American Society of Testing and Materials (ASTM) to ensure the proper labeling of art materials.



**EnviroCare Corporation**

260 Fordham Road  
Wilmington, MA 01887  
(978) 658-0123

**Emergency Telephone****1-800-424-9300 Chemtrec***Health* 1*Fire* 0

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**Section 1: Identity** EPA Reg. No. 10324-85-82480

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**Trade Name:** Moldex  
**Chemical Family:** Quaternary Ammonium Compounds  
**Formula:** (See Section 2)  
**Chemical Name:** (See Section 2)  
**DOT Proper Shipping Name:** N/A

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**Section 2: Ingredients**

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	<u>Weight</u>	<u>Exposure Limits</u>
Alkyl (50%C14, 40%C12, 10%C16) dimethyl benzyl ammonium chloride (CAS #68424-85-1)	0.034%	ND
Octyl decyl dimethyl ammonium chloride (CAS #32426-11-2)	0.026%	ND
Dioctyl dimethyl ammonium chloride (CAS #5538-94-3)	0.013%	ND
Didecyl dimethyl ammonium chloride (CAS #7173-51-5)	0.013%	ND
Na <sub>4</sub> EDTA (CAS #64-02-8)	0.030%	ND
Sodium Metasilicate, Pentahydrate (CAS #10213-79-3)	0.008%	ND
Nonoxynol-10 (CAS #26027-38-3)	0.039%	ND
Fragrance	0.003%	ND
Dye	0.0001%	ND
Water	99.8339%	

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**Section 3: Physical and Chemical Characteristics (Fire & Explosion Data)**

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**Boiling Point:** ND  
**Percent Volatile** (by weight) ND  
**Solubility In Water:** Soluble  
**Appearance and Odor:** Colorless to light straw in color  
**Specific Gravity:** (H<sub>2</sub>O = 1) 1.00  
**Flash Point:** ND  
**pH** 6-9  
**Evaporation Rate** Butyl Acetate=1 ND  
**Vapor Pressure:** ND  
**Vapor Density (Air = 1)** ND  
**Auto Ignition Temp.:** ND  
**Lower Explosion (%):** ND  
**Upper Explosion (%):** ND  
**Extinguishing Media:** Dry Chemical, Water Fog, CO<sub>2</sub>, Foam  
**Special Fire Fighting Procedures:**  
Fire fighters should wear self-contained breathing apparatus and protective clothing.  
**Unusual Fire Explosion Hazards:**  
No special hazards known.

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**Section 4: Physical Hazards**

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**Stability:** Stable  
**Incompatibility:** Strong oxidizers or reducing agents  
**Hazardous Polymerization:** Will not occur  
**Hazardous Decomposition Products:** Toxic hydrogen chloride fumes, oxides of carbon and nitrogen.  
**Conditions to avoid:** NA  
**Conditions to avoid:** Mixing with strong oxidizers or reducing agents

---

## Section 5: Health Hazards

---

**Routes of Entry:** Eye Contact, Skin Contact, Ingestion, Inhalation.

**Eye Contact:** Causes moderate eye irritation.

**Skin Contact:** Harmful if absorbed through skin.

**Ingestion:** Harmful if swallowed.

**Inhalation:** None known.

### **First Aid:**

**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 advice.

**Ingestion:** Call a poison control center or doctor immediately for treatment advice. Have a 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 breathing is affected, remove to fresh air. Get medical attention.

### **Chemicals Listed as Carcinogen by:**

OSHA -NO

I.A.R.C. Monographs -NO

National Toxicology Program -NO

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## Section 6: Toxicity

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Acute Oral LD<sub>50</sub> ND

Acute Dermal ND

Primary Skin - ND

Primary Eye - ND

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## Section 7: Special Protection Information

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**Ventilation type:** General room ventilation adequate.

**Respiratory Protection:** No special requirements under normal use conditions.

**Protective Gloves:** No special requirements under normal use conditions.

**Eye Protection:** No special requirements under normal use conditions.

**Other Equipment:** No special requirements.

---

## Section 8: Special Precautions and Spill/Leak Procedure

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**Precautionary Information:** **CAUTION**, Causes moderate eye irritation. Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco.

**Handling and Storage:** Store in original container in areas inaccessible to small children. Do not store on side. Avoid creasing or impacting of side walls. Do not reuse empty container. Wrap and discard in trash (or recycle).

**Spill and Leak Procedure:** Small spills may be mopped up, flushed away with water or absorbed on some absorbent material and incinerated. Large spills should be contained; the material then moved into containers and disposed of by approved methods for hazardous wastes.

**Waste Disposal:** Incinerate. Make sure that all federal, state and local regulations are observed.

**Other handling and Storage Conditions:** Keep out of reach of Children. Refer to product label for additional Hazards and Storage and Disposal information.

The seller makes no warranty expressed or implied concerning the accuracy or any results to be obtained from the use of any information and no warranty expressed or implied concerning the use of the products. The buyer assumes all risks of the use and/or handling.



## 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**PRODUCT NAMES:** **MOLDEX DEEP STAIN REMOVER CONCENTRATE**

**MANUFACTURER:** EnviroCare Corporation  
260 Fordham Road  
Wilmington, MA 01887  
Tel# (978) 658-0123 Fax# (978) 964-0444

**Emergency Contact:** CHEMTREC 1-800-424-9300 (24 Hours)

**Prepared by:** EnviroCare

**Revised:** 3/29/07

## 2. INFORMATION ON INGREDIENTS

Unlisted ingredients are not 'hazardous' per the occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See section 5 for any additional exposure limit guidelines.

<u>COMPONENT</u>	<u>CAS</u> <u>NUMBER</u>	<u>WT%</u> <u>+/-</u>	<u>OSHA</u> <u>PEL</u>	<u>OSHA</u> <u>STEL</u>	<u>ACGIH</u> <u>TLV</u>	<u>ACGIH</u> <u>STEL</u>
Hydrogen Peroxide	7722-84-1	5 - 7%				

## 3. FIRE AND EXPLOSION HAZARD DATA

**NOTE: THIS MATERIAL WILL NOT NORMALLY BURN.**

**FLASH POINT:** N/A

**LOWER EXPLOSIVE LIMIT:** N/A

**UPPER EXPLOSIVE LIMIT:** N/A

**EXTINGUISHING MEDIA:** Carbon dioxide, dry chemical, or alcohol foam

**SPECIAL FIREFIGHTING MEASURES:** None

## 4. PHYSICAL DATA

<input type="checkbox"/> <u>Physical:</u> Liquid	<u>APPEARANCE &amp; Odor:</u>	Clear Liquid Detergent
<input type="checkbox"/> <u>SOLUBILITY IN H<sub>2</sub>O:</u> Complete	<u>SPECIFIC GRAVITY:</u> (H <sub>2</sub> O=1)	1.0
<input type="checkbox"/> <u>Flash Point:</u> None	<u>MELTING POINT:</u>	N/A
<input type="checkbox"/> <u>VAPOR PRESSURE:</u> (mm Hg): N/A	<u>Odor:</u>	Detergent

## 5. HEALTH HAZARD DATA

Health hazards: None known

- ☐ EFFECTS OF OVEREXPOSURE – EYE / SKIN CONTACT: May cause irritation to eyes.
- ☐ EFFECTS OF OVEREXPOSURE – INHALATION: May cause irritation.
- ☐ EFFECTS OF OVEREXPOSURE – INGESTION: Ingestion is not an anticipated route of exposure. Gastric pain and vomiting may occur.
- ☐ EFFECTS OF OVEREXPOSURE – CHRONIC HAZARDS: None.
- ☐ CARCINOGENICITY: None.
- ☐ FIRST AID – EYE CONTACT: Rinse immediately. Flush with clear running water for 15 minutes.
- ☐ FIRST AID – SKIN CONTACT: Rinse immediately with clear running water.
- ☐ FIRST AID – INHALATION: N/A.
- ☐ FIRST AID – INGESTION: Drink large quantities of water. Get medical attention.

## 6. REACTIVITY DATA

**STABILITY:** This product is stable under normal storage conditions.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Heat, carbon dioxide, and carbon monoxide

**HAZARDOUS POLYMERIZATION:** Will not occur under normal conditions.



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## 7. SPILL OR LEAK PROCEDURES

---

**SPILLS:** Built dike and drum up for disposal. Dispose according to federal and local regulations  
**Handling and Storing:** Keep container closed when not in use. Do not freeze. Follow label instructions.  
**Other Precautions:** Keep this and all chemicals out of the reach of children.

---

## 8. SAFE HANDLING AND USE INFORMATION

---

**RESPIRATORY PROTECTION:** No special requirements under normal use and conditions

**VENTILATION:** Use outdoors only. None

**SKIN PROTECTION:** Gloves

**EYE PROTECTION:** Wear goggles glasses when handling this product

---

## 9. HMIS RATING

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**FIRE:** 0      **HEALTH:** 1      **REACTIVITY:** 1

**HAZARD RATINGS:**

0=MINIMAL

3=SERIOUS

1=SLIGHT

4=SEVERE

2=MODERATE

---

## 10. OTHER REGULATIONS

---

**TRANSPORTATION:**

US DOT Hazard Class.....NONREGULATED

**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 CFR 40 part 372:

**CHEMICAL NAME**

**CAS NUMBER**

**WT/WT% ±**

None

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

**LEGEND:** N.E. = Not Established      Abbreviations are self explanatory.

**NOTE:** The information contained in this MSDS is believed to be accurate, however, certain portions may vary slightly to conform with formulation changes.

CONSULT THE TECHNICAL DATA SHEET FOR FURTHER INFORMATION.

**WARRANTY:** EnviroCare warrants its products to be free from defects in material and workmanship. EnviroCare's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at EnviroCare's option, to either replacement of products not conforming to this Warranty or credit to Buyer's account in the invoiced amount of the nonconforming products.

**LIMITATION OF LIABILITY:** EnviroCare's liability on any claim of any kind, including claims based upon EnviroCare's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim. In no event shall EnviroCare be liable for consequential or incidental damages.



## 1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

PRODUCT NAMES: MOLDEX PROTECTANT  
MANUFACTURER: EnviroCare Corporation  
260 Fordham Road  
Wilmington, MA 01887  
Tel# (978) 658-0123 Fax# (978) 964-0444  
Emergency Contact: CHEMTREC 1-800-424-9300 (24 Hours)  
Prepared by: EnviroCare Revised: 4/06/06

## 2. INFORMATION ON INGREDIENTS

Unlisted ingredients are not 'hazardous' per the occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See section 5 for any additional exposure limit guidelines.

COMPONENT	CAS NUMBER	WT% +/-	OSHA		ACGIH	
			TWA	STEL	TWA	STEL
-	-	-	-	-	-	-

## 3. FIRE AND EXPLOSION HAZARD DATA

NOTE: THIS MATERIAL WILL NOT NORMALLY BURN.

FLASH POINT: N/A LOWER EXPLOSIVE LIMIT: N/A UPPER EXPLOSIVE LIMIT: N/A  
EXTINGUISHING MEDIA: Water Spray, Carbon Dioxide, Foam  
SPECIAL FIREFIGHTING MEASURES: Wear self-contained breathing apparatus and full protective gear. Material may splatter if temperatures exceed boiling point (212F)

## 4. PHYSICAL DATA

<input type="checkbox"/> ODOR:	Characteristic	<u>APPEARANCE:</u>	Thick Milky Aqueous Liquid
<input type="checkbox"/> SOLUBILITY IN H <sub>2</sub> O:	Dilutable	<u>VBW %:</u>	48%
<input type="checkbox"/> VAPOR DENSITY:	Heavier than Air		

## 5. HEALTH HAZARD DATA

Independent animal tests conducted according to OSHA Hazard communication Standard 29CFR1910.1200 confirms that the mixture is NON-TOXIC and is not an eye irritant.

- ☐ EFFECTS OF OVEREXPOSURE – EYE CONTACT: No irritation hazard in normal industrial use.
- ☐ EFFECTS OF OVEREXPOSURE – SKIN CONTACT: No irritation hazard in normal industrial use.
- ☐ EFFECTS OF OVEREXPOSURE – INHALATION: No irritation hazard in normal industrial use.
- ☐ EFFECTS OF OVEREXPOSURE – INGESTION: Ingestion is not an anticipated route of exposure. No hazard in normal industrial use.
- ☐ EFFECTS OF OVEREXPOSURE – CHRONIC HAZARDS: No organs known to be damaged by exposure to this product.
- ☐ CARCINOGENICITY: Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.
- ☐ FIRST AID – EYE CONTACT: None expected to be needed. Eye wash is recommended to remove chemical from eyes.
- ☐ FIRST AID – SKIN CONTACT: Wash with soap and water.
- ☐ FIRST AID – INHALATION: This product does not present a hazard if inhaled. Remove individual to fresh air after an airborne exposure if any symptoms develop, as a precautionary measure.
- ☐ FIRST AID – INGESTION: Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.



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## 6. REACTIVITY DATA

---

HAZARDOUS DECOMPOSITION PRODUCTS: When exposed to fire, produces normal products of combustion

CONDITIONS TO AVOID: None Known

INCOMPATIBILITY: Materials that react with water

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

---

## 7. SPILL OR LEAK PROCEDURES

---

STEPS TO BE TAKEN IN CASE THE MATERIAL IS RELEASED OR SPILLED: Prevent spread of spill. Absorb liquid with vermiculite floor absorbent, or other absorbent material. Prevent run-off from entering drains, sewers, or streams.

WASTE DISPOSAL METHODS: Solidify, and dispose of in approved landfill. Consult Federal, State or Local authorized for more restrictive requirements.

---

## 8. SAFE HANDLING AND USE INFORMATION

---

RESPIRATORY PROTECTION: No special requirements under normal use and conditions.

VENTILATION: No exposure limits exist for the constituents of this product. No engineering controls are likely to be necessary to maintain operator comfort under normal conditions of use.

SKIN PROTECTION: None required. Use nitrile gloves if conditions warrant.

EYE PROTECTION: Wear safety glasses when handling this product.

---

## 9. HMIS RATING

---

FIRE: 0      HEALTH: 0      REACTIVITY: 0

HAZARD RATINGS:

0=MINIMAL

3=SERIOUS

1=SLIGHT

4=SEVERE

2=MODERATE

---

## 10. OTHER REGULATIONS

---

TRANSPORTATION:

US DOT Hazard Class.....NONREGULATED

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 CFR 40 part 372:

<u>CHEMICAL NAME</u>	<u>CAS NUMBER</u>	<u>WT/WT% ±</u>
None		

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

LEGEND: N.E. = Not Established      Abbreviations are self explanatory.

NOTE: The information contained in this MSDS is believed to be accurate, however, certain portions may vary slightly to conform with formulation changes.

THIS PRODUCT IS FOR INDUSTRIAL USE ONLY.

CONSULT THE TECHNICAL DATA SHEET FOR FURTHER INFORMATION.

WARRANTY: EnviroCare warrants its products to be free from defects in material and workmanship. EnviroCare's sole obligation and Buyer's exclusive remedy in connection with the products shall be limited, at EnviroCare's option, to either replacement of products not conforming to this Warranty or credit to Buyer's account in the invoiced amount of the nonconforming products.

LIMITATION OF LIABILITY: EnviroCare's liability on any claim of any kind, including claims based upon EnviroCare's negligence or strict liability, for any loss or damage arising out of, connected with, or resulting from the use of the products, shall in no case exceed the purchase price allocable to the products or part thereof which give rise to the claim. In no event shall EnviroCare be liable for consequential or incidental damages.

01-17-05

00688-xxx

## Material Safety Data Sheet

CHROMA INC

Manufacturer

205 BUCKY DRIVE

Address

LITITZ PA 17543

(717)626-8866

Phone Number (For Information)

(717)626-8866

Emergency Phone Number

Telex\*

MOLTEN METALS METALLIC ACRYLIC

Identity (Trade Name As Used On Label)

MSDS Number\*

CAS Number\*

09/04

Date Prepared

Prepared By\*

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 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS — Chemical Name & Common Names (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	% *	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED
PRODUCT IS WATER BASED, NON-TOXIC, NON-HAZARDOUS ACRYLIC COLOR IN LIQUID FORM. CERTIFIED NON-TOXIC BY THE ART & CREATIVE MATERIALS INSTITUTE.				
1. WATER				
2. VARIOUS MICACEOUS PIGMENTS				
3. ACRYLIC EMULSION				
4. ACRYLIC THICKENERS				
5. PRESERVATIVE - NON HAZARDOUS AT LEVEL USED				
Non-Hazardous Ingredients				
TOTAL	100			

## SECTION 2 - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point 215-275°F	Specific Gravity (H <sub>2</sub> O = 1) NOT KNOWN
Vapor Pressure (mm Hg and Temperature) NOT KNOWN	Melting Point* NOT KNOWN
Vapor Density (Air = 1) LIGHTER THAN AIR	Evaporation Rate ( = 1) SLOWER THAN ETHER
Solubility in Water TOTALLY SOLUBLE	Water Reactive NOT KNOWN

Appearance and Odor: LIQUID METALLIC ACRYLIC PAINTS IN ASSORTED COLORS.

## SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point and Method Used N/A	Auto-Ignition Temperature N/A	Flammability Limits in Air % by Volume N/A	LEL UNKNOWN	UEL UNKNOWN
Extinguisher Media N/A				
Special Fire Fighting Procedures N/A				

Unusual Fire and Explosion Hazards N/A

**SECTION 4 - REACTIVITY HAZARD DATA**

PAGE 2 - MOLTEN METALS METALLIC ACRYLIC

**STABILITY**☒ Stable  
☐ Unstable**Conditions  
To Avoid**

N/A

**Incompatibility  
(Materials to Avoid)**

NONE

**Hazardous  
Decomposition Products**

NONE

**HAZARDOUS POLYMERIZATION**☐ May Occur  
☒ Will Not Occur**Conditions  
To Avoid**

N/A

**SECTION 5 - HEALTH HAZARD DATA****PRIMARY ROUTES  
OF ENTRY**☐ Inhalation☐ Skin Absorption☐ Ingestion☒ Not Hazardous**CARCINOGEN  
LISTED IN**☐ NTP☐ IARC Monograph☐ OSHA☒ Not Listed**HEALTH HAZARDS**

Acute

NONE

Chronic

NONE

**Signs and Symptoms  
of Exposure**

NONE

**Medical Conditions  
Generally Aggravated by Exposure**

NONE

**EMERGENCY FIRST AID PROCEDURES** - Seek medical assistance for further treatment, observation and support if necessary.**Eye Contact**

NONE

**Skin Contact**

NONE

**Inhalation**

NONE

**Ingestion**

NONE

**SECTION 6 - CONTROL AND PROTECTIVE MEASURES****Respiratory Protection  
(Specify Type)**

NONE NEEDED UNDER NORMAL CONDITIONS OF USE

**Protective Gloves**

NOT REQUIRED

**Eye Protection**

NOT REQUIRED

**VENTILATION  
TO BE USED**☐ Local Exhaust

N/A

☐ Mechanical (general)

N/A

☐ Special

N/A

☐ Other (specify)

N/A

**Other Protective  
Clothing and Equipment**

NOT REQUIRED

**Hygienic Work  
Practices**

AS WITH ANY WATER BASED ACRYLIC

**SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE / LEAK PROCEDURES****Steps to be Taken If Material  
Is Spilled Or Released**

DIKE AND CONTAIN SPILL.

**Waste Disposal  
Methods**

NORMAL DISPOSAL

**Precautions to be Taken  
in Handling and Storage**

NO PARTICULAR PRECAUTIONS

**Other Precautions and/or Special Hazards**

NONE



**DOW CORNING CORPORATION**  
**Material Safety Data Sheet**

Page: 1 of 7

Version: 1.5

Revision Date: 2014/01/31

**MOLYKOTE(R) 44 HIGH TEMP. BEARING GREASE, LIGHT****1. PRODUCT AND COMPANY IDENTIFICATION**

Dow Corning Corporation  
South Saginaw Road  
Midland, Michigan 48686

**24 Hour Emergency Telephone: (989) 496-5900**

Customer Service: (989) 496-6000

Product Disposal Information: (989) 496-6315

CHEMTREC: (800) 424-9300

MSDS No.: 01889800

Revision Date: 2014/01/31

Generic Description: Silicone grease.

Physical Form: Grease

Color: White

Odor: Slight odor

NFPA Profile: Health 0 Flammability 1 Instability/Reactivity 0

Note: NFPA = National Fire Protection Association

**2. HAZARDS IDENTIFICATION****POTENTIAL HEALTH EFFECTS****Acute Effects**

Eye: Direct contact may cause temporary redness and discomfort.

Skin: No significant irritation expected from a single short-term exposure.

Inhalation: No significant effects expected from a single short-term exposure.

Oral: Low ingestion hazard in normal use.

**Prolonged/Repeated Exposure Effects**

Skin: Repeated or prolonged exposure may cause irritation.

Inhalation: No known applicable information.

Oral: No known applicable information.

**Signs and Symptoms of Overexposure**

No known applicable information.

**Medical Conditions Aggravated by Exposure**

No known applicable information.

**MOLYKOTE(R) 44 HIGH TEMP. BEARING GREASE, LIGHT**

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data and/or expert review of the product. Please refer to Section 11 for the detailed toxicology information.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

None present. This is not a hazardous material as defined in the OSHA Hazard Communication Standard.

**4. FIRST AID MEASURES**

Eye:	If irritation occurs, flush eye(s) with lukewarm gently flowing water for 5 minutes. Obtain medical attention.
Skin:	No health effects expected. If irritation does occur flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, obtain medical advice.
Inhalation:	If symptoms are experienced remove source of contamination or move victim to fresh air. If irritation persists, obtain medical advice.
Oral:	If irritation or discomfort occur, obtain medical advice.
Notes to Physician:	Treat according to person's condition and specifics of exposure.

**5. FIRE FIGHTING MEASURES**

Flash Point:	> 214 °F / > 101.1 °C (Closed Cup)
Autoignition Temperature:	Not determined.
Flammability Limits in Air:	Not determined.
Extinguishing Media:	On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO <sub>2</sub> ), dry chemical or water spray. Water can be used to cool fire exposed containers.
Fire Fighting Measures:	Self-contained breathing apparatus and protective clothing should be worn in fighting large fires involving chemicals. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.
Unusual Fire Hazards:	None.

**6. ACCIDENTAL RELEASE MEASURES**

**MOLYKOTE(R) 44 HIGH TEMP. BEARING GREASE, LIGHT**

**Containment/Clean up:** Observe all personal protection equipment recommendations described in Sections 5 and 8. Wipe up or scrape up and contain for salvage or disposal. Clean area as appropriate since spilled materials, even in small quantities, may present a slip hazard. Final cleaning may require use of steam, solvents or detergents. Dispose of saturated absorbent or cleaning materials appropriately, since spontaneous heating may occur. Local, state and federal laws and 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 federal, state and local laws and regulations are applicable. Sections 13 and 15 of this MSDS provide information regarding certain federal and state requirements.

**Note:** See Section 8 for Personal Protective Equipment for Spills. Call (989) 496-5900, if additional information is required.

**7. HANDLING AND STORAGE**

Use with adequate ventilation. Traces of benzene (carcinogen) may form if heated in air above 300°F (149°C). Provide ventilation to control vapor exposure within inhalation guidelines when handling at elevated temperatures. Review the OSHA benzene regulation for detailed information on safe handling requirements. Avoid eye contact. Avoid skin contact.

Use reasonable care and store away from oxidizing materials.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Component Exposure Limits**

There are no components with workplace exposure limits.

**Engineering Controls**

Local Ventilation: None should be needed.  
General Ventilation: Recommended.

**Personal Protective Equipment for Routine Handling**

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Washing at mealtime and end of shift is adequate.

Suitable Gloves: Avoid skin contact by implementing good industrial hygiene practices and procedures. Select and use gloves and/or protective clothing to further minimize the potential for skin contact. Consult with your glove and/or personnel protective equipment manufacturer for selection of appropriate compatible materials.

Inhalation: No respiratory protection should be needed.

**MOLYKOTE(R) 44 HIGH TEMP. BEARING GREASE, LIGHT**

Suitable Respirator: None should be needed.

**Personal Protective Equipment for Spills**

Eyes: Use proper protection - safety glasses as a minimum.

Skin: Washing at mealtime and end of shift is adequate.

Inhalation/Suitable Respirator: No respiratory protection should be needed.

Precautionary Measures: Avoid eye contact. Avoid skin contact. Use reasonable care.

Comments: Traces of benzene (carcinogen) may form if heated in air above 300°F (149°C). Provide ventilation to control vapor exposure within inhalation guidelines when handling at elevated temperatures. Review the OSHA benzene regulation for detailed information on safe handling requirements.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Physical Form: Grease

Color: White

Odor: Slight odor

Specific Gravity @ 25°C: 1.1

Viscosity: Not determined.

Freezing/Melting Point: Not determined.

Boiling Point: Not determined.

Vapor Pressure @ 25°C: Not determined.

Vapor Density: Not determined.

Solubility in Water: Not determined.

pH: Not determined.

Volatile Content: Not determined.

Flash Point: > 214 °F / > 101.1 °C (Closed Cup)

Autoignition Temperature: Not determined.

Flammability Limits in Air: Not determined.

Note: The above information is not intended for use in preparing product specifications. Contact Dow Corning before writing specifications.

**10. STABILITY AND REACTIVITY**

Chemical Stability: Stable.

Hazardous Polymerization: Hazardous polymerization will not occur.

**MOLYKOTE(R) 44 HIGH TEMP. BEARING GREASE, LIGHT**

Conditions to Avoid: None.

Materials to Avoid: Oxidizing material can cause a reaction.

Hazardous Decomposition Products

Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: Carbon oxides and traces of incompletely burned carbon compounds. Silicon dioxide. Metal oxides. Formaldehyde.

**11. TOXICOLOGICAL INFORMATION**Special Hazard Information on Components

No known applicable information.

**12. ECOLOGICAL INFORMATION**Environmental Fate and Distribution

Complete information is not yet available.

Environmental Effects

Complete information is not yet available.

Fate and Effects in Waste Water Treatment Plants

Complete information is not yet available.

## Ecotoxicity Classification Criteria

Hazard Parameters (LC50 or EC50)	High	Medium	Low
Acute Aquatic Toxicity (mg/L)	<=1	>1 and <=100	>100
Acute Terrestrial Toxicity	<=100	>100 and <= 2000	>2000

This table is adapted from "Environmental Toxicology and Risk Assessment", ASTM STP 1179, p.34, 1993.

This table can be used to classify the ecotoxicity of this product when ecotoxicity data is listed above. Please read the other information presented in the section concerning the overall ecological safety of this material.

**13. DISPOSAL CONSIDERATIONS**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

State or local laws may impose additional regulatory requirements regarding disposal. Call (989) 496-6315, if additional

**MOLYKOTE(R) 44 HIGH TEMP. BEARING GREASE, LIGHT**

information is required.

**14. TRANSPORT INFORMATION****DOT Road Shipment Information (49 CFR 172.101)**

Not subject to DOT.

**Ocean Shipment (IMDG)**

Not subject to IMDG code.

**Air Shipment (IATA)**

Not subject to IATA regulations.

Call Dow Corning Transportation, (989) 496-8577, if additional information is required.

**15. REGULATORY INFORMATION**

Contents of this MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

TSCA Status: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

**EPA SARA Title III Chemical Listings****Section 302 Extremely Hazardous Substances (40 CFR 355):**

None.

**Section 304 CERCLA Hazardous Substances (40 CFR 302):**

None.

**Section 311/312 Hazard Class (40 CFR 370):**

Acute: No  
Chronic: No  
Fire: No  
Pressure: No  
Reactive: No

**Section 313 Toxic Chemicals (40 CFR 372):**

None present or none present in regulated quantities.

Note: Chemicals are listed under the 313 Toxic Chemicals section only if they meet or exceed a reporting threshold.

**Supplemental State Compliance Information**

**MOLYKOTE(R) 44 HIGH TEMP. BEARING GREASE, LIGHT****California**

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

None known.

**New Jersey**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
63148-52-7	85.0 - 100.0	Dimethyl, phenylmethyl siloxane, trimethyl-terminated
4485-12-5	10.0 - 30.0	Lithium stearate

**Pennsylvania**

<u>CAS Number</u>	<u>Wt %</u>	<u>Component Name</u>
63148-52-7	85.0 - 100.0	Dimethyl, phenylmethyl siloxane, trimethyl-terminated
4485-12-5	10.0 - 30.0	Lithium stearate

**16. OTHER INFORMATION**

Prepared by: Dow Corning Corporation

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied, is hereby 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.

(R) indicates Registered Trademark

# MATERIAL SAFETY DATA SHEET

EMERGENCY TELEPHONE: 800-424-9300 (Chemtree)

National Towellette  
1726 Woodhaven Drive  
Bensalem PA 19020  
Tel 215 245 7300, Fax 215 245 7300

Health : 1  
Flammability : 1  
Reactivity : 0

Page 1 of 7

## Disinfectant Wipes

\*\*\*\*\*

MATERIAL	DATE ISSUED	DOT HAZARD CLASSIFICATION
Disinfectant Wipes	04/25/08	Not Hazardous
CAS. NO. Mixture	SUPERCEDES	DOT SHIPPING NAME
	09/06/06	None
FORMULA Mixture		DOT LABEL None
CHEMICAL NAME (Active) mixture of N,N-Dialkyl-N,N-dimethylammonium Chloride and N-Alkyl-N,N-dimethyl-N-benzylammonium Chloride		

## \*\*\*\*\* I - INGREDIENTS \*\*\*\*\*

	APPROXIMATE WEIGHT %	TWA/TLV
N,N-Dialkyl(C <sub>8-10</sub> )-N,N-dimethylammonium Chloride (CAS No. 68424-95-3)	0.196	None established
N-Alkyl(C <sub>12-16</sub> )-N,N-dimethyl-N-benzylammonium Chloride (CAS No. 68424-85-1)	0.093	None established
Absorbent material	~20	None established
Water (CAS No. 7732-18-5)	~79.05	None established

## \*\*\*\*\* II - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*\*

APPEARANCE solid in disinfectant solution	pH 9.5-10.5
VISCOSITY Not applicable	ODOR Depends on fragrance
BOILING POINT Not known	MELTING OR FREEZING POINT Not known
VAPOR DENSITY (Air=1) Not known	VAPOR PRESSURE (mm Hg) Not known
PERCENT VOLATILE (by weight) ~79	SOLUBILITY IN WATER Soluble
EVAPORATION RATE (Butyl Acetate=1) Not known	DENSITY 8.3 LBS/GAL

## \*\*\*\*\* III - FIRE AND EXPLOSION INFORMATION \*\*\*\*\*

FLASH POINT >200F	AUTO IGNITION TEMPERATURE Not known
LOWER EXPLOSION LIMIT (%) Not applicable	UPPER EXPLOSION LIMIT (%) Not applicable
EXTINGUISHING MEDIA FOAM	ALCOHOL FOAM X CO <sub>2</sub> X
DRY CHEMICAL X	WATER X OTHER



# MATERIAL SAFETY DATA SHEET

EMERGENCY TELEPHONE: 800-424-9300 (Chemtrec)

National Towellette  
1726 Woodhaven Drive  
Bensalem PA 19020  
Tel 215 245 7300, Fax 215 245 7390

Page 2 of 7

## Disinfectant Wipes

\*\*\*\*\* III - FIRE AND EXPLOSION INFORMATION (continued) \*\*\*\*\*

### SPECIAL FIRE FIGHTING PROCEDURES:

Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.

### UNUSUAL FIRE AND EXPLOSION HAZARDS:

Products of combustion are toxic

\*\*\*\*\* IV - HEALTH EFFECTS INFORMATION \*\*\*\*\*

ROUTES OF ENTRY - SKIN CONTACT X EYE CONTACT X  
                                INHALATION X INGESTION

### EFFECTS OF OVEREXPOSURE

No information found for this product. Based on information available for similar products, it is anticipated that direct eye contact will produce mild irritation, and direct skin contact will produce mild irritation.

### OVEREXPOSURE MAY AGGRAVATE EXISTING CONDITIONS:

No effects indicated.

### EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician not available, flush for additional 15 minutes and then transport victim to medical care.

Skin: Wash with large amounts of running water, and soap if available, for 15 minutes. Remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminate shoes before reuse.

Ingestion: If swallowed, immediately give 3-4 glasses of milk (if unavailable, give water). DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person. (See "Note to Physician" in Section X).

Inhalation: Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available. Get immediate medical attention.

# MATERIAL SAFETY DATA SHEET

EMERGENCY TELEPHONE: 800-424-9300 (Chemtrec)

National Towellette  
1726 Woodhaven Drive  
Bensalem PA 19020  
Tel 215 245 7300, Fax 215 245 7390

Page 3 of 7

## Disinfectant Wipes

\*\*\*\*\* IV - HEALTH EFFECTS INFORMATION \*\*\*\*\*

### CHEMICALS LISTED AS CARCINOGEN BY:

NATIONAL TOXICOLOGY PROGRAM - No  
I.A.R.C. MONOGRAPHS - No  
OSHA - No

\*\*\*\*\* V - REACTIVITY INFORMATION \*\*\*\*\*

STABILITY: STABLE X CONDITIONS TO AVOID  
UNSTABLE None known

### HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition may produce toxic vapors/fumes of hydrogen chloride, amines and other organic materials, and oxides of carbon and nitrogen.

HAZARDOUS POLYMERIZATION CONDITIONS TO AVOID  
MAY WILL NOT X None known  
OCCUR OCCUR

### INCOMPATIBILITY (MATERIALS TO AVOID)

WATER OTHER X Strong oxidizing or reducing agents.

\*\*\*\*\* VI - SPILL AND DISPOSAL INFORMATION \*\*\*\*\*

### STEPS TO BE TAKEN IN CASE OF MATERIAL SPILL OR RELEASED

CAUTION. If needed wear appropriate protective equipment and respiratory protection where mist or vapors of unknown concentrations may be generated.

### WASTE DISPOSAL METHODS

Dispose of in compliance with all Federal, state and local laws and regulations. Incineration is the preferred method.

### 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.

# MATERIAL SAFETY DATA SHEET

EMERGENCY TELEPHONE: 800-424-9300 (Chemtrec)

National Towellette  
1726 Woodhaven Drive  
Bensalem PA 19029  
Tel 215 245 7300, Fax 215 245 7399

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## Disinfectant Wipes

\*\*\*\*\* VII - PERSONAL PROTECTION INFORMATION \*\*\*\*\*

### ENGINEERING CONTROLS

In processes where mists or vapors may be generated, proper ventilation must be provided in accordance with good ventilation practices.

### RESPIRATORY PROTECTION

NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls if needed.

### PROTECTIVE GLOVES

Use proper PPE if required.

### OTHER PROTECTIVE EQUIPMENT

Eye wash; safety shower; protective clothing if needed.

\*\*\*\*\* VIII - STORAGE AND HANDLING \*\*\*\*\*

### PRECAUTIONS FOR STORAGE AND HANDLING:

Maximum storage temperature: 140°F. Keep containers closed until used.  
Do not contaminate drinking water, food or feed by storage or disposal.

\*\*\*\*\* IX - TOXICOLOGY INFORMATION \*\*\*\*\*



# MATERIAL SAFETY DATA SHEET

EMERGENCY TELEPHONE: 800-424-9300 (Chemtrec)

National Towefette  
1726 Woodhaven Drive  
Bensalem PA 19028  
Tel 215 245 7390, Fax 215 245 7390

Page 5 of 7

## Disinfectant Wipes

\*\*\*\*\* X - MISCELLANEOUS AND REGULATORY INFORMATION \*\*\*\*\*

### FEDERAL REGULATIONS:

This is an EPA FIFRA registered pesticide (EPA Registration No. 6836-313) This material can only be used in the EPA registered application(s) noted on the product label.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act of 1980 requires notification of the National Response Center (Telephone 800-424-8802) in the event of a release of quantities of the following hazardous materials contained in this product, if the release is equal to or greater than the Reportable Quantities (RQs) listed in 40 CFR 302.4:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None known		

SARA Title III, Sections 302/304 (Superfund Amendments and Reauthorization act of 1986) - This act requires emergency planning, including agency notification, for possible release of the following components of this material, based upon the Threshold Planning Quantities (TPQs) and release Reportable Quantities (RQs) listed for the Components in 40 CFR 355:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None known		

SARA Title III Sections 311/312 - This act requires reporting under the Community Right-to-Know provisions due to the inclusion of the following components of this material in one or more of the five hazard categories listed in 40 CFR 370:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Hazard *) Categories</u>
N,N-dialkyl-N,N-dimethylammonium Chloride	68424-95-3	A
N-Alkyl-N,N-dimethyl-N-benzylammonium Chloride	68424-85-1	A

\*) The five hazard categories are as follows: F= FIRE HAZARD; S= SUDDEN RELEASE OF PRESSURE; R= REACTIVE; A= IMMEDIATE (ACUTE) HEALTH HAZARD; C= DELAYED (CHRONIC) HEALTH HAZARD

# MATERIAL SAFETY DATA SHEET

EMERGENCY TELEPHONE: 800-424-9300 (Chemtree)

National Towlette  
1726 Woodhaven Drive  
Bensalem PA 19020  
Tel 215 245 7300, Fax 215 245 7390

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## Disinfectant Wipes

\*\*\*\*\* X - MISCELLANEOUS AND REGULATORY INFORMATION (continued) \*\*\*\*\*  
FEDERAL REGULATIONS (continued):

SARA Title III Section 313 - This act requires submission of annual reports off the releases of the following components of this material if the threshold reporting quantities as listed in 40 CFR 372, are met or exceeded:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None known		

## TSCA Section 12(b) Export Notification

Components present in this product which, if exported, could require either annual or one-time reporting under this regulation are as follows:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None known		

## STATE RIGHT-TO-KNOW REGULATIONS:

CALIFORNIA PROPOSITION 65 - Components present in this material which the State of California has found to cause cancer, birth defects or other reproductive harm are as follows:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
Acetaldehyde	75-07-0	1 ppm
Benzene	71-43-2	23 ppm
Benzyl Chloride	100-44-7	46 ppm
N-Nitrosodimethylamine	62-75-9	23 ppb
Propylene Oxide	75-56-9	4 ppm
Toluene	108-88-3	23 ppm

MASSACHUSETTS Right-to-Know - The following components of this material are included in the Massachusetts Substance List and are present at or above reportable levels:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
Benzyl Chloride	100-44-7	46 ppm

MICHIGAN Critical Materials - The following components of this material are included in the Michigan Critical Materials List:

<u>Chemical Name</u>	<u>CAS Number</u>
None known	

# MATERIAL SAFETY DATA SHEET

EMERGENCY TELEPHONE: 800-424-9300 (Chemtrec)

National Towellette  
1726 Woodhaven Drive  
Bensalem PA 19020  
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## Disinfectant Wipes

\*\*\*\*\* X - MISCELLANEOUS AND REGULATORY INFORMATION (continued) \*\*\*\*\*

NEW JERSEY Right-to-Know - The following components of this material are included in the New Jersey Hazardous Substance List and are present at or above reportable levels:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
N,N-dialkyl-N,N-dimethylammonium Chloride	68424-95-3	0.139%
N-Alkyl-N,N-dimethyl-N-benzylammonium Chloride	68424-85-1	0.93%

PENNSYLVANIA Right-to-Know - The following components of this material are included in the Pennsylvania Hazardous Substance List and are present at or above reportable levels:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Typical Maximum Concentration</u>
None		



62948-1004  
-1005

## \* MATERIAL SAFETY DATA SHEET

Rev 02-21-01

mosaic adhesive

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : Water Base Adhesive  
IDENTIFICATION NUMBER: AM251  
PRODUCT USE/CLASS : Adhesive

DATE PRINTED: 02/25/99

SUPPLIER:  
Mosaic Mercantile  
461-2nd Street  
Suite 331  
San Francisco, CA 94107

MANUFACTURER:  
Triangle Coatings, Inc.  
1930 Fairway Drive  
San Leandro, CA 94577-5631

TELEPHONE: 1-877-9-667242  
9am-5pm PST Monday-Friday

EMERGENCY TELEPHONE: 800-895-8000  
(7:00 am - 5:00 pm PST)

PREPARER: Cmk, PHONE: , PREPARE DATE: 02/22/99

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

ITEM	CHEMICAL NAME	CAS NUMBER	WT/WT % EQUAL TO
------	---------------	------------	---------------------

No Hazardous Materials are Contained in this Product

(See Section 16 for abbreviation legend)

## SECTION 3 - HAZARDS IDENTIFICATION

\*\*\* EMERGENCY OVERVIEW \*\*\*: Harmful if swallowed. Causes eye irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: May cause irritation including pain, tearing or reddening accompanied by stinging sensation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: No hazard in normal industrial use.

EFFECTS OF OVEREXPOSURE - INGESTION: This material may be harmful or fatal if swallowed.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: None.

PRIMARY ROUTE(S) OF ENTRY: Unknown

HOUSE COPY

(Continued on Page 2)

V-3041

Product: AM251

Preparation Date: 02/22/99

Page 2

## SECTION 4 - FIRST AID MEASURES

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for 15 minutes. Get medical attention, if irritation persists.

FIRST AID - SKIN CONTACT: Wash with soap and water. Get medical attention if irritation develops or persists. Remove contaminated clothing and shoes. Do not reuse until cleaned.

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: If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

## SECTION 5 - FIRE FIGHTING MEASURES

FLASH POINT: 900 F  
(SETAFLASH CLOSED CUP)

LOWER EXPLOSIVE LIMIT: N.A.  
UPPER EXPLOSIVE LIMIT: N.A.

AUTOIGNITION TEMPERATURE: N.D.

EXTINGUISHING MEDIA: Unknown

UNUSUAL FIRE AND EXPLOSION HAZARDS: Product will not burn but may spatter if temperature exceeds boiling point.

SPECIAL FIREFIGHTING PROCEDURES: Containers can build up pressure if exposed to heat (fire). As in any fire, wear self-contained breathing apparatus pressure-demand (MSHA/NIOSH approved or equivalent) and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Ventilate area. Absorb spill with suitable absorbent material, then place in a chemical waste container. Avoid runoff into storm sewers and ditches which lead to waterways. If large spill, dike area and call spill response team. Notify appropriate state and local agencies.

## SECTION 7 - HANDLING AND STORAGE

HANDLING: Wash thoroughly after handling.

STORAGE: Keep from freezing. Keep container closed when not in use.

(Continued on Page 3)



Product: AM251

Preparation Date: 02/22/99

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## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Good general ventilation should be sufficient to control airborne levels.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure limits listed in Section 2 by using engineering controls. If not feasible, use a NIOSH approved respirator.

SKIN PROTECTION: General use of chemical resistant gloves are recommended to protect the skin from drying and irritation. Lotions and barrier creams are also recommended to prevent drying of the skin.

EYE PROTECTION: Eye protection is recommended.

OTHER PROTECTIVE EQUIPMENT: If repeated or prolonged skin contact or contamination is likely, protective clothing should be worn.

HYGIENIC PRACTICES: Establish good personal hygiene and work practices. Always wash hands before eating, drinking, or smoking.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE	: N.A.	VAPOR DENSITY	: Is lighter than air
ODOR	: Mild Cherry	ODOR THRESHOLD	: N.E.
APPEARANCE	: White	EVAPORATION RATE:	Is slower than Butyl Acetate
SOLUBILITY IN H2O	: Dilutable	SPECIFIC GRAVITY:	1.0927
FREEZE POINT	: 32	pH @ 100.0 %	: 8.0
VAPOR PRESSURE	: N.E.	VISCOSITY	: Fluid Paste
PHYSICAL STATE	: Liquid		
VOLATILE BY VOLUME:	38.0%		
COEFFICIENT OF WATER/OIL DISTRIBUTION:	N.E.		

(See Section 16 for abbreviation legend)

## SECTION 10 - STABILITY AND REACTIVITY

CONDITIONS TO AVOID: No Information.

INCOMPATIBILITY: Avoid contact with strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: Can include carbon dioxide and carbon monoxide.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

(Continued on Page 4)

Product: AM251

Preparation Date: 02/22/99

Page 4

## SECTION 11 - TOXICOLOGICAL PROPERTIES

No product or component toxicological information is available.

TOXICOLOGICAL INFORMATION: This information shown in Section 3 is based on the toxicity profiles for a number of products that are compositionally similar to this product.

## SECTION 12 - ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Refer to local, county, state and federal storm water and air quality regulations.

## SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of in accordance with local, county, state, and federal regulations. Incineration is preferred.

## SECTION 14 - TRANSPORTATION INFORMATION

No transportation information is available.

## SECTION 15 - REGULATORY INFORMATION

THE FOLLOWING COMPONENTS ARE NOT SUBJECT TO REPORTING IN SECTION 2:

CHEMICAL NAME	CAS NUMBER	WT/WT %
Emulsion		62.0 %
Water	7732185	38.0 %

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

OSHA: Non-hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200)

## 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 %
No SARA Section 313 components exist in this product.		

U.S. STATE REGULATIONS: AS FOLLOWS -

(Continued on Page 5)

Product: AM251 Preparation Date: 02/22/99 Page 5  
=====

## SECTION 15 - REGULATORY INFORMATION

## PENNSYLVANIA RIGHT-TO-KNOW:

The following non-hazardous ingredients are present in the product at greater than 3%:

----- CHEMICAL NAME -----	CAS NUMBER
Emulsion	
Water	7732185

CALIFORNIA PROPOSITION 65:  
None Known.

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: 1 FLAMMABILITY: 0 REACTIVITY: 0

PREVIOUS MSDS REVISION DATE: 02/22/99

VOLATILE ORGANIC COMPOUNDS (VOCs): 0.00 lbs/gal, 0 grams/ltr

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.

=====

<END OF MSDS>

**1. Identification**

Product Identifier : Carbon Dioxide  
Other means of identification : Carbonic, Carbon Dioxide, Carbonic Anhydride, CO<sub>2</sub>, UN 1013  
Product use : Synthetic, Analytical chemistry  
Supplier : Leland Limited, Inc.  
2614 South Clinton Ave.  
South Plainfield, NJ 07080  
1-908-668-1008 (9-5 EST)  
Emergency calls : 1-800-424-9300 (Domestic)  
(CHEMTREC) 1-703-527-3887 (International)

**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 : Gases under pressure – Liquefied gas  
GHS label elements Simple asphyxiant  
Hazard pictograms :



Signal word : Warning  
Hazards statements : Contains gas under pressure; may explode if heated  
May cause frostbite  
May displace oxygen and cause rapid suffocation  
May increase respiration and heart rate

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.  
Prevention : Use and store outdoors or in a well ventilated place.  
Response : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.  
Storage : Protect from sunlight. Protect from sunlight when ambient temperature exceeds 52C/125F. Store in a well-ventilated place.  
Disposal : Dispose in accordance with all applicable regulations.  
Hazards not otherwise classified : In addition to any other important health or physical hazards, this product may displace oxygen and cause rapid suffocation.  
May cause frostbite.

### 3. Composition, Information on Ingredients

Substance/Mixture	: Substance
Chemical Name	: Carbon dioxide
Synonyms	: Carbonic, Carbon Dioxide, Carbon Anhydride, CO <sub>2</sub>
CAS Number	: 124-38-9
Content (vo%)	: 99.5 % or more

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.

### 4. First Aid Measures

Description of necessary first aid measures

Inhalation	: Remove exposed person 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	: Carbon dioxide is harmless at atmospheric pressure. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Eye Contact	: Carbon dioxide is harmless at atmospheric pressure. 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.
Ingestion	: Since this product is a gas, refer to the inhalation section.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Inhalation	: No known significant effects or critical hazards.
Skin Contact	: No known significant effects or critical hazards.
Eye Contact	: No known significant effects or critical hazards.
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

Inhalation	: No specific data.
Skin Contact	: No specific data.
Eye 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.

## 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. In a fire or if heated, a pressure increase will occur and the container may burst or explode.
- 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.
- Special protective equipment for fire-fighters : Fire-fighters should wear appropriate equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 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. Avoid breathing gas. 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 : 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.
- Large spill : Immediately contact emergency personnel. Stop leak if without risk. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

**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. 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). 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 52C (125F).

**8. Exposure Controls and Personal Protection**

## Control parameters

## Occupational exposure limits

Ingredient name	Exposure limits
Carbon Dioxide	ACGIH TLV (United States, 3/2012). Oxygen Depletion [Asphyxiant]. STEL: 54000 mg/m <sup>3</sup> 15 minutes. STEL: 30000 ppm 15 minutes. TWA: 9000 mg/m <sup>3</sup> 8 hours TWA: 5000 ppm 8 hours. NIOSH REL (United States, 1/2013). STEL: 54000 mg/m <sup>3</sup> 15 minutes. STEL: 30000 ppm 15 minutes. TWA: 9000 mg/m <sup>3</sup> 8 hours TWA: 5000 ppm 8 hours. OSHA PEL (United States, 6/2010). TWA: 9000 mg/m <sup>3</sup> 8 hours TWA: 5000 ppm 8 hours.

	OSHA PEL 1989 (United States, 3/1989). STEL: 54000 mg/m <sup>3</sup> 15 minutes. STEL: 30000 ppm 15 minutes. TWA: 9000 mg/m <sup>3</sup> 8 hours TWA: 5000 ppm 8 hours.
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Appropriate engineering controls	: Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Environmental exposure control	: 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, using the lavatory and at the end of your shift. 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.

## 9. Physical and Chemical Properties

### Appearance

Physical state	: Gas at normal temperature and pressure
Color	: Colorless
Molecular weight	: 44.01 g/mol
Molecular formula	: C-O <sub>2</sub>
Melting/freezing point	: Sublimation temperature: -79C (-110.2F)
Critical temperature	: 30.85C (87.5F)
Odor	: Odorless
Odor threshold	: Not available.
pH	: Not available.
Flash point	: [Product does not sustain combustion.]
Burning time	: Not applicable.
Burning rate	: Not applicable.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: 830 psig
Vapor density	: 1.53 (Air = 1), Liquid Density@BP: Solid Density = 97.5 lb/ft <sup>3</sup> (1562 kg/m <sup>3</sup> )
Specific Volume	: 8.7719 ft <sup>3</sup> /lb ( m <sup>3</sup> /g)
Gas Density	: 0.114 lb/ft <sup>3</sup> (178.6 g/m <sup>3</sup> )
Relative density	: Not applicable.
Solubility	: Not available.
Solubility in Water	: Not available.
Partition coefficient: n-octanol/water	: 0.83
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
SADT	: Not available.
Viscosity	: Not applicable.

## 10. Stability and Reactivity

Reactivity	: No specific test data related to reactivity is 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.
Hazardous decomposition	: Under normal conditions of storage and use, hazardous decomposition

products : products should not be produced.  
Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

## 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 : Since 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

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.

**12. Ecological Information**

Toxicity : Not available.

Persistence and degradability : Not available.

Bioaccumulative potential

Product/Ingredient name	Log P <sub>ow</sub>	BCF	Potential
Carbon Dioxide	0.83	-	low

Mobility in soil

Soil/Water partition coefficient (K<sub>oc</sub>) : Not available.

Other adverse effects : No known significant effects or critical hazards.

**13. Disposal Considerations**

Discharge of Carbon Dioxide : Gradually release in open air.

Disposal of Cylinders : If gas remains in cylinders, release gas with proper equipment and dispose of cylinders as incombustible waste.  
For empty cylinders, check for a puncture hole and dispose of as incombustible waste.  
Do not dispose of cylinders without first checking that all gas has been released.

**14. Transport Information**

DOT / IMDG : Carbon Dioxide

Shipping Name

UN Number : UN 1013

Hazard Class : 2.2

Placard (When required) : Nonflammable gas



Special Shipping Information : See CFR 49, 172.101, 173.306 for exceptions of labeling.

**15. Regulatory Information**

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, state, and local regulations.

U.S. Federal Regulations	:	None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA 311/312	:	Fire hazard : No
Hazardous Categories	:	Sudden release of pressure : Yes
	:	Reactive : No
	:	Immediate (acute) health hazard : No
	:	Delayed (chronic) health hazard : 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.
	:	California : This material is listed.
	:	Not regulated under CA Proposition 65.
International Regulations	:	Canada inventory This material is listed or exempted.
	:	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.

**16. Other Information**

Hazard Rating Systems	:	<b>NFPA Ratings</b>	<b>HMIS Ratings</b>
	:	Health = 2	Health = 1
	:	Flammability = 0	Flammability = 0
	:	Reactivity = 0	Physical hazards = 3
	:	Special = SA	

**Key to abbreviations**

ACGIH	:	American Conference of Governmental Industrial Hygienists
BCF	:	Bioconcentration Factor
CAS	:	Chemical Abstract Services
CERCLA	:	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	:	United States Code of Federal Regulations

DOT	: Department of Transportation
GHS	: Globally Harmonized System of Classification and Labeling of Chemicals
IATA	: International Air Transport Association
IMDG	: International Maritime Dangerous Goods
Log P <sub>ow</sub>	: Logarithm of the octanol/water partition coefficient
NIOSH	: National Institute for Occupational Safety and Health
OSHA	: Occupational Safety and Health Administration
STEL	: Short-term Exposure Limit
SARA	: Superfund Amendments and Reauthorization Act
TLV	: Threshold Limit Value
TSCA	: Toxic Substances Control Act
TWA	: Time Weighted Average

**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 they are the only hazards that exist.



## Mr. Muscle Oven and Grill Cleaner

Version Number: 2

Preparation date: 2015-01-13

### 1. IDENTIFICATION

**Product name:** Mr. Muscle Oven and Grill Cleaner  
**Product Code:** 991206  
**SDS #:** MS0800125  
**Recommended use:**

- Industrial/Institutional
- Oven and Grill Cleaner

**Uses advised against:** Uses other than those identified are not recommended

**Manufacturer, importer, supplier:**

Consumer Branded Professional Products Diversey, Inc. 8310 16th Street Sturtevant, Wisconsin 53177-1964 Phone: (888) 352-2249	Canadian Headquarters Diversey, Inc. - Canada 3755 Laird Road Mississauga, Ontario L5L 0B3 Phone: 1-800-668-3131
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**Emergency telephone number:** 1-800-851-7145 (U.S.); 1-651-917-6133 (Int'l)

### 2. HAZARDS IDENTIFICATION

#### Classification for the undiluted product

Skin corrosion/irritation	Category 1B
Serious eye damage/eye irritation	Category 1
Flammability	Extremely flammable aerosol, Category 1
Metal Corrosion:	Category 1

**Signal Word:****Danger**

#### Precautionary Statements

**EXTREMELY FLAMMABLE AEROSOL. CONTAINS GAS UNDER PRESSURE; MAY EXPLODE IF HEATED. CAUSES SEVERE SKIN BURNS AND SERIOUS EYE DAMAGE. MAY BE CORROSIVE TO METALS.**

Causes burns/ serious damage to mouth, throat and stomach. Avoid contact with eyes, skin and clothing. 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. Keep container tightly closed. Keep only in original container. Do not pierce or burn, even after use. Do not incinerate. Do not breathe spray. Wash affected areas thoroughly after handling. Wear chemical-splash goggles, long chemical-resistant gloves and protective footwear when spraying and wiping. Do not spray towards face. IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes. 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 for at least 15 minutes. Immediately call a Poison Center (1-800-851-7145) or physician. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Store in corrosive-resistant container with a resistant inner liner. Protect from sunlight. Store in a well-ventilated place. Do not expose to temperatures exceeding 50 °C (122 °F) which may cause bursting. Dispose of in accordance with all federal, state and local applicable regulations.

Mr. Muscle Oven and Grill Cleaner

1 of 5



**Health hazards not otherwise classified (HHNOC)** - Not applicable  
**Physical hazards not otherwise classified (PHNOC)** - Not applicable

**Classification for the diluted product @ RTU**

This product is intended to be used neat.

**Precautionary Statements**

None required.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Classified Ingredients**

Ingredient(s)	CAS #	Weight %
Diethylene glycol butyl ether	112-34-5	10 - 20%
Sodium hydroxide	1310-73-2	3% - < 5%
Butane	106-97-8	1% - < 3%
Isobutane	75-28-5	1% - < 3%
Monoethanolamine	141-43-5	1% - < 3%

\*Exact percentages are being withheld as trade secret information

**4. FIRST AID MEASURES**

**Undiluted Product:**

**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes.

**Skin:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water for at least 15 minutes.

**Inhalation:** IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Ingestion:** IF SWALLOWED: Rinse mouth. DO NOT induce vomiting unless directed to do so by medical personnel. Drink a cupful of milk or water.

**Most Important Symptoms/Effects:** No information available.

**Immediate medical attention and special treatment needed** Not applicable.

**Aggravated Medical Conditions:** Individuals with chronic respiratory disorders such as asthma, chronic bronchitis, emphysema, etc., may be more susceptible to irritating effects.

**Diluted Product:**

This product is intended to be used neat.

**Eyes:** Rinse with plenty of water. If irritation occurs and persists, get medical attention.

**Skin:** Rinse with plenty of water. If irritation occurs and persists, get medical attention.

**Inhalation:** No specific first aid measures are required.

**Ingestion:** Rinse mouth with water.

**5. FIRE-FIGHTING MEASURES**

**Specific methods:** Use water spray to keep fire-exposed containers cool. Aerosol Product - Containers may rocket or explode in heat of fire.

**Suitable extinguishing media:** Dry chemical, water spray, foam.

**Specific hazards:** NFPA 30B Level 1 Aerosol. Aerosol product - Containers may rocket or explode in heat of fire.

**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:** Remove all sources of ignition. Put on appropriate personal protective equipment (see Section 8.).  
**Environmental precautions and clean-up methods:** Prevent product from entering drains. 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. Avoid breathing vapors or mists. ALWAYS WEAR LONG CHEMICAL-RESISTANT GLOVES, CHEMICAL-SPLASH GOGGLES AND PROTECTIVE FOOTWEAR WHEN SPRAYING AND WIPING. Do not spray toward face. Wash hands and arms after use. Do not spray on or let spray contact pilot light, electrical connections, switches, light bulbs, heating elements, receptacles, or thermostats. Spray may cause electric short. Do not let product contact floor coverings, linoleum, aluminum, copper, chrome, painted surfaces or plastics. Do not use on continuous or self-cleaning ovens. FOR COMMERCIAL AND INDUSTRIAL USE ONLY.

**Storage:**

Protect from freezing. Keep out of the reach of children. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 degrees C or 120 degrees F. Exposure to heat may cause bursting. Do not pierce or burn, even after use. Store in a cool, dry, well ventilated area away from heat or open flame.

**Aerosol Level (if applicable) :** Level 1

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Guidelines:**

Ingredient(s)	CAS #	ACGIH	OSHA
Diethylene glycol butyl ether	112-34-5	10 ppm (TWA)	-
Sodium hydroxide	1310-73-2	2 mg/m <sup>3</sup> (Ceiling)	2 mg/m <sup>3</sup> (TWA)
Isobutane	75-28-5	1000 ppm (STEL)	-
Butane	106-97-8	1000 ppm (STEL)	-
Monoethanolamine	141-43-5	6 ppm (STEL) 3 ppm (TWA)	3 ppm (TWA) 6 mg/m <sup>3</sup> (TWA)

**Undiluted Product:**

**Engineering measures to reduce exposure:**

Good general ventilation should be sufficient to control airborne levels Respiratory protection is not required if good ventilation is maintained.

**Personal Protective Equipment**

**Eye protection:**

Chemical-splash goggles.

**Hand protection:**

Long chemical-resistant gloves.

**Skin and body protection:**

Protective footwear. If major exposure is possible, wear suitable protective clothing and footwear.

**Respiratory protection:**

In case of insufficient ventilation wear suitable respiratory equipment. 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.

**Hygiene measures:**

Handle in accordance with good industrial hygiene and safety practice.

**Diluted Product:**

This product is intended to be used neat.

**Personal Protective Equipment**

**Eye protection:**

Chemical-splash goggles.

**Hand protection:**

Long chemical-resistant gloves.

**Skin and body protection:**

Protective footwear. If major exposure is possible, wear suitable protective clothing and footwear.

**Respiratory protection:**

In case of insufficient ventilation wear suitable respiratory equipment. 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.

**Hygiene measures:**

Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES:

**Physical State:** Aerosol

**Evaporation Rate:** No information available

**Odor threshold:** No information available.

**Melting point/range:** Not determined

**Autoignition temperature:** No information available

**Solubility in other solvents:** No information available

**Density:** 8.75 lbs/gal 1.049 Kg/L

**Bulk density:** No information available

**Flash point:** 19 °F -7 °C

**Dilution Flash Point:** 19 °F -7 °C

**Elemental Phosphorus:** 0 % by wt.

**pH:** 13

**Dilution pH:** 13 @ RTU

**Metal Corrosion:** Not determined

**Color:** Tan

**Odor:** Citrus

**Boiling point/range:** Not determined

**Decomposition temperature:** Not determined

**Solubility:** Completely Soluble

**Relative Density (relative to water):** 1.049

**Vapor density:** No information available

**Vapor pressure:** No information available.

**Partition coefficient (n-octanol/water):** No information available

**Viscosity:** No information available

**VOC:** 7.9 % \*

**VOC % by wt. at use dilution** 7.9 % \*

**Flammability (Solid or Gas):** Not applicable



**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

<b>Reactivity:</b>	Not Applicable
<b>Stability:</b>	The product is stable
<b>Hazardous decomposition products:</b>	None reasonably foreseeable.
<b>Materials to avoid:</b>	Strong oxidising agents. Strong acids.
<b>Conditions to avoid:</b>	Keep away from open flames, hot surfaces and sources of ignition.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure:

Skin contact, Inhalation, Eye contact, Ingestion

### Delayed, immediate, or chronic effects and symptoms from short and long-term exposure

**Skin contact:** Corrosive. Causes severe burns. Symptoms may include burns, blisters, redness and pain (which may be delayed).

**Eye contact:** Corrosive. Causes serious eye damage. Symptoms may include pain, burning sensation, redness, watering, blurred vision or loss of vision.

**Ingestion:** Causes burns/ serious damage to mouth, throat and stomach. Symptoms may include stomach pain and nausea.

**Inhalation:** May cause irritation and corrosive effects to nose, throat and respiratory tract. Symptoms may include coughing and difficulty breathing.

**Sensitization:** No known effects.

### Numerical measures of toxicity

**ATE - Oral (mg/kg):** >5000 mg/kg

**ATE - Dermal (mg/kg):** >5000 mg/kg

**ATE - Inhalatory, mists (mg/l):** >20 mg/L

**ATE - Inhalatory, vapors (mg/l):** >50 mg/L

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** No information available.

**Persistence and Degradability:** No information available.

**Bioaccumulation:** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste from residues / unused products:** This product, as sold, if discarded or disposed, is a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Dispose in compliance with all Federal, state, provincial, and local laws and regulations.

**Contaminated Packaging:** Do not re-use empty containers.

**RCRA Hazard Class (undiluted product):** D001 Ignitable Waste, D002 Corrosive Waste

## 14. TRANSPORT INFORMATION

**DOT/TDG/IMDG:** Please refer to the Diversey HazMat Library, only available through Internet Explorer, <http://naextranet.diversey.com/dot/>, for up to date shipping information.

**DOT (Ground) Bill of Lading Description:** LTD. QTY.

**IMDG (Ocean) Bill of Lading Description:** UN1950, AEROSOLS, 2.1, LTD. QTY.

## 15. REGULATORY INFORMATION

**International Inventories at CAS# Level**

All components of this product are listed on the following inventories: U.S.A. (TSCA), Canada (DSL/NDL).

**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:
Water	7732-18-5	-	-	-	-
Diethylene glycol butyl ether	112-34-5	-	X	-	-
Sodium hydroxide	1310-73-2	X	X	X	X
Butane	106-97-8	X	X	X	-
Isobutane	75-28-5	X	X	X	-
Monoethanolamine	141-43-5	X	X	X	-

**CERCLA/ SARA**

Ingredient(s)	CAS #	Weight %	CERCLA/SARA RQ (lbs)	Section 302 TPQ (lbs)	Section 313
Diethylene glycol butyl ether	112-34-5	10 - 20%			X
Sodium hydroxide	1310-73-2	3% - < 5%	1000		

Ingredient(s)	CAA HAP	CAA ODS	CWA Priority Pollutants
Diethylene glycol butyl ether	X		

**SARA 311/312 Hazard Categories**

Immediate: X  
 Delayed: -  
 Fire: X  
 Reactivity: -  
 Sudden Release of Pressure: X

Ingredient(s)	CAS #	NPRI
Diethylene glycol butyl ether	112-34-5	X

**16. OTHER INFORMATION****NFPA (National Fire Protection Association)**

Rating Scale: (Low Hazard) 0 - 4 (Extreme Hazard)

Health 3

Flammability 4

Instability 0

Version Number: 2

Preparation date: 2015-01-13

Reason for revision:

Not applicable

Prepared by:

NAPRAC

Additional advice:

- NFPA 30B Level 1 Aerosol
- Contains an added fragrance, see "Odor" heading in section 9 for specific description

*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.*

# 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:** MRP Marble Restoration Paste  
**Supplier's Name:** National Chemical Laboratories of PA, Inc.  
**Supplier's Address:** 401 N. 10<sup>th</sup> Street · Philadelphia PA 19123  
**HMIS Hazard Code:** Health: 2 Flammability: 0 Reactivity: 0 Other: 0  
**Chemical Family:** Detergent Combination  
**D.O.T. Shipping Name:** N/A

**Product #:** 2522  
**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)
Oxalic Acid	144-62-7	PROP.	1mg/m <sup>3</sup>

### SECTION 3 - PHYSICAL DATA

**Boiling Point (°F):** 212  
**Vapor Pressure:** = To Water  
**Vapor Density:** = To Water  
**Solubility in Water:** Complete  
**Appearance:** White slurry  
**Odor:** None

**Specific Gravity:** 1.380  
**Evaporation Rate:** = To Water

### SECTION 4 - FIRE AND EXPLOSION DATA

**Flash Point (°F):** None  
**Flammable Limits:** N/A  
**Unusual Fire & Explosion Hazards:** None

### SECTION 5 - HEALTH HAZARD DATA

**Route(s) of Entry:** Inhalation: Yes Skin: Yes Ingestion: Yes **Threshold Limit Value:** Not Est.  
**Effects of Overexposure:** May cause skin and eye irritation. Harmful or fatal if swallowed. If ingested may cause corrosion of the mouth, esophagus and stomach.  
**Emergency & First Aid Procedures:** **For Eyes:** Flush eyes with water for at least fifteen minutes. If irritation persists seek medical attention. **For Skin:** Flush skin thoroughly with water. If irritation persists seek medical attention. **If ingested:** Do not induce vomiting. Give water. Seek immediate medical attention. Never give anything by mouth to an unconscious person.  
**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:** Avoid contact with strong acids and oxidizers  
**Hazardous Decomposition Products:** Carbon Oxides  
**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 using a suitable absorbent. Rinse remaining material to drains.  
**Waste disposal method:** Follow local, state, and federal regulations.

### SECTION 8 - SPECIAL PROTECTION INFORMATION

**Respiratory Protection:** Not required  
**Ventilation:** Not required  
**Protective Gloves:** Rubber or latex  
**Eye Protection:** Goggles or safety glasses with side shields.  
**Other Protective Equipment:** Not required

### SECTION 9 - SPECIAL PRECAUTIONS

**Precautions to be taken in handling and storage:** Store between 40°F and 120°F  
**Other Precautions:** 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 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 be covered by this MSDS. The user is responsible for full compliance.

Date Prepared – 05/30/02 By: G.C.

# **MATERIAL SAFETY DATA SHEET**

## **SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

Product Name: MTK  
Manufacturer's Product Code: 5002  
Other Names: Aerosol silicon-based cleaner and protective coating  
Major Recommended Uses: As a cleaner and polish for non-porous surfaces.  
Date of Issue: Feb 2010

Supplier's Details: MANTEK  
 7 Ralph Street, Alexandria  
 Sydney NSW 2015  
 Telephone Number (Office Hours): (02) 9669 0261  
 Fax Number: (02) 9693 1562  
 Emergency Telephone Number: (02) 9214 0755

## **SECTION 2 – HAZARDS IDENTIFICATION**

Hazard Classification: NOT classified as hazardous according to the criteria of ASCC.  
Dangerous Goods Class: Class 2.1, no sub-risk.  
Poisons Schedule: None allocated.  
Risk Phrases: Flammable.  
Safety Phrases: Keep out of reach of children.  
 Keep container in a well-ventilated place.  
 Keep away from sources of ignition - no smoking.  
 Avoid contact with the eyes and skin. In case of contact with eyes, rinse immediately with plenty of water.

## **SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS**

### **Ingredients**

Chemical Entity	CAS No	Proportion	Synonyms
'Ingredients determined not to be hazardous'		100%	
(Propan-2-ol)	67-63-0	<20%	Isopropanol)

## **SECTION 4 – FIRST AID MEASURES**

Skin: Wash off with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists.

Eye: Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

Inhalation: If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion: Give water, but do NOT induce vomiting. If vomiting occurs, give fluids again. Seek medical attention.

First Aid Facilities: General eyewash and safety shower.

Advice to Doctor: Treat the patient symptomatically.

Additional Information: Principle routes of exposure: inhalation, skin and eye contact. Primary routes of entry: inhalation, skin absorption. Target organs: Skin, eyes, liver, heart, central nervous system, respiratory system, kidney.

## **SECTION 5 – FIRE FIGHTING MEASURES**

Suitable Extinguishing Media: In the event of a fire, powder, foam, CO<sub>2</sub> and water spray are the recommended extinguishing agents. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special Protective Equipment and Precautions for Fire Fighters: As in any fire, fire fighters should wear self-contained breathing apparatus and full protective gear.

Fire/Explosive Hazards: As with all aerosol containers, use water spray to cool exposed cans.

Hazchem Code: 2Y

## **SECTION 6 – ACCIDENTAL RELEASE MEASURES**

Wear appropriate protective clothing. Floor may be slippery.

Methods and Materials for Containment and Clean Up: Eliminate all sources of ignition and ventilate the area. Due to the nature of the aerosol packaging, a large spill is unlikely. For a small spill, ventilate the area and absorb with a non-combustible, inert, absorbent material. Dispose of waste in a closed, labelled container in accordance with local, state and Commonwealth laws. Typical disposal is to wrap the empty aerosol container in several layers of newspaper and dispose of in the garbage. Do not puncture or incinerate the can. Residue can be rinsed with water and area washed with detergent and water, but do not flush spilt product into surface water.

## **SECTION 7 – HANDLING AND STORAGE**

Precautions for Safe Handling: Keep away from heat, open flames, sparks, pilot lights, static electricity, and any other and ignition sources when using - product is flammable. Keep out of eyes. Avoid breathing vapours and mists, and avoid contact with skin and eyes.

Observe all precautions stated on the product label, and follow industry safety regulations. Prevent repeated or prolonged skin exposure; follow the exposure controls outlined in Section 8. Maintain high standards of personal hygiene - i.e. always wash hands prior to eating, drinking, smoking or using toilets.

Conditions for Safe Storage: Store indoors in the in original container. Store in a dry, well-ventilated area. Store below 49°C. Keep away from heat and sources of ignition.

## **SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure Standards: Not established for this mixture. The exposure limits for individual ingredients follow:

propane/butane propellant:	TWA – 800ppm; 1900mg/m <sup>3</sup>
propan-2-ol:	TWA - 400ppm (983mg/m <sup>3</sup> ); STEL – 500ppm (1230mg/m <sup>3</sup> )

Engineering Controls: Ensure adequate ventilation. General exhaust is usually sufficient to protect user from exposure to levels of greater than permissible exposure limits. Minimise confined space use.

Personal Protective Equipment:

Eye/Face Protection: Wear safety glasses with side shields if use presents the likelihood of eye contact. AS1336 and AS/NZS1337 should be consulted for information on eye protection.

Skin Protection: Wear impervious gloves when handling this product if repeated or prolonged skin contact is anticipated. Refer to AS/NZS 2161 for information on glove selection.

Respiratory Protection: Whilst not required in normal conditions of use, an approved organic vapour respirator meeting the requirements outlined in AS/NZS 1715 and AS/NZS 1716 should be used if engineering controls are not effective in controlling airborne exposure in a specific situation – or if used in confined or poorly ventilated areas where exposure will be above the recommended exposure limits.

## **SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	Opaque white emulsion with an alcohol odour.	
Vapour Density:	2.0	(Air = 1)
Vapour Pressure:	131mm of Hg	(At 25°C)
Boiling Point:	82°C	
Melting Point:	Not applicable	
Solubility in Water (g/L):	Complete	
Specific Gravity:	0.97 – 0.99	(At 25°C; water = 1)
Flashpoint:	53°C	(bulk liquid)

Flashpoint Method: P.M.C.C.  
 Flammability Limits: Not available  
 % Volatiles by Volume: 97%  
 Evaporation Rate: 0.5 (Bu Ac = 1)

## **SECTION 10 – STABILITY AND REACTIVITY**

Stability: Stable.  
Hazardous Polymerisation: Will not occur.  
Conditions/Materials to Avoid: Avoid heat, hot surfaces, sparks, and open flames. Incompatible with strong bases, acids, oxidising agents, halogenated hydrocarbon, aldehydes, ketones.  
Hazardous Decomposition Products: Oxides of carbon and nitrogen. No possibility of hazardous reactions under normal processing.

## **SECTION 11 – TOXICOLOGICAL INFORMATION**

Health Effects:  
 Acute - Swallowed: May cause irritation to mucous membranes, and cause headaches, drowsiness.  
 Acute - Eye: May cause irritation seen as tearing, redness and a burning sensation.  
 Acute - Skin: May cause mild irritation. The product may be absorbed through the skin.  
 Acute - Inhaled: Not a hazard in usual use, but can cause irritation of respiratory tract. May cause central nervous system effects, headaches and dizziness.

### Acute toxicity:

	LD50 Oral	LD50 Dermal	LD50 Inhalation
propan-2-ol	4396mg/kg (rat)	12800mg/kg (rabbit/rat)	72.6mg/L (rat ) 4 hr
propane/butane propellant	-	658mg/kg (rat)	658 g/m <sup>3</sup> (rat) 4 hr

Chronic: Due to the use pattern of this product, the likelihood of chronic effects is remote. Repeated exposure may cause skin dryness or cracking. Chronic ingestion can cause liver and kidney injury.

Chronic toxicity: No mutagenicity, sensitisation, developmental or reproductive toxicity data.

Target Organs: Skin, eyes, respiratory system, kidney (propan-2-ol); liver, heart, central nervous system (aerosol propellant).

### Product Contains Chemicals Listed as Carcinogens or Potential Carcinogens by:

International Agency for the Research of Cancer (IARC): NO  
 Other: NO

## **SECTION 12 – ECOLOGICAL INFORMATION**

No specific toxicology data on this product is available. When used as indicated, no adverse environmental effects are foreseen.

Propan-2-ol - log Pow = 0.05

Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea
EC50> 1000mg/L 13299mg/L	LC50= 61200mg/L Pimephales promelas 96 h	EC50 = 35390mg/L	EC50 =
Scenedesmus subspicatus 72 h EC50> 1000mg/L	LC50= 94900mg/L Pimephales promelas 96 h	5 min	48 hr
Scenedesmus subspicatus 96 h	LC50= 9640mg/L Pimephales promelas 96 h		

## **SECTION 13 – DISPOSAL CONSIDERATIONS**

Do not incinerate or puncture aerosol cans. If aerosol can develops a leak, allow to fully discharge before disposal. Prevent disposal in sewers and waterways. Normally suitable for disposal at approved land waste site, but review Federal, State and local government requirements prior to disposal.

## **SECTION 14 – TRANSPORT INFORMATION**

UN Number: UN1950  
UN Proper Shipping Name: Aerosol  
Transport Hazard Class: ADG Class 2.1, no sub-risk.

Packaging Group: Not applicable.  
 Hazchem Code: 2Y  
 EmS No.: F-D, S-U

## **SECTION 15 - REGULATORY INFORMATION**



Poisons Schedule: None allocated ;

## **SECTION 16 – OTHER INFORMATION**

Initial 16-heading MSDS.

Since the user's working conditions are not known by the supplier, 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 in Section 1 without first obtaining written handling instructions. CHEMSEARCH AUSTRALIA 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 non-recommended use, storage or disposal of the product.

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.

# Material Safety Data Sheet: RED STREAK, MM

Supersedes Date 01/13/2011

Issuing Date 12/06/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** RED STREAK, MM  
**Recommended use** Use in drains  
**Information on Manufacturer**  
MANTEK, DIVISION OF NCH CORP.  
BOX 152170  
IRVING, TEXAS 75015

**Product Code** 0058  
**Chemical nature** Alkaline  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

DANGER  
POISON  
Corrosive  
Causes skin and eye burns  
May cause delayed lung injury and burns  
Harmful or fatal if swallowed

**Color** Colorless

**Physical State** Liquid

**Odor** Odorless

**Potential Health Effects**

**Principle Route of Exposure**

**Primary Routes of Entry**

**Acute Effects**

**Eyes**

**Skin**

**Inhalation**

**Ingestion**

Skin contact, Eye contact, Inhalation.  
None known

Corrosive to the eyes and may cause severe damage including blindness.

Causes skin burns.

Causes burns. Inhalation may be fatal or cause delayed lung injury.

If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Inhaled corrosive substances can lead to a toxic edema of the lungs.

**Chronic Toxicity**

**Target Organ Effects**

**Aggravated Medical Conditions**

**Potential Environmental Effects**

Respiratory system, Eyes, Skin.

Respiratory disorders, Skin disorders.

See Section 12 for additional Ecological information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Potassium hydroxide	1310-58-3

## 4. FIRST AID MEASURES

**General advice**

**Eye Contact**

**Skin Contact**

**Inhalation**

**Ingestion**

**Notes to physician**

Do not get in eyes, on skin or on clothing. Do not breathe mist.

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.

Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.

Move to fresh air. In case of shortness of breath, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

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.

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. Carbon dioxide (CO<sub>2</sub>). Foam. Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Specific hazards arising from the chemical**

Contact with metals liberates flammable hydrogen gas. 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.

<b>NFPA</b>	<b>Health 3</b>	<b>Flammability 0</b>	<b>Instability 1</b>
<b>HMIS</b>	<b>Health 3</b>	<b>Flammability 0</b>	<b>Instability 1</b>

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	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)
<b>Methods for Cleaning Up</b>	Pick up and transfer to properly labeled containers
<b>Neutralizing Agent</b>	Acetic acid, diluted.

**7. HANDLING AND STORAGE**

<b>Handling</b>	Do not get in eyes, on skin or on clothing. Do not breathe mist.
<b>Storage</b>	Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Metal containers must be lined. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
<b>Storage Temperature</b>	<b>Minimum</b> 60 °F / 16 °C
<b>Storage Conditions</b>	<b>Indoor</b> X <b>Outdoor</b> <b>Maximum Heated</b> 120 °F / 49 °C <b>Refrigerated</b>

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH
Potassium hydroxide	Ceiling: 2 mg/m <sup>3</sup>	No data available	Ceiling: 2 mg/m <sup>3</sup>

<b>Engineering Measures</b>	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.
<b>Personal Protective Equipment</b>	
<b>Eye/Face Protection</b>	Tightly fitting safety goggles. Face-shield.
<b>Skin Protection</b>	Wear suitable protective clothing, Impervious gloves.
<b>Respiratory Protection</b>	In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
<b>General Hygiene Considerations</b>	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. Remove and wash contaminated clothing before re-use.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State</b>	Liquid	<b>Viscosity</b>	Non viscous
<b>Color</b>	Colorless	<b>Odor</b>	Odorless
<b>Appearance</b>	Transparent	<b>pH</b>	14
<b>Specific Gravity</b>	1.45	<b>Evaporation Rate</b>	0.34 (Butyl acetate=1)
<b>Percent Volatile (Volume)</b>	71.4	<b>VOC Content (%)</b>	0
<b>Vapor Pressure</b>	9.6 mmHg @ 70°F	<b>Vapor Density</b>	0.6 (Air = 1.0)
<b>Solubility</b>	Completely soluble	<b>Boiling Point/Range</b>	235 °F / 113 °C

**10. STABILITY AND REACTIVITY**

<b>Chemical Stability</b>	Stable. Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	None known
<b>Incompatible Products</b>	Strong oxidizing agents, Light and/or alkaline metals, Acids, Aldehydes, Highly halogenated compounds, Contact with metals liberates hydrogen gas.
<b>Hazardous Decomposition Products</b>	Hydrogen, by reaction with metals
<b>Possibility of Hazardous Reactions</b>	None under normal processing

**11. TOXICOLOGICAL INFORMATION**

Product Information	No information available.
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## 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

## 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

## Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Potassium 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

## 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** Potassium hydroxide, solution  
**Hazard Class** 8  
**UN-No** UN1814  
**Packing Group** II  
**Reportable Quantity (RQ)** Potassium hydroxide, RQ kg= 1008.89  
**Description** UN1814, Potassium hydroxide, solution, 8, PG II

## TDG

**Proper shipping name** Potassium hydroxide, solution  
**Hazard Class** 8  
**UN-No** UN1814  
**Packing Group** II  
**Description** POTASSIUM HYDROXIDE, SOLUTION,8,UN1814,PG II

## ICAO

**UN-No** UN1814  
**Proper Shipping Name** Potassium hydroxide solution  
**Hazard Class** 8  
**Packing Group** II  
**Shipping Description** Potassium hydroxide solution,8,UN1814,PG II

## IATA

**UN-No** UN1814  
**Proper Shipping Name** Potassium hydroxide, solution  
**Hazard Class** 8  
**Packing Group** II  
**ERG Code** 8L  
**Shipping Description** UN1814,Potassium hydroxide, solution,8,PG II

## IMDG/IMO

**Proper Shipping Name** Potassium hydroxide solution  
**Hazard Class** 8

UN-No UN1814  
Packing Group II  
EmS No. F-A, S-B  
Shipping Description UN1814, Potassium hydroxide solution,8,PG II

**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	Yes	No	No	No

**CERCLA**

Component	Hazardous Substances RQs	CERCLA EHS RQs
Potassium 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**

D1B Toxic materials E Corrosive material

**16. OTHER INFORMATION**

Prepared By Adrienne McKee  
Supersedes Date 01/13/2011  
Issuing Date 12/06/2013  
Reason for Revision No information available.  
Glossary No information available.  
List of References. No information available.

**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. 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: LEMON DROP 12 OZ SAMPLE, NAC MM

Supersedes Date 09/29/2011

Issuing Date 11/22/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** LEMON DROP 12 OZ SAMPLE, NAC MM  
**Recommended use** Fragrance  
**Information on Manufacturer**  
CHEMSEARCH DIV. OF NCH CORP.  
BOX 152170  
IRVING, TX 75015

**Product Code** 5940  
**Chemical nature** Petroleum distillates and fragrances  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

#### DANGER

Combustible liquid and vapor  
May cause skin irritation  
May cause allergic skin reaction  
Causes eye irritation  
May cause allergic respiratory reaction  
May be harmful if swallowed

**Color** Colorless - Light yellow

**Physical State** Liquid

**Odor** Citrus

**Potential Health Effects**

**Principle Route of Exposure**

**Primary Routes of Entry**

**Acute Effects**

**Eyes**

**Skin**

**Inhalation**

**Ingestion**

**Chronic Toxicity**

**Target Organ Effects**

**Aggravated Medical Conditions**

**Potential Environmental Effects**

Skin contact, Eye contact, Inhalation.

Inhalation, Skin Absorption.

Causes eye irritation.

May cause skin irritation. May cause allergic skin reaction.

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. May cause allergic respiratory reaction.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways.

Liver and kidney injuries may occur. May cause sensitization by skin contact. May cause sensitization by inhalation.

Respiratory system, Ears, Central nervous system, Liver, Kidney, Immune system.

Respiratory disorders, Skin disorders, Neurological disorders, Liver disorders, Kidney disorders.

See Section 12 for additional Ecological information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Petroleum distillates, hydrotreated light	64742-47-8
Orange Terpenes	68647-72-3
Linalool	78-70-6
Citral	5392-40-5
D-Limonene	5989-27-5
Lemon oil	8008-56-8

## 4. FIRST AID MEASURES

**General advice**

**Eye Contact**

**Skin Contact**

**Inhalation**

**Ingestion**

**Notes to physician**

Avoid contact with skin, eyes and clothing.

Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists. Remove contaminated clothing and shoes. Wash contaminated clothing before re-use.

If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways. May cause sensitization of susceptible persons.

## 5. FIRE-FIGHTING MEASURES

**Flash Point** 164 °F / 73 °C**Method** Seta closed cup**Autoignition Temperature** No information available.**Flammability Limits in Air %** Petroleum distillates.**Upper** 4.9**Lower** 0.5**Suitable Extinguishing Media**Foam. Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.**Specific hazards arising from the chemical**

Combustible Liquid. 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 1**Flammability** 2**Instability** 0**HMIS** Health 1**Flammability** 2**Instability** 0**6. ACCIDENTAL RELEASE MEASURES****Personal Precautions**

Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation.

**Environmental Precautions**

Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

**Methods for Containment**

Do not flush into surface water or sanitary sewer system.

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**

Use clean non-sparking tools to collect absorbed material. Pick up and transfer to properly labeled containers.

**Neutralizing Agent**

Not applicable.

**7. HANDLING AND STORAGE****Handling**

Keep away from open flames, hot surfaces and sources of ignition. Avoid contact with skin, eyes and clothing.

**Storage**

Keep away from heat and sources of ignition. 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
Petroleum distillates, hydrotreated light	5 mg/m <sup>3</sup> as oil mist	10 mg/m <sup>3</sup> as oil mist	No data available
Orange Terpenes	No data available	No data available	No data available
Linalool	No data available	No data available	No data available
Citral	TWA: 5 ppm Skin	No data available	No data available
D-Limonene	No data available	No data available	No data available
Lemon oil	No data available	No data available	No data available

**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**

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**

Non viscous

**Color**

Colorless - Light yellow

**Odor**

Citrus

**Appearance**

Transparent

**pH**

Not applicable

**Specific Gravity**

0.80

**Evaporation Rate**

0.02 (Butyl acetate=1)

**Percent Volatile (Volume)**

100

**VOC Content (%)**

92

**VOC Content (g/L)**

736

**Vapor Pressure**

0.37 mmHg @ 70°F

**Vapor Density**

4.9 (Air = 1.0)

**Solubility**

Negligible

**Boiling Point/Range**

390 °F / 199 °C

## 10. STABILITY AND REACTIVITY

**Chemical Stability****Conditions to Avoid****Incompatible Products****Hazardous Decomposition Products****Possibility of Hazardous Reactions**

Stable. Hazardous polymerization does not occur.

Heat, flames, and sparks

Strong oxidizing agents, Strong acids, Strong bases.

Carbon oxides

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
Petroleum distillates, hydrotreated light	> 5000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 5.2 mg/L ( Rat ) 4 h	no data available	no data available
Orange Terpenes	no data available	no data available	no data available	no data available	no data available
Linalool	no data available	no data available	no data available	no data available	no data available
Citral	= 4950 mg/kg ( Rat )	= 2250 mg/kg ( Rabbit )	no data available	no data available	no data available
D-Limonene	no data available	> 5 g/kg ( Rabbit )	no data available	no data available	no data available
Lemon oil	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
Petroleum distillates, hydrotreated light	no data available	no data available	no data available	no data available	respiratory system, liver, kidney, CNS
Orange Terpenes	no data available	no data available	no data available	no data available	no data available
Linalool	no data available	no data available	no data available	no data available	no data available
Citral	no data available	no data available	no data available	no data available	no data available
D-Limonene	no data available	Skin sensitization, Respiratory sensitization	no data available	no data available	CNS, immune system, lungs, liver, kidneys
Lemon oil	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
Petroleum distillates, hydrotreated light	not applicable	not applicable	not applicable	not applicable	not applicable
Orange Terpenes	not applicable	not applicable	not applicable	not applicable	not applicable
Linalool	not applicable	not applicable	not applicable	not applicable	not applicable
Citral	not applicable	not applicable	not applicable	not applicable	not applicable
D-Limonene	not applicable	not applicable	not applicable	not applicable	not applicable
Lemon oil	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
Petroleum distillates, hydrotreated light	no data available	LC50 = 45 mg/L Pimephales promelas 96 h LC50 = 2.2 mg/L Lepomis macrochirus 96 h LC50 = 2.4 mg/L Oncorhynchus mykiss 96 h	no data available	LC50= 4720 mg/L 96 h	N/A
Orange Terpenes	no data available	no data available	no data available	no data available	N/A
Linalool	EC50 = 88.3 mg/L Desmodesmus subspicatus 96 h	LC50 22 - 46 mg/L Leuciscus idus 96 h	EC50 = 1000 mg/L 30 min	EC50= 20 mg/L 48 h	2.84 - 3.1
Citral	EC50 = 16 mg/L Desmodesmus subspicatus 72 h EC50 = 19 mg/L Desmodesmus subspicatus 96 h	LC50 4.6 - 10 mg/L Leuciscus idus 96 h	EC50 = 2100 mg/L 30 min	EC50= 7 mg/L 48 h	2.76
D-Limonene	no data available	LC50 0.619 - 0.796 mg/L Pimephales promelas 96 h LC50 = 35 mg/L Oncorhynchus	no data available	no data available	N/A

		mykiss 96 h			
Lemon oil	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** DOT  
**Proper Shipping Name** >119 Gals = Combustible liquid, n.o.s.  
**Hazard Class** Combustible liquid  
**UN-No** NA1993  
**Packing Group** III  
**Description** NA1993, Combustible liquid, n.o.s.(Petroleum Distillates), Combustible liquid, PG III  
**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	Yes	Yes	No	No

#### CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Petroleum distillates, hydrotreated light	Not applicable	Not applicable
Orange Terpenes	Not applicable	Not applicable
Linalool	Not applicable	Not applicable
Citral	Not applicable	Not applicable
D-Limonene	Not applicable	Not applicable
Lemon oil	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

B3 Combustible liquid D2A Very toxic materials D2B Toxic materials



### 16. OTHER INFORMATION

**Prepared By** Rachael Mohochi  
**Supersedes Date** 09/29/2011

Issuing Date 11/22/2013  
Reason for Revision No information available.  
Glossary No information available.  
List of References. No information available.

**CHEMSEARCH 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

May be used to comply with  
OSHA's Hazard Communication Standard  
29 CFR 1910.1200. Standard must be  
consulted for specific requirements.



REAGENT CHEMICAL & RESEARCH, INC.  
115 US Hwy 202 Ringoes, NJ 08551

REVISED DATE: 1/1/2006

VALID UNTIL 1/1/2011

<b>IDENTITY</b>	<i>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.</i>
Hydrochloric Acid, 20° Baume	

## Section I - Product Information

Product Name	CAS #
Hydrochloric Acid	7647-01-0
Synonym	Chemical Formula
Muriatic Acid	HCl
Chemical Name	Chemical Family
Hydrochloric Acid Solution	Inorganic Acid

## Section II - Manufacturers Information

Manufacturers Name	Address
Reagent Chemical & Research, Inc.	124 River Road Middlesex, NJ 08846
Emergency Contact	Country
Robert Dritschel	United States
Emergency Telephone	Emergency Telephone #
1-409-962-5769	CHEMTREC 1-800-424-9300

## Section III - Ingredients/Regulatory Information

Substance Description	Percent	CAS #
Hydrogen Chloride	31.45 - 33.30	7647-01-0
Water	66.70 - 68.55	7732-18-5

## EXPOSURE LIMITS/REGULATORY INFORMATION

Substance	PEL	TLV	STEL	TWA	CEILING
Hydrogen Chloride	C-7 mg/m3	C-5 ppm	50 ppm	N/D	5 ppm
Water	N/D	N/D	N/D	N/D	N/D
N/D - Not Determined		C = Ceiling Level			

## Section IV - Hazards Identification

Appearance & Odor	Statement of Hazards
Clear/Pale Yellow Liquid/Pungent Odor	Severe and painful burns upon contact

### Primary Route of Exposure

Skin, eye and inhalation contact are the primary routes of exposure to this product

### Inhalation Acute Exposure Effect:

Inhalation of excessive concentrations of Hydrogen Chloride vapors immediately

produces severe irritation of the upper respiratory tract; resulting in coughing,

burning of the throat, and a choking sensation. Reactions encountered in man have

usually been limited to inflammation occasional ulceration of the nose, throat and

larynx. If inhaled deeply, edema of the lungs may occur.

### Skin Contact Acute Exposure Effect:

Concentrated solutions are destructive to clothing and on contact with skin, causes

severe burns unless promptly washed off. Repeated skin contact with dilute solutions

may lead to the development of dermatitis. Exposure to the concentrated vapors of

Hydrogen Chloride may also result in burns and dermatitis.

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## Section IV - Hazards Identification (continued)

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### Eye Contact Acute Exposure Effects

Contact of the eyes with Hydrogen Chloride, either as a gas or in solution, rapidly causes severe irritation and painful burns of the eyes and eyelids. If the acid is not quickly removed by thorough irrigation with water, there may be prolonged or permanent visual impairment or total loss of sight.

### Ingestion Acute Exposure Effects

When concentrated Hydrochloric Acid is swallowed, it causes severe burns of the mucous membranes of the mouth, esophagus and stomach. The lips and mouth usually turn white, and later brown. There is pain in the throat and stomach, difficulty in swallowing, intense thirst, nausea and in severe cases, collapse and unconsciousness.

### Fire and Explosion Hazard:

Non-flammable, but Hydrochloric Acid reacts with all metals, except gold and platinum, with rapid evolution of Hydrogen which is flammable and explosive in air. Firefighters exposed to Hydrochloric Acid vapors should wear Scott Air-Pak, or equivalent. Hydrogen Chloride vapors are extremely irritating to the respiratory tract and may cause breathing difficulty.

### Carcinogenicity

IARC	...No	OSHA	...No	ACGIH	...No
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## Section V - First Aid Measures

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### General

If a known exposure occurs or is suspected, immediately initiate the recommended procedures below. Simultaneously contact a physician, or the nearest Poison Control Center. Inform the person contacted of the type and extent of exposure, describe the victim's symptoms and follow the advice given. For additional information, call day or night, Reagent Chemical (409) 962-5769 or Chemtrec (800) 424-9300.

### Inhalation

Remove from contaminated atmosphere. If breathing has ceased, clear the victim's airway and start mouth-to-mouth artificial respiration, which may be supplemented by the use of a bag-mask respirator, or a manually-triggered, oxygen supply capable of delivering 1 liter/second or more. If the victim is breathing, oxygen may be administered from a demand-type or continuous-flow inhalator, preferably with a physician's advice. Contact a physician immediately.

### Eye Contact

Immediately flush the eyes with large quantities of running water for 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. DO NOT attempt to neutralize with chemical agents. Obtain medical attention as soon as possible. Oils or ointments should not be used. Continue the flushing for an additional 15 minutes if the physician is not available.

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## Section V - First Aid Measures (continued)

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### Skin Contact

Immediately remove contaminated clothing under a safety shower. Flush all

affected areas with large amounts of water for 15 minutes. DO NOT attempt to

neutralize with chemical agents. Obtain medical advice.

### Ingestion

DO NOT induce vomiting. Immediately give large quantities of water or milk, if

available. If vomiting does occur, give fluids again. Never give anything by mouth

to an unconscious person. Call a physician of the nearest Poison Control Center.

### Medical Conditions Generally Aggravated by Exposure

Hydrogen Chloride will aggravate breathing disorders

### Note to Physician

Attending Physician should treat exposed patients symptomatically

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## Section VI - Fire Fighting Measures

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Flash Point	Flash Method
N.A.	N.A.

### Extinguishing Method

Not Applicable

### Unusual Fire and Explosion Hazard:

Non-flammable, but Hydrochloric Acid reacts with metals.

### Special Firefighting Procedure:

Non-flammable, but Hydrochloric Acid reacts with all metals, except gold and

platinum, with rapid evolution of Hydrogen which is flammable and explosive in air.

Firefighters exposed to Hydrochloric Acid vapors should wear Scott Air-Pak, or

equivalent. Hydrogen Chloride vapors are extremely irritating to the respiratory

tract and may cause breathing difficulty.

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## Section VII - Accidental Release Measures

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### Steps to be Taken in Case Material is Released or Spilled

Spills or discharges into the environment involving large quantities of Hydrochloric

Acid should be controlled and cleaned-up according to a pre-determined, affirmative

written Spill Prevention and Control Program. For assistance in developing a SPCP

contact your nearest Reagent Sales Office.

Spills should be handled immediately by neutralization and dilution of the spilled

product by the use of Soda Ash (Sodium Carbonate), Lime (Calcium Hydroxide), or

Limestone (Calcium Carbonate) with large amounts of water. For an interior (inside

a closed space) spill be aware that the use of Soda Ash, Lime and Limestone will

evolve heat and carbon dioxide and that ample ventilation must be provided.

### Waste Disposal

Under Federal RCRA, it is the responsibility of the user of products to determine,

at the time of disposal, whether the product falls under RCRA as a hazardous waste.

This is because product uses, transformations, mixtures, etc. may render the

resulting end-product hazardous.

### Container Disposal

Containers should be cleaned of residual product before disposal. Empty containers

should be disposed of in accordance with all applicable laws and regulations.

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## Section VII - Accidental Release Measures (continued)

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### Precautions to be Taken in Handling and Storage

Make sure all personnel involved in housekeeping and spill clean-up follow good

Industrial Hygiene practices and wear proper protective equipment.

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## Section VIII - Handling/Storage/Transportation

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### Handling

Chemical goggles and full face shield must be worn at all times by personnel

exposed to or handling Hydrochloric Acid. The use of a NIOSH approved cartridge

respirator or a Scott Air-Pak should be used by all personnel exposed.

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### Storage

Store containers in a cool, dry location away from direct sunlight, sources of

intense heat, or where freezing may occur. Store material in acid-proof container.

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Keep container tightly closed when not in use. Keep container away from incompatible

materials. All loading, unloading, and storage equipment must be inspected prior to

any transfer operations are initiated.

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### General Comments

Impervious clothing, gloves, footwear and head gear must be worn at all times

by personnel exposed to or handling Hydrochloric Acid.

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## Section IX - Exposure Controls/Personal Protection

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### Respiratory Protection (Specify Type)

Maintain airborne contaminate levels below listed guidelines. Use with adequate

ventilation. Use a mechanical fan or vent area to scrubber.

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Ventilation	Local Exhaust	Special
	If PEL exceeded	Vent fumes to appropriate scrubber
	Mechanical (General	Other
	If PEL exceeded	Not Applicable

### Skin Protection

Wear neoprene rubber gloves to minimize skin contact.

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### Eye Protection

Splash goggles or safety glasses. Face shields are recommended.

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### Other Protection

Use body protection appropriate for task. An apron or other impermeable body

protection is suggested. Full body chemical protection is recommended for

emergency response procedures.

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### Applicable Exposure Limits

Other than any exposure limits which may be displayed in Section 3, there are no other

known exposure limits applicable to this product or its components.

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## Section X - Physical and Chemical Properties

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Boiling Point	230 F	Specific Gravity (H2O = 1)	1.160 - 1.1693
Vapor Pressure (mm Hg)	50 - 60 mm	Freezing Point	.-12 F to -63 F
Vapor Density (AIR = 1)	N.A.	Density	9.671 - 9.748

### Solubility in Water

miscible

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### Appearance and Odor

Clear/Slightly yellow with a sharp pungent odor

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## Section XI - Stability and Reactivity

Stability	Unstable		Conditions to Avoid Hydrochloric Acid is extremely reactive. Avoid contact with metal surfaces and oxidizing agents.
	Stable	X	

### Incompatibility (Materials to Avoid)

Hydrochloric Acid is chemically stable when properly contained and handled. It is a strong mineral acid and reacts with many metals and metal oxides and hydroxides to form the equivalent metal chloride. It reacts with zeolites and other silicious compounds to form Hydrosilicic Acid; it reacts with carbonates to form Carbon Dioxide and Water. It is oxidized by Oxygen or electrolysis to form Chlorine, a lethal, poisonous gas. It reacts with alkaline compounds to form a neutral salt. It is a hydrolyzing agent for carbohydrates, esters and other compounds.

Its reaction with most metals will produce Hydrogen, an explosive gas. Violent reactions will result when Hydrochloric Acid Reacts with acetic anhydride, 2-aminoethanol, ammonium hydroxide, calcium phosphide, chlorosulfonic acid, ethylene diamine, ethylene imine, oleum (fuming sulfuric acid), perchloric acid, beta propiolactone, propylene oxide, sodium hydroxide, sulfuric acid, uranium phosphide and vinyl acetate. This listing is not all-inclusive.

### Hazardous Decomposition or By-products

Extreme heat may cause the product to decompose, producing toxic fumes which may include chlorine compounds.

Hazardous Polymerization	May Occur		Conditions to Avoid Extreme heat and contact with incompatible materials
	Will Not Occur	X	

## Section XII - Toxicological Information

Route(s) of Entry:	Inhalation? Yes	Skin? Yes	Ingestion? Yes
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### Health Hazards (Acute and Chronic)

Hydrogen Chloride, both as a gas and in a solution as Hydrochloric Acid, is a corrosive substance and can cause severe and painful burns on contact with any part of the body or if taken internally. The mucous membranes of the eyes and the upper respiratory tract are especially susceptible to the irritating effects of high atmospheric concentrations of Hydrogen Chloride. The gas or vapor is so penetrating and pungent that when high concentrations do occur, those exposed should immediately leave the contaminated area.

Carcinogenicity	NTP? No	IARC Monographs? No	OSHA Regulated? No
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### Signs and Symptoms of Exposure

Exposure to Hydrochloric acid may cause severe burns at the contact points

### Medical Conditions Generally Aggravated by Exposure

Exposure to fumes may aggravate dermatitis and breathing disorders.

## Section XII - Toxicological Information (cont.)

Toxicology	Inhalation Data
Hydrogen Chloride	Human LCLo - 1300 ppm/30 min
	Rat LC <sub>50</sub> - 4701 ppm/30 min
	Oral (rabbit)
	LD <sub>50</sub> - 900 mg/kg
	Mutagenic Effects
	Inhalation: 100 ppm/24 hrs (Chromosome damage)
	Oral:: 100 ppm (Chromosome damage)
	Parental: 20 mg (Cytogenic effects)

## Section XIII - Ecological Information

### Ecological Toxicity

Animals exposed to hydrochloric acid solution will experience tissue damage, burns and may be killed. Plants contaminated with hydrochloric acid solutions of low pH may be adversely effected or destroyed. High concentrations have been shown to be detrimental to aquatic life. A release into a body of water will kill fish and other aquatic life.

### Other Ecological Information

Hydrochloric acid is stable and found naturally in the environment. All work practices should be aimed at eliminating environmental contamination.

### Chemical Fate Information

Hydrochloric acid is naturally occurring in the environment.

### Other Regulatory Information

No other regulatory information is available on this product.

## Section XIV - Transportation Information

### Regulated Material

Hydrochloric Acid is defined as hazardous by the US Dot and Transport Canada

### DOMESTIC SHIPPING INFORMATION

Proper Shipping Name	Hydrochloric Acid	Hazard Classification	Corrosive
UN/NA Identification	UN 1789	Hazard Class	Class 8
DOT Labels Required	Corrosive	Packaging Group	II

### INTERNATIONAL SHIPPING INFORMATION

Proper Shipping Name	Hydrochloric Acid	Hazard Classification	Corrosive
UN/NA Identification	UN 1789	Hazard Class	Class 8
Labels Required	Corrosive	Packaging Group	II

## Section XV - Other Information

Created By	MSDS Revision Number
Product Safety - 4/20/99	Revision # 005
Toxic Substances Control Act	Superfund Amendment & Reauthorization Act, Title I
TSCA listed 7647-01-0	Hazard Categories
Emergency Planning & Community Right to Know	HEALTH: Chronic
EHS - Threshold Quantity: None	PHYSICAL: None
Is product Regulated Under 1990 Clean Air Act	Does Product Contain, or is Manufactured with, CFC's
No	No
Reportable Quantity	NSF Listing
RQ - 5000 lbs	Scale & Corrosion control at maximum 40 mg/l
NFPA	HMIS
3 - 0 - 0 - Acid	3 - 0 - 0 - X
Is This Product Regulated Under the EPA's Risk Management Plan	
No, Hydrochloric Acid Solution under 37% is not regulated.	
North American Emergency Response Guide Book	
ID # 1789 Guide #157 1996 Revision	

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## Disclaimer of Liability

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# MATERIAL SAFETY DATA SHEET

**Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200**

Date of Prep: 2/27/03

## SECTION 1

SUNNYSIDE CORPORATION  
225 CARPENTER AVENUE  
WHEELING, ILLINOIS 60090  
EMERGENCY TELEPHONE

(847) 541-5700  
(800) 424-9300

FOR INFORMATION:

(847) 541-5700

- SUNNYSIDE CORPORATION  
- CHEM TREC

Product Class: Inorganic Acid  
Trade Name: HYDROCHLORIC ACID  
(Muriatic Acid)

Manufacturer's Code:  
NPCA HMIS:

710  
Health: 3  
Fire: 0  
Reactivity: 1

Product Appearance and Odor: Clear, colorless to pale yellow liquid, pungent, irritating 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
Hydrogen Chloride	7647-01-0		5 PPM	5 PPM	5 PPM	5 PPM	Approximately 35 MM Hg @ 77° F.
				(Ceiling)		(Ceiling)	

## SECTION 3 -- EMERGENCY AND FIRST AID PROCEDURES

Eye Contact:	Immediately flush the eyes with large quantity of water while holding the eyelids apart, for at least 15 to 20 minutes. Severe eye injury can occur, particularly if rinsing is delayed. Get medical attention immediately. Apply cool packs on eyes while transporting victim to medical facility.
Skin Contact:	Remove contaminated clothing and shoes immediately. Wash affected area with soap and large amounts of water for at least 15 to 20 minutes. In case of chemical burns, cover area with sterile, dry dressing. Keep affected area cool. Get medical attention immediately.
Inhalation:	Remove to fresh air. Administer oxygen as soon as possible (6 liters per minute) if breathing is difficult. If not breathing, give artificial respiration. Immediately contact a physician. Keep the victim warm and at rest.
Ingestion:	Do not induce vomiting. If conscious, give large amounts of water or milk. If vomiting persists, administer fluids repeatedly. Maintain airway and treat for shock. If vomiting occurs, keep head below hips to prevent aspiration. Get medical attention immediately.

## SECTION 4 -- PHYSICAL DATA

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

Boiling Range:	Approx. 183° (F) - I.B.P.	Vapor Density:	Heavier than air
Evaporation Rate:	Slower than ether	% Volatile By Volume:	100%
Weight Per Gallon:	9.66 lbs		
Solubility in Water:	100 Wt.% pH: <1.0		

## SECTION 5 -- FIRE AND EXPLOSION DATA

Flammability Classification:	Non-flammable
Flash Point:	Not applicable
Lower Explosive Limit:	Not applicable
Extinguishing Media:	Use water spray, fog, foam, dry chemicals, carbon dioxide or other agents as appropriate for surrounding fire.
Unusual Fire and Explosion Hazards:	Reacts with active metals (Potassium, sodium, calcium, powdered aluminum, zinc, magnesium) to produce flammable hydrogen.
Special Fire Fighting Procedures:	Use self-contained breathing apparatus and full protective acid resistant clothing. Water spray should be used to cool fire exposed containers and to control vapors.



**SECTION 6 -- HEALTH HAZARD DATA**

THRESHOLD LIMIT VALUE: 5 PPM - Ceiling Limit (ACGIH)  
EFFECTS OF OVEREXPOSURE

Acute Inhalation: Inhalation of fumes at lower levels may cause irritation and burning of the throat, coughing and choking. At higher levels (above 50 PPM), inflammation of the nose, throat or larynx, bronchitis, pneumonia, and headache may occur. Severe cases may exhibit necrosis of the windpipe and bronchial epithelium, damage to pulmonary blood vessels and emphysema.

Chronic Inhalation: Repeated or prolonged overexposure may cause erosion and discoloration of exposed teeth, chronic bronchitis and gastritis.

Acute Eye Contact: Contact may cause severe irritation, conjunctivitis, corneal necrosis and burns.

Chronic Eye Contact: Conjunctivitis or effects similar to those for acute exposure may occur.

Acute Skin Contact: Contact may cause severe irritation, inflammation, ulceration, necrosis and chemical burns.

Chronic Skin Contact: Repeated or prolonged contact may cause chronic irritation and dermatitis. Photosensitization may also occur.

Acute Ingestion: Ingestion may cause burns of the mouth, throat, esophagus and stomach with pain, nausea, salivation, vomiting, diarrhea, chills, shock and intense thirst. Nephritis, fever and perforation of the intestinal tract, and circulatory collapse may occur.

Carcinogenicity: This product is not listed as a carcinogen by NTP, IARC or OSHA.

Medical Conditions Aggravated by Exposure: Individuals with pre-existing diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures.

**SECTION 7 -- REACTIVITY DATA**

Stability: Stable  
Conditions to Avoid: Avoid contact with metals and strong oxidizers.  
Incompatibility (Materials to Avoid): Avoid base and corrosive materials.  
Hazardous Decomposition Products: Flammable hydrogen gas can be produced by reaction with most metals and may form explosive mixtures with air. Chlorine gas will be released by mixing with strong oxidizers.  
Hazardous Polymerization: Will not occur.

**SECTION 8 -- SPILL OR LEAK PROCEDURES**

Steps to be taken in case material is spilled or released: Evacuate area and deny entry by unauthorized personnel. Do not breathe vapors, stay upwind. For large spills, contain and pump into tanks, which have been constructed for Hydrochloric Acid service. Full acid resistant suits and self-contained breathing apparatus should be worn during emergency operations. Knock down vapors with water spray or water fog. Water used to knock down vapors may become corrosive and should be contained properly for later disposal. Neutralize spill with slaked lime, sodium bicarbonate or crushed limestone. Since neutralization generates heat (exothermic reaction), the reaction can be violent. The acid should be diluted and cooled before attempting to neutralize. Spills must be neutralized and federal, state and local regulations must be consulted before flushing to sewer. For small spills, take up with sand or other absorbent material and react with dry alkali (soda ash or lime). Place into containers for later disposal. Adhere to federal, state and local regulations on reporting releases.

Waste disposal method: Landfill or neutralize in accordance with federal, state and local environmental regulations.

**SECTION 9 -- SAFE HANDLING AND USE INFORMATION**

Respiratory Protection: Use NIOSH/MSHA approved acid-gas respirator for areas where airborne exposure is excessive. Do not exceed the working limits of the respirator.

Ventilation: Provide good general room ventilation to keep workroom concentration below current applicable OSHA safety and health requirements (Section 2). Use local exhaust ventilation at points of vapor emission.

Protective Gloves: Wear protective gloves, such as rubber or neoprene, to minimize skin contact.

Eye Protection: Chemical safety goggles and a full faceshield to prevent contact.

Other Protective Equipment: Eye wash facility should be in close proximity. Use of rubberized coveralls, rubber shoes, and emergency shower availability are recommended.

**SECTION 10 -- SPECIAL PRECAUTIONS**

Dept. of Labor Storage Category:	Non-flammable liquid.
Hygienic Practices:	Wash thoroughly after contact. Wash protective clothing prior to re-use.
Additional Precautions:	Do not get in eyes or on skin or clothing. Avoid breathing vapors. Keep containers closed. Protect containers from physical damage. Store in cool, well ventilated place, separate from all oxidizing materials. Keep lights, fire and sparks away from container openings.
Empty Container Warning:	"Empty" containers contain hazardous acid vapor or liquid; never add to, mix or store any other product in any container that contains or has contained hydrochloric acid. Mixing hydrochloric acid with some commonly available chemicals and some household products, such as bleach, can cause a violent reaction or the evolution of poisonous or explosive gases.

**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
Hydrochloric Acid	7647-01-0	31.45%

SARA Title III Hazard Categories:	Immediate (Acute) Health Hazard
Common Names:	Hydrogen Chloride Solution, HCl, Aqueous Solution of Hydrochloric Acid, Muriatic Acid
California Proposition 65:	This product contains trace amounts of chemicals known to the State of California to cause cancer, and trace amounts of chemicals known to the State of California to cause birth defects or other reproductive harm.

**TRANSPORTATION**

U.S. D.O.T. Proper Shipping Name:	Hydrochloric Acid, Solution
U.S. D.O.T. Hazard Class & Packing Group:	8, PG II
U.S. D.O.T. I.D. Number:	UN 1789
U.S. D.O.T. Hazardous Substance:	Hydrochloric Acid RQ 5000 lbs.

Refer to 49 CFR for possible exceptions and exemptions.

# MATERIAL SAFETY DATA SHEET

Date Printed: 06/01/16

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT CODE: MS-72000's  
PRODUCT NAME: My Studio Paints

PLAID ENTERPRISES, INC.  
3225 WESTECH DRIVE  
NORCROSS, GA 30092

PHONE: 678-291-8100      CHEMTREC 24-HOUR PHONE: 800-424-9300

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT/EXPOSURE LIMITS	CAS#	% BY WT.
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\*\*\*\*\*No reportable quantities of hazardous materials are present.\*\*\*\*\*

## 3. HAZARDS IDENTIFICATION

### POTENTIAL HEALTH EFFECTS

EYE: Direct contact with material may cause slight irritation.

SKIN: Prolonged or repeated contact may cause slight skin irritation.

INGESTION: Not an anticipated route of exposure. Small amounts are not anticipated to be harmful.

INHALATION: Exposure to vapors in poorly ventilated areas may cause irritation of the nose, throat, and respiratory tract.

CHRONIC (CANCER) INFORMATION: No anticipated chronic effects. This product does not contain regulated levels of NTP, IARC, ACGIH or OSHA listed carcinogens.

TERATOLOGY (BIRTH DEFECT) INFORMATION: Product does not contain chemicals at levels known to cause birth defects.

REPRODUCTION INFORMATION: Product does not contain chemicals at levels known to cause reproductive toxicity.

## 4. FIRST AID MEASURES

EYES: Flush eyes with a large amount of water for at least 15 minutes. Consult a physician if irritation persists.

# M A T E R I A L   S A F E T Y   D A T A   S H E E T

Date Printed: 06/01/16

SKIN: Wash affected skin areas thoroughly with soap and water. Consult a physician if irritation persists.

INGESTION: Small amounts are not anticipated to be harmful. Give 2 glasses of water to drink.

INHALATION: Remove to fresh air. Get medical attention if breathing is difficult.

NOTE TO PHYSICIANS: Please contact your local poison control center for information regarding this product.

## 5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT: Not Determined      METHOD: Not Determined

FLAMMABLE LIMITS:

LOWER FLAMMABLE LIMIT: Not Determined

UPPER FLAMMABLE LIMIT: Not Determined

AUTOIGNITION TEMPERATURE: Not Applicable.

HAZARDOUS COMBUSTION PRODUCTS: Not Applicable

EXTINGUISHING MEDIA: Use extinguishing media appropriate for surrounding fire, water spray, foam, carbon dioxide, or dry chemical.

FIREFIGHTING INSTRUCTIONS: Use water spray to cool containers not actively involved in fire. Self-contained breathing apparatus recommended for fire fighters.

## 6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Absorb spill with inert material.

LARGE SPILL: Floor may be slippery, use care to avoid falling. Contain spills immediately with inert materials (e.g. sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. Caution: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

## 7. HANDLING AND STORAGE

# MATERIAL SAFETY DATA SHEET

Date Printed: 06/01/16

**HANDLING:** Avoid employee exposure through the use of appropriate engineering controls, adequate personal protective equipment, and good industrial hygiene practices. Wash thoroughly after handling. Handle in well-ventilated workspace.

**STORAGE:** Store in a moderate cool, dry, well ventilated area away from direct sources of heat. Avoid freezing (32F). Position containers so that any labeling information is visible. Keep containers closed.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** The use of local exhaust ventilation is recommended to control emissions near the source. Additional engineering controls should be used as necessary.

**RESPIRATORY PROTECTION:** Respiratory protection is generally not required. A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

**SKIN PROTECTION:** Impervious clothing should be worn when gross contact is likely, such as when cleaning up large spills. Neoprene gloves may provide protection against permeation.

**EYE PROTECTION:** Use safety glasses with side shields (ANSI Z87.1 or approved equivalent).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**BOILING POINT:** 212 Deg. F

**MELTING POINT:** Not determined.

**VAPOR PRESSURE:** Not Determined

**VAPOR DENSITY:** Not Determined.

**SOLUBILITY IN WATER:** 100% Soluble or dispersible.

**SPECIFIC GRAVITY:** 1.42

**PH:** 8.5 to 9.5

**ODOR:** Acrylic odor

**APPEARANCE:** Colored dispersion.

**COATING VOC:** .4 lb/gl

**MATERIAL VOC:** .13 lb/gl

## 10. STABILITY AND REACTIVITY

**CHEMICAL STABILITY (CONDITIONS TO AVOID):** This material is considered stable. However, avoid temperatures above 177C/350F, the onset of polymer decomposition. Thermal decomposition is dependent on time and temperature.

# MATERIAL SAFETY DATA SHEET

Date Printed: 06/01/16

INCOMPATIBILITY: There are no known materials which are incompatible with this product.

HAZARDOUS DECOMPOSITION PRODUCTS: Hazardous decomposition will not occur.

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

## 11. TOXICOLOGICAL INFORMATION

As packaged for consumers, this product is certified in a toxicological evaluation by a medical expert to contain no materials in sufficient quantities to be toxic or injurious to humans, including children, or to cause acute or chronic health problems.

## 12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No applicable data.

CHEMICAL FATE INFORMATION: Appreciable evaporation from water to air is expected in the environment. No appreciable bioconcentration is expected in the environment.

## 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Local, State, and Federal waste disposal regulations.

## 14. TRANSPORT INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE

US DOT Hazard Class.....Nonregulated

## 15. REGULATORY INFORMATION:

NOT MEANT TO BE ALL INCLUSIVE - SELECTED REGULATIONS REPRESENTED

U.S. FEDERAL REGULATIONS: The components of this product are included on the TSCA inventory.

OSHA: This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR 1910.1200)

CERCLA: SARA HAZARD CATEGORY: Release of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to state and local emergency

# M A T E R I A L   S A F E T Y   D A T A   S H E E T

Date Printed: 06/01/16

planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

SECTION 313: This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

## INTERNATIONAL REGULATIONS:

CANADIAN WHMIS: This product is not a controlled product under the Canadian Workplace Hazardous Materials Information System (WHMIS).

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All components of this product are on the Domestic Substances List (DSL), and acceptable for use under the provisions of CEPA.

EINECS: All the components of this product are on the European Inventory of Existing Commercial Chemical Substances.

## STATE REGULATIONS:

VOLATILE ORGANIC COMPOUNDS: The Volatile Organic Compounds (VOCs) are below the emission limits as regulated by The Environmental Protection Agency (EPA) and state regulations.

## 16. OTHER INFORMATION

NAME OF PREPARER: Jim Stanley

REVISION DATE: 12-01-2008

HMIS CODES: H F R P  
1 0 0 A

HMIS HAZARD RATINGS: H=HEALTH, F=FIRE, R=REACTIVITY, P=PERSONAL

SCALE: 0=MINIMAL, 1=SLIGHT, 2=MODERATE, 3=SERIOUS, 4=SEVERE

PERSONAL PROTECTION: See Section 8, Exposure Controls/Personal Protection for recommended handling of material as supplied; check with supervisor for your actual use condition.

HMIS is a registered trademark of the National Paint and Coatings Association.

## LIST OF ACRONYMS:

ACGIH: American Conference of Government Industrial Hygienists

IARC: International Agency for Research on Cancer

## **M A T E R I A L   S A F E T Y   D A T A   S H E E T**

Date Printed: 06/01/16

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

PPM: Parts Per Million

SARA: Superfund Amendment Reauthorization Act

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

Please note that this MSDS applies to industrial handling of this material. Consumers should read product label. The information and recommendations set forth herein are believed to be accurate, The data is derived from information provided to Plaid Enterprises, Inc. from its raw material suppliers. Plaid Enterprises, Inc. makes no guarantee or warranty, expressed or implied, regarding the accuracy, reliability, or completeness of the data or the results to be obtained from the use thereof. It is the responsibility of the user of the product to comply with all applicable federal, state, and local laws and regulations.



# **MATERIAL SAFETY DATA SHEET**

Date Printed: 06/01/16

## Napa Antifreeze Coolant

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## Napa Antifreeze Coolant

NAPA Antifreeze & Coolant # 1GAL

=====

### MATERIAL SAFETY DATA SHEET

Effective Date: 1-21-00 Revision Date: 7-22-02

NAPA Antifreeze & Coolant # 1GAL

Code: OWI Page: 1

=====

### Section 1 - Product and Company Identification

PRODUCT NAME: Napa Antifreeze & Coolant # 1GAL

MANUFACTURER'S NAME: EMERGENCY TELEPHONE NUMBER

OLD WORLD INDUSTRIES, INC. (800)424-9300 CHEMTREC

4065 Commercial Avenue

Northbrook, IL 60062-1851 MISCELLANEOUS INFORMATION

(847)559-2000

=====

### Section 2 - Hazardous Ingredients

MATERIAL CAS# % BY WT PEL (OSHA) TLV (ACGIH)

Ethylene Glycol 107-21-1 90-95 50 ppm 50 ppm

Diethylene Glycol 111-46-6 0-5 None None

Di Potassium Phosphate

7758-11-4 1-2 None None

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### MATERIAL SAFETY DATA SHEET

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Napa Antifreeze & Coolant # 1GAL

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### Section 3 - Hazards Identification

Slight odor. May be fatal if swallowed. Vapors can cause eye irritation.

LOWEST KNOWN LD50 (ORAL) 107-21-1 5840 mg/kg  
(Rats)

LOWEST KNOWN LD50 (SKIN) 107-21-1 9530 mg/kg  
(Rabbits)

## Napa Antifreeze Coolant

### HAZARD RATING SYSTEM (NFPA)

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0

KEY: 0 - Minimal, 1 - Slight 2. Moderate 3. Serious  
4. Severe

Product: Antifreeze/Coolant

### POTENTIAL HEALTH EFFECTS

Routes of Exposure: Inhalation, Ingestion, Skin Contact/Absorption, Eye Contact

EYE: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapors or mists may cause eye irritation.

SKIN: Prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Repeated skin exposure may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potential lethal amounts.

INGESTION: Single dose oral toxicity is considered to be moderate. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death.

INHALATION: At room temperature, exposures to vapors are minimal due to physical properties; higher temperatures may generate vapor levels sufficient to cause adverse effects.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Repeated excessive exposures may cause severe kidney and also liver gastrointestinal effects. Signs and symptoms of excessive exposure may be central nervous system effects. Signs

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### MATERIAL SAFETY DATA SHEET

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Napa Antifreeze & Coolant # 1GAL

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Section 3 - Hazards Identification - Continued

## Napa Antifreeze Coolant

and symptoms of excessive exposure may be nausea and/or vomiting. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. Observations in animals include formation of bladder stones after repeated oral doses of ethylene glycol. Reports of kidney failure and death in burn patients suggest the ethylene glycol may have been a factor. The use of topical applications containing this material may not be appropriate in severely burned patients or individuals with impaired renal function.

CANCER INFORMATION: Based on data from long-term animal studies, ethylene glycol is not believed to pose a carcinogenic risk to man.

TERATOLOGY (birth defects): Exposure to ethylene glycol has caused birth defects in laboratory animals only at doses toxic to the mother.

REPRODUCTIVE EFFECTS: Ethylene glycol has not interfered with reproduction in animal studies except at very high doses.

=====  
Section 4 - First Aid Measures

Ensure physician has access to this MSDS.

Eyes: Immediately flush eyes with large amounts of water for 15 minutes, lifting lower and upper lids. Get medical attention as soon as possible. Contact lenses should never be worn when working with this chemical.

Skin: Flush area of skin contact immediately with large amounts of water for 15 minutes, while removing contaminated clothing. If irritation persists after flushing, get medical attention promptly. Wash clothing before re-use.

Inhalation: If inhaled, immediately remove victim to fresh air and call emergency medical care. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: Obtain medical attention immediately. If patient is fully conscious, give two glasses of water. Do not induce vomiting. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whisky. For children, give proportionally less liquor, according to weight.

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MATERIAL SAFETY DATA SHEET

Effective Date: 1-21-00 Revision Date: 7-22-02

## Napa Antifreeze Coolant

Napa Antifreeze & Coolant # 1GAL

Code: OWI Page: 4

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### Section 5 - Firefighting Measures

#### FLAMMABLE PROPERTIES

FLASH POINT: 119/c (247/F)

METHOD USED: Setaflash

AUTOIGNITION TEMPERATURE: Autoignition temperature for ethylene glycol is 398/(C748/F).

FLAMMABILITY LIMITS - % of vapor concentration at which product can ignite in presence of spark. Lower Flammability Limit: 3.2%; Upper Flammability Limit: 15.3%.

HAZARDOUS COMBUSTION PRODUCTS: Hazardous combustion products may include and are not limited to carbon monoxide, carbon dioxide and trace amounts of aldehydes and organic acids. When available oxygen is limited, as in a fire or when heated to very high temperatures by a hot wire or plate, carbon monoxide and other hazardous compounds such as aldehydes might be generated.

EXTINGUISHING MEDIA: Water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Carbon dioxide. Dry chemical. Do not use direct water stream. May spread fire.

FIRE FIGHTING INSTRUCTIONS: No fire and explosion hazards expected under normal storage and handling conditions (i.e. ambient temperatures). However, ethylene glycol or solutions of ethylene glycol and water can form flammable vapors with air if heated sufficiently. Keep people away. Isolate fire area and deny unnecessary entry.

PROTECT EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots, and gloves).

---

### Section 6 - Environmental Release Measures

PROTECT PEOPLE: Material is moderately toxic when ingested. Take adequate precautions to keep people, especially children away from spill site  
PVC-coated rubber gloves and monogoggles or faceshield can be used during cleanup of spill site.

Protect the environment: Do not dump used product or diluted material into

Napa Antifreeze Coolant  
sewers, on the ground, or into any body of water.

CLEANUP: Small spills - soak up with absorbent material. Large spills:  
Dike and pump into suitable containers for disposal. Ensure compliance with  
all applicable statutes that require notification of appropriate government  
officials

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MATERIAL SAFETY DATA SHEET

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Section 7 - Handling and Storage

Product on surfaces can cause slippery conditions. Practice reasonable care  
and cleanliness. Avoid breathing spray mists if generated. Keep out of  
reach of children. Product may become a solid at temperatures below:  
-22 C (-8 F). Do not store near food, foodstuffs, drugs or potable water  
supplies.

=====

Section 8 - Exposure Controls/Personal Protection

Respiratory Respiratory protection is required if airborne concentration  
exceeds Protection:TLV. At any detectable concentration, any self-contained  
breathing apparatus with a full facepiece and operated in a pressure-demand  
or other positive pressure mode or any supplied-air respirator with a full  
facepiece and operated in a pressure-demand or other positive pressure mode  
in combination with an auxiliary self-contained breathing apparatus  
operated in pressure-demand or other positive  
pressure mode.

Escape: Any air-purifying full facepiece respirator (gas mask) with a  
chin-style or front or back-mounted organic vapor canister or any  
appropriate escape-type self contained breathing apparatus.

Skin Protection: Protective gloves recommended when prolonged skin contact  
can not be avoided. Polyethylene; Neoprene; nitrile; Polyvinyl alcohol;  
Natural Rubber, Butyl Rubber, Safety shower should be available.

Eye Protection: Safety goggles and face shield. Emergency eyewash should be  
available. Contact lenses should not be worn when working with this  
chemical.

Engineering Controls: Use general or local exhaust ventilation to meet TLV  
requirements.

## Napa Antifreeze Coolant

### Section 9 - Physical and Chemical Properties

Boiling Range: 171 -175 C (339-348F)  
Freeze Point: -18C (0F)  
Specific Gravity (Water =1 1.12  
Pounds/Gallons 9.3  
Vapor Pressure (mm Hg) @ 20C <0.1  
Vapor Density 2.1  
Water Solubility: Complete  
Evaporation Rate (BuAc=1): Nil  
% Volatile by Volume: 97.0  
Appearance Green  
Odor: Mild

### MATERIAL SAFETY DATA SHEET

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Napa Antifreeze & Coolant # 1GAL  
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### Section 10 - Stability and Reactivity

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: Material is not known to polymerize.

### Section 11 - Toxicological Information

SKIN: The dermal LD50 hasb not been determined

INGESTION: The lethal dose in humans is estimated to be 100 m (3  
ounces). The oral LD50 for rats is in the 6000 13,000 mg/kg range.

MUTAGENICITY (THE EFFECTS ON GENETIC MATERIAL): In vitro mutagenicity  
studies were negative. Animal mutagenicity studies were negative

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Napa Antifreeze & Coolant # 1GAL



## Napa Antifreeze Coolant

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### Section 12 - Ecological Information

#### ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Bioconcentration potential is low (BCF less than 100 or Log Kow less than 3). Log octanol/water partition coefficient (log Kow) is 1.36. Henry's Law Constant (H) is 6.0E-08 atm-m<sup>3</sup>/mol. Bioconcentration factor (BCF) is 10 in golden orfe.

DEGRADATION & TRANSFORMATION: Biodegradation under aerobic static laboratory conditions is high (BOD<sub>20</sub> or BOD<sub>28</sub>/ThOD GREATER THAN 40%). 5-Day biochemical oxygen demand (BOD<sub>5</sub>) is 0.78p/p. 10-Day biochemical oxygen demand (BOD<sub>10</sub>) is 1.06 p/p. 20-Day biochemical oxygen demand (BOD<sub>20</sub>) is 1.15 p/p. Theoretical oxygen demand (ThOD) is calculated to be 1.29 p/p. Biodegradation may occur under both aerobic and anaerobic conditions (in either the presence or absence of oxygen). Inhibitory concentration (IC<sub>50</sub>) in OECD " Activated Sludge, Respiration Inhibition Test" (Guideline # 209) is < 1000 mg/L. Degradation is expected in the atmospheric environment within days to weeks.

ECOTOXICOLOGY: Material is practically non-toxic to aquatic organisms on an acute basis (LC<sub>50</sub> greater than 100 mg/L in most sensitive species). Acute LC<sub>50</sub> for fathead minnow (*Pimephales promelas*) is 51000 mg/L. Acute LC<sub>50</sub> for bluegil (*Lepomis macrochirus*) is 27549 mg/L. Acute LC<sub>50</sub> for rainbow trout (*Oncorhynchus mykiss*) is about 18000-46000 mg/L. Acute LC<sub>50</sub> for guppy (*Poecilia reticulata*) is 49300 mg/L. Acute LC<sub>50</sub> for water flea (*Daphnia magna*) is 46300-51100 mg/L. Acute LC<sub>50</sub> for the cladoceran *Ceriodaphnia dubia* is 10000-25800 mg/L. Acute LC<sub>50</sub> for crayfish is 91430 mg/L. Acute LC<sub>50</sub> for brine shrimp (*Artemia salina*) is 20000 mg/L. Acute LCC<sub>50</sub> for golden orfe (*Leuciscus idus*) is greater than 10000 mg/L. Acute LC<sub>50</sub> for goldfish (*Carassius auratus*) is greater than 5000 mg/L.

Growth inhibition EC<sub>50</sub> for green alga *Selenastrum capricornutum* is 9500-13000 mg/L.

### Section 13 - Disposal Considerations

DO NOT discharge to sewer. Wear appropriate personal protection. Take up with sand, vermiculite, or similar inert material. Dispose in accordance with federal, state and local regulations.

#### MATERIAL SAFETY DATA SHEET

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Section 14 - Transport Information

US DOT Ethylene Glycol

NON-BULK

Proper Shipping Name: Environmentally Hazardous Material

Liquid N.O.S. (Ethylene Glycol) BULK

Proper Shipping Name: Ethylene Glycol

UN3082

9

PG III

Technical Name: 5,000 lb.

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MATERIAL SAFETY DATA SHEET

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=====  
Section 15 - Regulatory Information

THIS PRODUCT CONTAINS COMPONENT(S) CITED ON THE FOLLOWING REGULATIONS.

CHEMICAL NAME CAS NUMBER

Ethylene Glycol 107-21-1

UNITED STATES

TSCA - Inventory: Listed

WATER STANDARDS: No data available

ATMOSPHERIC Clean Air Act (1990) - List of Hazardous Air

Contaminants: listed

STANDARDS:

CERCLA: Reportable Quantity (RQ): 5,000 pounds (532 gallons)

SARA Title III: Section 311/312 - Categories: Acute hazard; chronic hazard

Section 312 - Inventory Reporting: Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting.

Napa Antifreeze Coolant

Section 313 - Emission Reporting: Ethylene glycol  
is subject to Form R reporting requirements.

Section 302 - Extremely Hazardous Substances:  
Ethylene glycol is = not listed.

STATE RIGHT-TO-KNOW:

California - Exposure Limits - Ceilings: vapor-50 ppm ceiling; 125 mg/m<sup>3</sup>  
ceiling

Director's List of Hazardous Substances: listed

Florida - Hazardous Substances List: listed

Massachusetts - Right-To-Know List: listed

Minnesota - Haz. Subs. List: listed (particulate and vapor)

New Jersey - Right-To-Know List (Total): Present greater than 1.0%

Pennsylvania Right-To-Know List: environmental hazard

CANADIAN REGULATIONS:

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.

WHMIS INFORMATION: D2A - material has potential toxic effects. Refer  
elsewhere in the MSDS for the specific warnings and safe handling  
information. Refer to the employer's workplace education program.

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Section 16 - Other Information

California Proposition 65

This product contains the following chemicals known to the State of  
California to cause cancer:

Component CAS # Amount

1,4-Dioxane 123-91-1 <=0.0086%

Acetaldehyde 75-07-0 <=0.1000ppm

This contains the following chemical known to the State of California to  
cause birth defects and/or other reproductive harm.

Component CAS # Amount

Ethylene glycol monomethyl ether

109-86-4 <=0.0009%

Napa Antifreeze Coolant

California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents)

Contact: Thomas Cholke Phone: (847) 559-2000

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Supplier:  
 Permatex, Inc.  
 10 Columbus Blvd.  
 Hartford, CT 06106  
 Telephone: 1-87-Permatex  
 (877) 376-2839

## Material Safety Data Sheet

### 1. PRODUCT IDENTIFICATION

Product Name: NAPA 765-1151 ANTI-SEIZE 16OZ  
 Item No: 21115  
 Product Type: Lubricant

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percent	ACGIH 8 Hr. TWA:	OSHA 8 Hr. TWA:
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTHENIC 64742-52-5	50-60	5 mg/m3 mist	5 mg/m3 mist
CALCIUM OXIDE 1305-78-8	15-25	2 mg/m3	5 mg/m3
ALUMINIUM POWDER (PYROPHORIC) 7429-90-5	5-15	metal dust, as Al: 10 mg/m3 TWA	total dust, as Al: 15 mg/m3 TWA; respirable fraction, as Al: 5 mg/m3 TWA
GRAPHITE 7782-42-5	1-10	3 mg/m3 TWA	3 mg/m3 TWA
MINERAL OIL 64741-44-2	1-10	5 mg/m3 TWA	10 mg/m3 TWA
LITHIUM SOAP 7620-77-1	1-10		
SILICA, QUARTZ 14808-60-7	0.1-1.0	0.1 mg/m3 TWA (respirable dust)	0.1 mg/m3 TWA (respirable dust)

### 3. HAZARDS IDENTIFICATION

**Toxicity:** May cause eye and skin irritation. May cause nose, throat and respiratory irritation. May cause gastrointestinal irritation. May cause central nervous system (CNS) depression.  
 Eye and skin contact, ingestion, inhalation.

**Primary Routes of Entry:**

**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 perforation of the nasal septum. Repeated skin contact may cause allergic skin reactions.

Ingredients	Percent	NTP:	ACGIH Carcinogens	IARC:
SILICA, QUARTZ 14808-60-7	0.1-1.0	Known Carcinogen		Group 1; Vol. 68; 1997

**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:** If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

**Skin Contact:** Remove contaminated clothing. Wash area with soap and water. If irritation persists, seek medical attention.

**Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get

**Product Name:** NAPA 765-1151 ANTI-SEIZE 16OZ  
**Item No:** 21115

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 Formed by Fire or Thermal Decomposition:** Metal oxide fumes, Oxides of carbon. Nitrogen compounds, Barium oxide. Sulfur dioxide. Hydrogen sulfide, Zinc.  
**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 or goggles.  
**Skin:** Neoprene or nitrile gloves recommended.  
**Ventilation:** Provide adequate local ventilation to maintain vapor concentration below TLV if misting of oil occurs.  
**Respiratory Protection:** Use an approved NIOSH organic vapor respirator below the TLV. If TLV is exceeded or overexposure is likely, use positive pressure or self contained breathing apparatus.

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** Silver paste  
**Odor:** PETROLEUM  
**Boiling Point (°F):** Not determined.  
**pH:** Does not apply  
**Solubility in Water:** Nil  
**Specific Gravity:** 1.17  
**VOC Content(Wt.%):** Not determined  
**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:** Do not expose to heat or store at temperatures above 120 F.  
**Hazardous Products Formed by Fire or Thermal Decomposition:** Metal oxide fumes, Oxides of carbon. Nitrogen compounds, Barium oxide. Sulfur dioxide. Hydrogen sulfide, Zinc.

## **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.

**Product Name:** NAPA 765-1151 ANTI-SEIZE 16OZ  
**Item No:** 21115

**US EPA Waste Number:** D001

#### **14. TRANSPORT 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:** Unrestricted  
**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.  
**CALIFORNIA PROP 65:**

**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 1  
**Estimated HMIS Classification:** FLAMMABILITY 1, REACTIVITY 1, HEALTH 1

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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 06106  
**Telephone Number:** 1-87-Permatex (877) 376-2839  
**Revision Date:** 08/08/2001

NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200

<b>1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING</b>
--

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

Product name	NAPA® PREM PERF AUTOMATIC TRANSMISSION FLUID
Product code	NP75200
Product Use Description	No data

<b>2. HAZARDS IDENTIFICATION</b>
----------------------------------

**Emergency Overview**

Appearance: liquid,, red

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

**Potential Health Effects**

**Routes of exposure**

Inhalation, Skin contact, Eye Contact, Ingestion

**Eye contact**

Unlikely to cause eye irritation or injury.

**Skin contact**

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

**Ingestion**

Swallowing small amounts of this material during normal handling is not likely to  
cause harmful effects. Swallowing large amounts may be harmful. This material can get  
into the lungs during swallowing or vomiting. This results in lung inflammation and  
other lung injury.

**Inhalation**



**NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200**

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), Abdominal pain

**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).

**Reproductive hazard**

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

**Other information**

No data

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Components</b>	<b>CAS-No.</b>	<b>Concentration</b>
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>=80-<90%

**4. FIRST AID MEASURES****Eyes**

NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200

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.

<b>5. FIRE-FIGHTING MEASURES</b>
----------------------------------

**Suitable extinguishing media**

Dry chemical, Carbon dioxide (CO2), Foam

**Hazardous combustion products**

May form: carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorus, hydrocarbons

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**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.

**Flammability Class for Flammable Liquids**

Combustible Liquid Class IIIB

<b>6. ACCIDENTAL RELEASE MEASURES</b>
---------------------------------------

**Personal precautions**

For personal protection see section 8. Spills of this material are very slippery.

**Environmental precautions**

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

**Methods for cleaning up**

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

**Other information**

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

<b>7. HANDLING AND STORAGE</b>
--------------------------------

**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**

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

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## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **Exposure Guidelines**

#### **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**

<b>Physical state</b>	liquid
<b>Form</b>	No data
<b>Colour</b>	red
<b>Odour</b>	hydrocarbon-like

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<b>Boiling point/boiling range</b>	No data
<b>pH</b>	No data
<b>Flash point</b>	364.98 °F / 184.99 °C
<b>Evaporation rate</b>	> 1 (Ethyl Ether)
<b>Explosion limits</b>	No data
<b>Vapour pressure</b>	No data
<b>Vapour density</b>	No data
<b>Density</b>	0.862 g/cm <sup>3</sup> @ 60.01 °F / 15.56 °C 7.29 lb/gal @ 60.00 °F / 15.56 °C
<b>Solubility</b>	No data
<b>Partition coefficient: n-octanol/water</b>	No data
<b>Autoignition temperature</b>	No data

## 10. STABILITY AND REACTIVITY

### Stability

Stable

### Conditions to avoid

### Incompatible products

Avoid contact with:, strong oxidizing agents

### Hazardous decomposition products

No data

### Hazardous reactions

Product will not undergo hazardous polymerization.

### Thermal decomposition

No data

## 11. TOXICOLOGICAL INFORMATION

### Acute oral toxicity

DISTILLATES (PETROLEUM),

LD 50 Rat: 15 g/kg

NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200

HYDROTREATED HEAVY  
PARAFFINIC

**Acute inhalation toxicity**

**Acute dermal toxicity**

DISTILLATES (PETROLEUM),  
HYDROTREATED HEAVY  
PARAFFINIC

LD 50 Rabbit: 5 g/kg

**12. ECOLOGICAL INFORMATION**

**Aquatic toxicity**

**Acute and Prolonged Toxicity to Fish**

No data

**Acute Toxicity to Aquatic Invertebrates**

No data

**Environmental fate and pathways**

No data

**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**

Dangerous goods descriptions (if indicated above) may not reflect package size, 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**

# ASHLAND

## SAFETY DATA SHEET

Page: 8  
Revision Date: 11/19/2007  
Print Date: 1/2/2008  
MSDS Number: R0200299  
Version: 1.7

NAPA® PREM PERF AUTOMATIC  
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### California Prop. 65

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

**SARA Hazard Classification** Acute Health Hazard

### SARA 313 Component(s)

	Health	Flammability	Reactivity	Other
HMIS	1	1	0	
NFPA	1	1	0	

## 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

## 1. Identification

**Product identifier** NAPA® Brakleen® Non-Chlorinated Brake Parts Cleaner - 50 State Formula

**Other means of identification**

**Product code** 095050

**Recommended use** Brake parts cleaner

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufactured or sold by:**

**Company name** CRC Industries, Inc.

**Address** 885 Louis Dr.  
Warminster, PA 18974 US

**Telephone**

**General Information** 215-674-4300

**Technical Assistance** 800-521-3168

**Customer Service** 800-272-4620

**24-Hour Emergency (CHEMTREC)** 800-424-9300 (US)  
703-527-3887 (International)

**Website** www.crcindustries.com

## 2. Hazard(s) identification

<b>Physical hazards</b>	Flammable aerosols	Category 1
	Gases under pressure	Compressed gas
<b>Health hazards</b>	Serious eye damage/eye irritation	Category 2A
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
<b>Environmental hazards</b>	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 3
<b>OSHA defined hazards</b>	Not classified.	

**Label elements**



**Signal word** Danger

**Hazard statement** Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes serious eye irritation. May cause drowsiness or dizziness. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

**Precautionary statement**

**Prevention** Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not apply while equipment is energized. Pressurized container: Do not pierce or burn, even after use. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Avoid breathing gas. Wear eye/face protection. Wash hands thoroughly after handling. Avoid release to the environment.

**Response** If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. 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 in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.



<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
<b>Supplemental information</b>	8.49% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 8.49% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Acetone		67-64-1	80 - 90
Carbon dioxide		124-38-9	5 - 10
3-Methylhexane		589-34-4	1 - 3
Methylcyclohexane		108-87-2	1 - 3
n-Heptane		142-82-5	1 - 3
Cyclohexane		110-82-7	< 1

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	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.
<b>Skin contact</b>	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	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 and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Aspiration may cause pulmonary edema and pneumonitis.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. May cause drowsiness or dizziness.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Alcohol resistant foam. Water spray. Water fog. Carbon dioxide (CO <sub>2</sub> ). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	Contents under pressure. Pressurized container may explode when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water.
<b>Special protective equipment and precautions for firefighters</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
<b>Fire-fighting equipment/instructions</b>	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
<b>General fire hazards</b>	Extremely flammable aerosol.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Remove all possible sources of ignition in the surrounding area. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Avoid breathing gas. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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**Methods and materials for containment and cleaning up**

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop the flow of material, if this is without risk. Collect spillage. Dike far ahead of spill for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

## 7. Handling and storage

**Precautions for safe handling**

Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid breathing mist or vapor. Avoid breathing gas. Avoid contact with eyes. Avoid prolonged exposure. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains. For product usage instructions, please see the product label.

**Conditions for safe storage, including any incompatibilities**

Level 3 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Avoid spark promoters. These alone may be insufficient to remove static electricity. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

## 8. Exposure controls/personal protection

**Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm
Carbon dioxide (CAS 124-38-9)	PEL	9000 mg/m3 5000 ppm
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m3 300 ppm
Methylcyclohexane (CAS 108-87-2)	PEL	2000 mg/m3 500 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3 500 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value
3-Methylhexane (CAS 589-34-4)	STEL	500 ppm
Acetone (CAS 67-64-1)	TWA	400 ppm
	STEL	750 ppm
Carbon dioxide (CAS 124-38-9)	TWA	500 ppm
	STEL	30000 ppm
Cyclohexane (CAS 110-82-7)	TWA	5000 ppm
	TWA	100 ppm
Methylcyclohexane (CAS 108-87-2)	STEL	500 ppm
	TWA	400 ppm
n-Heptane (CAS 142-82-5)	STEL	500 ppm

**US. ACGIH Threshold Limit Values**

Components	Type	Value
	TWA	400 ppm

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3 250 ppm
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
	TWA	30000 ppm 9000 mg/m3 5000 ppm
Cyclohexane (CAS 110-82-7)	TWA	1050 mg/m3
Methylcyclohexane (CAS 108-87-2)	TWA	300 ppm 1600 mg/m3
n-Heptane (CAS 142-82-5)	Ceiling	400 ppm 1800 mg/m3 440 ppm
	TWA	350 mg/m3 85 ppm

**Biological limit values****ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*

\* - For sampling details, please see the source document.

**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** Wear safety glasses with side shields (or goggles).

**Skin protection****Hand protection**

Wear protective gloves such as: Nitrile. Polyvinyl alcohol (PVA). Viton®.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory protection**

In case of insufficient ventilation, wear suitable respiratory equipment. Air monitoring is needed to determine actual employee exposure levels.

**Thermal hazards**

Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

When using, do not eat, drink or smoke. 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**

<b>Physical state</b>	Liquid.
<b>Form</b>	Aerosol.
<b>Color</b>	Clear. Colorless.

**Odor** Solvent.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** -195.9 °F (-126.6 °C) estimated

**Initial boiling point and boiling range** 132.9 °F (56.1 °C) estimated

**Flash point** < 0 °F (< -17.8 °C) Tag Closed Cup

**Evaporation rate** Fast.

**Flammability (solid, gas)** Not available.

## Upper/lower flammability or explosive limits

Flammability limit - lower (%)	1.1 % estimated
Flammability limit - upper (%)	12.8 % estimated
Vapor pressure	5061 hPa estimated
Vapor density	> 2 (air = 1)
Relative density	0.84 estimated
Solubility (water)	Slightly soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	539.6 °F (282 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	91.5 % estimated

## 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	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Acids. Alkalies. Aluminum. Halogens. Peroxides. Oxygen. Amines. Ammonia.
Hazardous decomposition products	Carbon oxides.

## 11. Toxicological information

### Information on likely routes of exposure

Ingestion	May be fatal if swallowed and enters airways.
Inhalation	Vapors have a narcotic effect and may cause headache, fatigue, dizziness and nausea. Prolonged inhalation may be harmful.
Skin contact	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.
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	May be fatal if swallowed and enters airways. Narcotic effects.
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Product	Species	Test Results
NAPA® Brakleen® Non-Chlorinated Brake Parts Cleaner - 50 State Formula		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	11501.0918 mg/kg estimated
<i>Inhalation</i>		
LC50	Rat	38853.0078 ppm, 4 hours estimated 80.89 mg/l, 4 Hours estimated
<i>Oral</i>		
LD50	Rat	6231.645 mg/kg estimated
TDL0	Human	3.5211 g/kg estimated
<b>Chronic</b>		
<i>Inhalation</i>		
NOEL	Rat	23068.9746 ppm, 8 weeks estimated
<i>Oral</i>		
NOEL	Rat	121.4157 mg/kg, 90 days estimated

\* Estimates for product may be based on additional component data not shown.

<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation. Repeated exposure may cause skin dryness or cracking.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Narcotic effects.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.
<b>Chronic effects</b>	Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

## 12. Ecological information

<b>Ecotoxicity</b>	Toxic to aquatic life. Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.
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Product	Species		Test Results
NAPA® Brakleen® Non-Chlorinated Brake Parts Cleaner - 50 State Formula			
<i>Acute</i>			
Fish	LC50	Fish	74.7831 mg/l, 96 hours estimated
Components	Species		Test Results
Acetone (CAS 67-64-1)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea (Daphnia magna)	21.6 - 23.9 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Cyclohexane (CAS 110-82-7)			
<b>Aquatic</b>			
Fish	LC50	Fathead minnow (Pimephales promelas)	23.03 - 42.07 mg/l, 96 hours
Methylcyclohexane (CAS 108-87-2)			
<b>Aquatic</b>			
Fish	LC50	Striped bass (Morone saxatilis)	5.8 mg/l, 96 hours
n-Heptane (CAS 142-82-5)			
<b>Aquatic</b>			
<i>Acute</i>			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.1 - 2.98 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

<b>Persistence and degradability</b>	No data is available on the degradability of this product.
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<b>Bioaccumulative potential</b>	No data available.
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### Partition coefficient n-octanol / water (log Kow)

Acetone	-0.24
Cyclohexane	3.44
Methylcyclohexane	3.61
n-Heptane	4.66

<b>Mobility in soil</b>	No data available.
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<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.
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## 13. Disposal considerations

<b>Disposal of waste from residues / unused products</b>	This material and its container must be disposed of as hazardous waste. Consult authorities before disposal. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	D001: Waste Flammable material with a flash point <140 F F003: Waste Non-halogenated Solvent - Spent Non-halogenated Solvent

**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

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**DOT**

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols, flammable, Limited Quantity
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.1
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	2.1
<b>Packing group</b>	Not applicable.
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	N82
<b>Packaging exceptions</b>	306
<b>Packaging non bulk</b>	304
<b>Packaging bulk</b>	None

**IATA**

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	Aerosols, flammable, Limited Quantity
<b>Transport hazard class(es)</b>	
<b>Class</b>	2.1
<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	No.
<b>ERG Code</b>	10L
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

**IMDG**

<b>UN number</b>	UN1950
<b>UN proper shipping name</b>	AEROSOLS, LIMITED QUANTITY, MARINE POLLUTANT
<b>Transport hazard class(es)</b>	
<b>Class</b>	2
<b>Subsidiary risk</b>	-
<b>Packing group</b>	Not applicable.
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-D, S-U
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

## 15. Regulatory information

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**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.

**SARA 304 Emergency release notification**

Not regulated.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance**

Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Acetone (CAS 67-64-1)

**CERCLA Hazardous Substances: Reportable quantity**

Acetone (CAS 67-64-1) 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.

**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.**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Acetone (CAS 67-64-1) 6532

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Acetone (CAS 67-64-1) 35 % weight/volumn

**DEA Exempt Chemical Mixtures Code Number**

Acetone (CAS 67-64-1) 6532

**Food and Drug Administration (FDA)** Not regulated.**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Section 311/312** Immediate Hazard - Yes**Hazard categories** Delayed Hazard - No

Fire Hazard - Yes

Pressure Hazard - Yes

Reactivity Hazard - No

**SARA 302 Extremely hazardous substance** No**US state regulations****US. New Jersey RTK - Substances: Listed substance**

3-Methylhexane (CAS 589-34-4)

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

Cyclohexane (CAS 110-82-7)

Methylcyclohexane (CAS 108-87-2)

n-Heptane (CAS 142-82-5)

**US. Massachusetts RTK - Substance List**

3-Methylhexane (CAS 589-34-4)

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

Methylcyclohexane (CAS 108-87-2)

n-Heptane (CAS 142-82-5)

**US. Pennsylvania RTK - Hazardous Substances**

3-Methylhexane (CAS 589-34-4)

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

Cyclohexane (CAS 110-82-7)

Methylcyclohexane (CAS 108-87-2)

n-Heptane (CAS 142-82-5)

**US. Rhode Island RTK**

Acetone (CAS 67-64-1)

Cyclohexane (CAS 110-82-7)

**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 - CRT: Listed date/Carcinogenic substance**

Benzene (CAS 71-43-2)

Listed: February 27, 1987

Cumene (CAS 98-82-8)

Listed: April 6, 2010

Ethanal (CAS 75-07-0)

Listed: April 1, 1988

**US - California Proposition 65 - CRT: Listed date/Developmental toxin**

Benzene (CAS 71-43-2)

Listed: December 26, 1997

Toluene (CAS 108-88-3)

Listed: January 1, 1991

**US - California Proposition 65 - CRT: Listed date/Female reproductive toxin**

Toluene (CAS 108-88-3)

Listed: August 7, 2009

**US - California Proposition 65 - CRT: Listed date/Male reproductive toxin**

Benzene (CAS 71-43-2)

Listed: December 26, 1997

**Volatile organic compounds (VOC) regulations****EPA****VOC content (40 CFR 51.100(s))** 9.2 %



**Consumer products**      Not regulated  
(40 CFR 59, Subpt. C)

**State**

**Consumer products**      This product is regulated as a Brake Cleaner. This product is compliant for use in all 50 states.  
**VOC content (CA)**      9.2 %  
**VOC content (OTC)**      9.2 %

**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)	Yes
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 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**

<b>Issue date</b>	03-04-2014
<b>Prepared by</b>	Allison Cho
<b>Version #</b>	01
<b>Further information</b>	CRC # 920B
<b>HMIS® ratings</b>	Health: 2 Flammability: 4 Physical hazard: 0 Personal protection: B
<b>NFPA ratings</b>	Health: 2 Flammability: 4 Instability: 0
<b>Disclaimer</b>	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 (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.



# MATERIAL SAFETY DATA SHEET

1073  
05 00

DATE OF PREPARATION  
Aug 25, 2009

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

1073

### PRODUCT NAME

NAPA® Mac's® Battery Terminal Protector

### MANUFACTURER'S NAME

Manufactured by:  
The Sherwin-Williams Co.  
Diversified Brands  
Cleveland, OH 44115  
-----

Distributed by:  
Balkamp Headquarters  
P. O. Box 421268  
Indianapolis, IN 46242

### Telephone Numbers and Websites

<b>Regulatory Information</b>	(216) 566-2902
<b>Medical Emergency</b>	(216) 566-2917
<b>Transportation Emergency*</b>	(800) 424-9300
<i>*for Chemical Emergency ONLY (spill, leak, fire, exposure, or accident)</i>	

## SECTION 2 — COMPOSITION/INFORMATION ON INGREDIENTS

% by Weight	CAS Number	Ingredient	Units	Vapor Pressure	
9	74-98-6	Propane	ACGIH TLV OSHA PEL	2500 PPM 1000 PPM	760 mm
21	106-97-8	Butane	ACGIH TLV OSHA PEL	800 PPM 800 PPM	760 mm
14	142-82-5	Heptane	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL	400 PPM 500 PPM STEL 400 PPM 500 PPM STEL	50 mm
13	108-88-3	Toluene	ACGIH TLV OSHA PEL OSHA PEL	20 PPM 100 PPM (Skin) 150 PPM (Skin) STEL	22 mm
2	100-41-4	Ethylbenzene	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL	100 PPM 125 PPM STEL 100 PPM 125 PPM STEL	7.1 mm
13	1330-20-7	Xylene	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL	100 PPM 150 PPM STEL 100 PPM 150 PPM STEL	5.9 mm
2	64742-94-5	Medium Aromatic Hydrocarbons	ACGIH TLV OSHA PEL	Not Available Not Available	0.12 mm
0.3	91-20-3	Naphthalene	ACGIH TLV ACGIH TLV OSHA PEL OSHA PEL	10 PPM 15 PPM STEL 10 PPM 15 PPM STEL	1 mm
16	67-64-1	Acetone	ACGIH TLV ACGIH TLV OSHA PEL	500 PPM 750 PPM STEL 1000 PPM	180 mm

## 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.

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.

### HMIS Codes

Health	2*
Flammability	4
Reactivity	0

## 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 laundry 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

Propellant < 0 °F

### LEL

0.8

### UEL

12.8

### EXTINGUISHING MEDIA

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 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.

## 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/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> (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

<b>PRODUCT WEIGHT</b>	6.02 lb/gal	721 g/l
<b>SPECIFIC GRAVITY</b>	0.72	
<b>BOILING POINT</b>	<0 - 415 °F	<-18 - 212 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	95%	
<b>EVAPORATION RATE</b>	Faster than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	N.A.	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
	Volatile Weight 76.81%	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

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.

### 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
142-82-5	Heptane	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
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
64742-94-5	Medium Aromatic Hydrocarbons	LC50 RAT	4HR	Not Available
		LD50 RAT		Not Available
91-20-3	Naphthalene	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	13	
100-41-4	Ethylbenzene	2	
1330-20-7	Xylene	13	
91-20-3	Naphthalene	0.2	

### 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.

CLING SURFACE CO INC -- 765-1397 BALKAMP 16 OZ SPRAY BELT DRESSING -- 9150-00N043245

===== Product Identification =====

Product ID:765-1397 BALKAMP 16 OZ SPRAY BELT DRESSING

MSDS Date:07/01/1986

FSC:9150

NIIN:00N043245

MSDS Number: BRRGB

=== Responsible Party ===

Company Name:CLING SURFACE CO INC

Address:1301 EDEN EVANS CTR RD

City:ANGOLA

State:NY

ZIP:14006

Country:US

Info Phone Num:716-549-5400

Emergency Phone Num:716-549-5400

CAGE:CLING

=== Contractor Identification ===

Company Name:CLING SURFACE CO INC

Address:1301 EDEN EVANS CTR RD

City:ANGOLA

State:NY

ZIP:14006

Country:US

Phone:716-549-5400

CAGE:CLING

===== Composition/Information on Ingredients =====

Ingred Name:TACKIFIERS; (TACIFIERS)

Fraction by Wt: 38%

OSHA PEL:N/K

ACGIH TLV:N/K

Ingred Name:HEPTANE; (N-HEPTANE)

CAS:142-82-5

RTECS #:MI7700000

Fraction by Wt: 17%

OSHA PEL:500 PPM/500 STEL

ACGIH TLV:400 PPM/500STEL;9293

Ingred Name:METHANE, DICHLORO-; (METHYLENE CHLORIDE)

CAS:75-09-2

RTECS #:PA8050000

Fraction by Wt: 30%

Other REC Limits:100 TLV (MFR)

OSHA PEL:500 PPM;1000, C

ACGIH TLV:50 PPM

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ingred Name:PROPANE; (PROPANE/ISOBUTANE)

CAS:74-98-6

RTECS #:TX2275000

Fraction by Wt: 15%

OSHA PEL:1000 PPM

ACGIH TLV:SIMPLE ASPHYXIAN

===== Hazards Identification =====

LD50 LC50 Mixture:NONE SPECIFIED BY MANUFACTURER.  
 Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES  
 Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO  
 Health Hazards Acute and Chronic:ACUTE: MAY CAUSE DIZZINESS OR, IN  
 EXTREME CASES, ABSENCE OF OXYGEN COULD PRODUCE NARCOSIS.  
 CHLOROCARBON MATERIALS HAVE PRODUCED SENSITIZATION OF MYOCARDIUM TO  
 EPINEPHRINE IN LAB ANIMALS AND COULD HAVE SIMILAR EFT IN HUMANS.  
 ADRENOMIMETICS (E.G., EPINEPHRINE) MAY BE CONTRAINDICATED EXCEPT  
 FOR (EFTS OF OVEREXP)  
 Explanation of Carcinogenicity:METHYLENE CHLORIDE: IARC MONOGRAPHS,  
 SUPPLEMENT, VOL 7, PG 194, 1987: GRP 2B. NTP 6TH ANNUAL REPORT ON  
 (SUPP DATA)  
 Effects of Overexposure:HLTH HAZ: LIFE-SUSTAINING USES IN HUMANS  
 ACUTELY OR CHRONICALLY EXPOSED TO CHLOROCARBONS .

===== First Aid Measures =====

First Aid:INHAL: IF UNCON, REMOVE TO FRESH AIR AND CALL A PHYS. EYES:  
 FLUSH IMMED WITH LARGE QTY OF WATER FOR AT LEAST 15 MINUTES. SKIN:  
 FLUSH WITH COPIOUS AMOUNTS OF WATER. CALL MD . INGEST: CALL MD IMME  
 D .

===== Fire Fighting Measures =====

Flash Point Method:TOC  
 Flash Point:BELOW 20F  
 Extinguishing Media:WATERFOG, FOAM, CARBON DIOXIDE, OR DRY CHEMICAL.  
 Fire Fighting Procedures:NIOSH/MSHA APPRVD PRESS DEMAND SCBA & FULL  
 PROTECTIVE EQUIPMENT . KEEP CONTRS COOL, USE EQUIP/SHIELDING  
 REQUIRED TO PROTECT AGAINST BURST/VENTING CONTRS.  
 Unusual Fire/Explosion Hazard:AT ELEVATED TEMPERATURES (130F/OVER)  
 CONTAINERS MAY VENT, RUPTURE, OR BURST. THERMAL DECOMPOSITION  
 PRODUCTS MAY INCLUDE HCL AND PHOSGENE .

===== Accidental Release Measures =====

Spill Release Procedures:FLUSH WITH LARGE QTY OF WATER, VENTILATE AREA.  
 Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

===== Handling and Storage =====

Handling and Storage Precautions:DO NOT STORE IN TEMPERATURES ABOVE  
 130F. READ AND FOLLOW CAUTIONS ON PRODUCT LABEL.  
 Other Precautions:NO SMOKING IN AREA OF USE. DO NOT USE IN GENERAL  
 VICINITY OF ARC WELDING, OPEN FLAMES/HOT SURF. HEAT &/OR UV  
 RADIATION MAY CAUSE FROMATION OF HCL AND/OR PHOSGENE .

===== Exposure Controls/Personal Protection =====

Respiratory Protection:AVOID BREATHING CONCENTRATED VAPORS/PARTICLES  
 FROM ALL PRODUCTS DESIGNED NOT BE INHALED. USE NIOSH/MSHA APPROVED  
 RESPIRATOR APPROPRIATE FOR EXPOSURE OF CONCERN .  
 Ventilation:LOCAL EXHAUST: NORMAL.  
 Protective Gloves:IMPERVIOUS GLOVES .  
 Eye Protection:CHEMICAL SAFETY GOGGLES .  
 Supplemental Safety and Health

EXPLAN OF CARCIN: CARCIN, 1991: ANTICIPATED TO BE CARCINOGEN.

===== Physical/Chemical Properties =====

HCC:V3

Vapor Pres:<130@140F

Vapor Density:HVR/AIR

Solubility in Water:<1%

Appearance and Odor:LIGHT AMBER SOLVENT

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

Stability Condition to Avoid:PRESSURIZED CONTAINERS COULD RUPTURE ABOVE  
103F.

Hazardous Decomposition Products:CARBON DIOXIDE, CARBON MONOXIDE AND  
WATER FROM BURNING. HCL AND PHOSGENE .

===== Disposal Considerations =====

Waste Disposal Methods:DO NOT PUCNTURE/INCINERATE CONTAINERS. GIVE TO  
LCOAL DISPOSAL SERVICE EQUIPPED TO SAFELY HANDLE AND DISPOSE OF  
PRESSURIZED CONTAINERS. DISPOSE OF I/A/W FEDERAL, STATE AND LOCAL  
REGULATIONS .

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particular situation.



# MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid

MSDS NO.

Revision Date:

Date Printed

10/07/2004

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid  
Chemical Family: GLYCOL ETHER  
Synonyms: None  
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: NAPA, P. O. Box 421268, Indianapolis, IN 46241

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient/CAS No.	wt. %	OSHA PEL TWA	OSHA PEL Ceiling Limits	ACGIH TLV TWA	ACGIH TLW STEL
Diethylene Glycol 111-46-6	5-15	None Known	None Known	None Known	None Known
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	None Known	None Known	None Known	None Known
Triethylene glycol monomethyl ether 112-35-6	6-25	None Known	None Known	None Known	None Known
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	None Known	None Known	None Known	None Known
Triethylene glycol monobutyl ether 143-22-6	20-39	None Known	None Known	None Known	None Known
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	None Known	None Known	None Known	None Known
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	None Known	None Known	None Known	None Known
Polyethylene Glycol 25322-68-3	5-20	None Known	None Known	None Known	None Known
Polyethylene glycol monobutyl ether 9004-77-7	5-20	None Known	None Known	None Known	None Known
Polyalkylene Glycols 9038-95-3	5-20	None Known	None Known	None Known	None Known
Diethylene Glycol Monomethyl Ether 111-77-3	<5	None Known	None Known	None Known	None Known
Diethylene Glycol Monoethyl Ether 111-90-0	<5	None Known	None Known	None Known	None Known
Trade Secret : Trade Secret Inhibitor Package	<3	None Known	None Known	None Known	None Known

## 3. HAZARDS IDENTIFICATION

**Emergency Overview:** Danger: May be fatal if swallowed. This material is an eye irritant. May cause allergic skin reaction. Vapors are mildly to markedly irritating to the lungs depending on the exposure level. Ingestion may cause abdominal discomfort, nausea, and vomiting. May produce central nervous system depression and kidney damage.

**HMIS Classification:** Health: 2 Flammability: 1 Physical Hazard: 0  
**NFPA Rating:** Health: 2 Flammability: 1 Reactivity: 0

## 4. FIRST AID MEASURES

**Eye Contact:** In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

**Ingestion:** Induce vomiting immediately as directed by medical personnel. Never give fluids or induce vomiting if the victim is unconscious or having convulsions.

**Inhalation:** If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention. Vapors or mists from this material can irritate the nose, throat and lungs, and cause signs and symptoms of central nervous system depression, depending on the concentration and duration of exposure.

**Skin Contact:** Wash with soap and water. Remove contaminated clothing and shoes, and launder before reuse. Get medical attention if

# MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid  
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irritation persists.

## 5. FIRE FIGHTING MEASURES

### Flammable Properties

**Flash Point °F(°C):** >135C. (>275 F.)  
**Flash Point Method:** TAG Closed Cup  
**Flammable Limits in Air - Lower (%):** Not Determined  
**Flammable Limits in Air - Upper (%):** Not Determined  
**Autoignition Temperature °F(°C):** Not Determined  
**Extinguishing Media:** Water fog, carbon dioxide, foam, dry chemical. DO NOT use straight water streams.  
**Protection Of Fire-Fighters:**  
**Special Fire-Fighting Procedures:** Wear approved positive-pressure self-contained breathing apparatus and protective clothing. Do not realse runoff from fire control methods to sewers or waterways. Fight from a maximum distance or use unmanned hose holders or monitor nozzles. Containers can build up pressure if exposed to heat; cool with flooding quantities of water until well after the fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of vessel.

**Hazardous Combustion Products:** Carbon Dioxide. Carbon Monoxide. Unidentified organic compounds.  
**Aerosol Comments:** Not Applicable

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Wear appropriate protective clothing and equipment to prevent skin and eye contact.  
**Spill Procedures:** Avoid all sources of ignition; heat, sparks and open flames. Contain any liquid from leaking containers. Wear protective equipment specified. Ventilate spill area. Soak up material with absorbent and place in chemical waste container.  
If clean-up is not immediate, cover spill with plastic or canvas to keep dry.

**Environmental Precautions:** Do not allow to enter sanitary drains, sewer or surface and subsurface waters.

## 7. HANDLING AND STORAGE

**Handling and Storage:** Do Not Swallow. Store in a cool, dry place. Use only in a well ventilated area. Keep container closed when not in use to prevent contact with acidic, basic or oxidizing materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Exhaust ventilation. Eyewash stations. Showers.  
**Eyes:** Chemical goggles; also wear a face shield if splashing hazard exists.  
**Skin Protection:** Avoid skin contact. Wear protective clothing and gloves. Rubber, Neoprene or Vinyl.  
**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:** Clear, yellow to amber colloidal liquid  
**Odor:** MILD  
**Vapor Pressure:** Not Determined  
**Boiling Point (°F):** 480 F. (249 C)  
**Solubility in Water:** SOLUBLE  
**Molecular Weight:** Bulk Density at 20°C: 8.33 - 9.02 lb/gal  
**Viscosity:** Not determined.  
**VOC Content(%):** Not determined.

**pH Value:** 10 - 11.5  
**Vapor Density (Air=1):** Not Determined  
**Melting/Freezing Point:** -58 F. (-50 C.)  
**Evaporation Rate:** <.01  
**Specific Gravity (H2O=1):** 1.000 - 1.070 @ 4 C.  
**Decomposition Temperature:** Not Known

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** STABLE.  
**Conditions to Avoid:** Keep away from heat, sparks and flame.  
**Materials to Avoid:** Avoid contact with acidic, basic or oxidizing agents.  
**Hazardous Decomposition Products:** Carbon monoxide. Carbon dioxide. Unknown organic compounds.  
**Hazardous Polymerization:** WILL NOT OCCUR

## 11. TOXICOLOGICAL INFORMATION

### Toxicological Data:

Ingredient/CAS No.	wt. %	Route	Species	Dose
Diethylene Glycol 111-46-6	5-15	Oral	Rats	LD50 12565 mg/kg
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	Oral	Rats	LD50 5660 mg/kg
Triethylene glycol monomethyl ether 112-35-6	6-25	Oral	Rats	LD50 11300 uL/kg

## MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid  
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Ingredient/CAS No.	wt. %	Route	Species	Dose
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	Oral	Rats	LD50 7750 mg/kg
Triethylene glycol monobutyl ether 143-22-6	20-39	Oral	Rats	LD50 5300 mg/kg
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	NA	NA	Not Known
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	NA	NA	NA
Polyethylene Glycol 25322-68-3	5-20	Oral	Rats	LD50 28 gm/kg
Polyethylene glycol monobutyl ether 9004-77-7	5-20	NA	NA	NA
Polyalkylene Glycols 9038-95-3	5-20	Oral	Rats	LD50 12300 uL/kg
Diethylene Glycol Monomethyl Ether 111-77-3	<5	Oral	Rats	LD50 4 mL/kg
Diethylene Glycol Monoethyl Ether 111-90-0	<5	Oral	Rats	LD50 5500 mg/kg
Trade Secret : Trade Secret Inhibitor Package	<3	Oral	Rats	>2000 mg/kg

### Carcinogenicity:

Ingredient/CAS No.	wt. %	IARC	NTP	OSHA
Diethylene Glycol 111-46-6	5-15	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	6-25	Not Listed	Not Listed	Not Listed
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	20-39	Not Listed	Not Listed	Not Listed
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	Not Listed	Not Listed	Not Listed
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	Not Listed	Not Listed	Not Listed
Polyethylene Glycol 25322-68-3	5-20	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	5-20	Not Listed	Not Listed	Not Listed
Polyalkylene Glycols 9038-95-3	5-20	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monomethyl Ether 111-77-3	<5	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monoethyl Ether 111-90-0	<5	Not Listed	Not Listed	Not Listed
Trade Secret : Trade Secret Inhibitor Package	<3	Not Known	Not Known	Not Known

## 12. ECOLOGICAL INFORMATION

# MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid  
 MSDS NO.  
 Revision Date:  
 Date Printed 10/07/2004

Ecological testing has not been conducted on this product.

## 14. TRANSPORTATION INFORMATION

**U.S. DOT:**

Proper Shipping Name: Not Regulated  
 Hazard Class: Not Regulated  
 UN/NA Number: Not Applicable  
 DOT Packing Group: Not Applicable

**IMDG:**

Proper Shipping Name: Not Applicable  
 Hazard Class: Non-Hazardous  
 Hazard Subclass: Not Applicable  
 UN No.: Not Applicable  
 Packing Group: Not Applicable  
 Marine Pollutant: No

## 15. REGULATORY INFORMATION

**US Federal Regulations:**

Ingredient/CAS No.	wt. %	SARA 313	SARA 302	RQ	TPQ
Diethylene Glycol 111-46-6	5-15	Not Listed	Not Listed	NA	NA
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	Not Listed	Not Listed	NA	NA
Triethylene glycol monomethyl ether 112-35-6	6-25	Listed	Not Listed	NA	NA
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	Not Listed	Not Listed	NA	NA
Triethylene glycol monobutyl ether 143-22-6	20-39	Listed	Not Listed	NA	NA
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	Not Listed	Not Listed	NA	NA
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	Not Listed	Not Listed	NA	NA
Polyethylene Glycol 25322-68-3	5-20	Not Listed	Not Listed	NA	NA
Polyethylene glycol monobutyl ether 9004-77-7	5-20	Not Listed	Not Listed	NA	NA
Polyalkylene Glycols 9038-95-3	5-20	Not Listed	Not Listed	NA	NA
Diethylene Glycol Monomethyl Ether 111-77-3	<5	Not Listed	Not Listed	NA	NA
Diethylene Glycol Monoethyl Ether 111-90-0	<5	Not Listed	Not Listed	NA	NA
Trade Secret : Trade Secret Inhibitor Package	<3	Not Known	Not Known	NA	NA

No specific component of this material is listed as a Hazardous Substance CERCLA (40 CFR 261). However, this product contains various ethylene glycols and glycol ethers which are each included as a broad category on the CERCLA Hazardous substances list.

**SARA 311/312 Hazard Categories:** Delayed

**State Regulations:**

Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
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# MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid  
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Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
Diethylene Glycol 111-46-6	5-15	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monobutyl Ether 112-34-5	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	6-25	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene Glycol Monoethyl Ether 112-50-5	6-25	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	20-39	Not Listed	Not Listed	Not Listed	Not Listed
Tetraethylene Glycol Monobutyl Ether 1559-34-8	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyalkylene Glycol Monomethyl Ether 23783-42-8	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyethylene Glycol 25322-68-3	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyalkylene Glycols 9038-95-3	5-20	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monomethyl Ether 111-77-3	<5	Not Listed	Not Listed	Not Listed	Not Listed
Diethylene Glycol Monoethyl Ether 111-90-0	<5	Not Listed	Not Listed	Not Listed	Not Listed
Trade Secret : Trade Secret Inhibitor Package	<3	Not Listed	Not Listed	Not Listed	Not Listed

U.S. TSCA: The components of this product are listed on the TSCA Inventory.

## 16. OTHER INFORMATION

General Notes: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

**Disclaimer:**

The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER  
Synonyms: None  
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Zak Products, 3006 Skyway Circle South, Irving, TX 75038

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER  
Synonyms: None  
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Conoco Phillips, Houston, TX 77079

## MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid  
MSDS NO.  
Revision Date:

Date Printed 10/07/2004

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER  
Synonyms: None  
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: The Heartland, P.O. Box 1520, Wheaton, IL 60189

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER  
Synonyms: None  
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Santech, 2450 Handley Ederville Rd., Fort Worth, TX 76118

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER  
Synonyms: None  
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Cyclo Industries, 10190 Riverside Drive, Palm Beach Gardens, FL 33410-4881

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER  
Synonyms: None  
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Warren Oil Co., Highway 301 N, Dunn, NC 28334

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER  
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Bowes Seal Fast, Indianapolis, IN 46218

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER  
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Master Corporation, Memphis, TN 38138

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER

## MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 3 Brake Fluid  
MSDS NO.  
Revision Date:  
Date Printed 10/07/2004

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: AGCO Parts, 1500 North Raddant Road, Batavia, IL 60510

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 3 Brake Fluid 32 Oz  
Chemical Family: GLYCOL ETHER

Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: Kar Products, P.O. Box 6908, Cleveland, OH 44101

# MATERIAL SAFETY DATA SHEET

1067  
03 00

DATE OF PREPARATION  
Nov 12, 2012

## SECTION 1 — PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NUMBER

1067

### PRODUCT NAME

NAPA® Mac's® Ignition & Battery Sealer

### MANUFACTURER'S NAME

Manufactured by:  
The Sherwin-Williams Co.  
Diversified Brands  
Cleveland, OH 44115  
-----

Distributed by:  
Balkamp Headquarters  
P. O. Box 421268  
Indianapolis, IN 46242

### Telephone Numbers and Websites

Product Information	www.balkamp.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
15	74-98-6	Propane		
		ACGIH TLV	2500 PPM	760 mm
		OSHA PEL	1000 PPM	
15	106-97-8	Butane		
		ACGIH TLV	800 PPM	760 mm
		OSHA PEL	800 PPM	
39	108-88-3	Toluene		
		ACGIH TLV	20 PPM	22 mm
		OSHA PEL	100 ppm (Skin)	
		OSHA PEL	150 ppm (Skin) STEL	
21	67-64-1	Acetone		
		ACGIH TLV	500 PPM	180 mm
		ACGIH TLV	750 PPM STEL	
		OSHA PEL	1000 PPM	
2	763-69-9	Ethyl 3-Ethoxypropionate		
		ACGIH TLV	Not Available	1.11 mm
		OSHA PEL	Not Available	

## 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.

### HMIS Codes

Health	2
Flammability	4
Reactivity	0

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
- the cardiovascular system
- the reproductive 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 laundry 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	1.0	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

<b>PRODUCT WEIGHT</b>	6.07 lb/gal	727 g/l
<b>SPECIFIC GRAVITY</b>	0.73	
<b>BOILING POINT</b>	<0 - 342 °F	<-18 - 172 °C
<b>MELTING POINT</b>	Not Available	
<b>VOLATILE VOLUME</b>	94%	
<b>EVAPORATION RATE</b>	Faster than ether	
<b>VAPOR DENSITY</b>	Heavier than air	
<b>SOLUBILITY IN WATER</b>	Not Available	
<b>VOLATILE ORGANIC COMPOUNDS (VOC Theoretical - As Packaged)</b>		
	Volatile Weight 70.84%	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
108-88-3	Toluene	LC50 RAT	4HR	4000 ppm
		LD50 RAT		5000 mg/kg
67-64-1	Acetone	LC50 RAT	4HR	Not Available
		LD50 RAT		5800 mg/kg
763-69-9	Ethyl 3-Ethoxypropionate	LC50 RAT	4HR	Not Available
		LD50 RAT		5000 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

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)

May be classed as LTD. QTY. OR ORM-D

UN1950, AEROSOLS, 2.1, LIMITED QUANTITY, (ERG#126)

### Canada (TDG)

May be classed as LTD. QTY. OR 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, ADR (D)

### IATA/ICAO

UN1950, AEROSOLS, FLAMMABLE, 2.1, LIMITED QUANTITY

## SECTION 15 — REGULATORY INFORMATION

### SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL/COMPOUND	% by WT	% Element
108-88-3	Toluene	39	

### 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 \*\*\*\*

NB1300 - NAPA Rust Inhibitor

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<a href="#">SEC 1 - PRODUCT AND MANUFACTURER INFO</a>	<a href="#">SEC 9 - PHYS, CHEM PROPERTIES</a>
<a href="#">SEC 2 - COMPOSITION INFORMATION</a>	<a href="#">SEC 10 - STABILITY, REACTIVITY</a>
<a href="#">SEC 3 - HAZARDS IDENTIFICATION</a>	<a href="#">SEC 11 - TOXICOLOGY INFORMATION</a>
<a href="#">SEC 4 - FIRST AID MEASURES</a>	<a href="#">SEC 12 - ECOLOGICAL INFORMATION</a>
<a href="#">SEC 5 - FIRE FIGHTING MEASURES</a>	<a href="#">SEC 13 - DISPOSAL CONSIDERATIONS</a>
<a href="#">SEC 6 - ACCIDENTAL RELEASE MEASURES</a>	<a href="#">SEC 14 - TRANSPORT INFORMATION</a>
<a href="#">SEC 7 - HANDLING AND STORAGE</a>	<a href="#">SEC 15 - REGULATORY INFORMATION</a>
<a href="#">SEC 8 - EXPOSURE, PERS. PROTECTION</a>	<a href="#">SEC 16 - ADDITIONAL INFORMATION</a>

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\*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND MANUFACTURER IDENTIFICATION \*\*\*\*

**Product Name:** NB1300 - NAPA Rust Inhibitor

**Part Number:**

NB1300

**Product CAS:** (None)

**Product Code:** NB1300

**Synonyms:** NB1300 - NAPA Rust Inhibitor

**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:** 3/10/2005

**MSDS Supersedes Date:** 3/1/2013

**Miscellaneous:**

Product CAS: Mixture

**Brief Description:** Organic rust inhibitor for automotive coolant systems.

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\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

Chemical Name	CAS	MIN	MAX
Boramides	67952-33-4	0	5

**Miscellaneous:**

CHEMICAL NAME	LIMIT VALUES
Boramides	N/A

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**\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\***

**EMERGENCY OVERVIEW:**

**NFPA:** Health: 1 Fire: 0 Reactivity: 0 Specific Hazard: NONE

**HMIS:** Health: 1 Flammability: 0 Reactivity: 0 PPE: B

**Miscellaneous:**

This product does not contain any components above de minimus concentrations that are considered carcinogenic by OSHA, IARC or NTP.

**POTENTIAL HEALTH EFFECTS**

**Target Organs/Primary Route(s) of Entry:**

**Eye:**

Severe Irritant.

**Skin:**

Irritant.

**Ingestion:**

Treat patient for borate ingestion, pH of product is alkaline 9.5 to 11.0

**Inhalation:**

Respiratory irritation and coughing.

**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. A follow up visit to an ophthalmologist should be made. Contact lenses should not be worn when working with this chemical.

**Skin:**

If the product contacts the skin, promptly wash the contaminated skin with soap and water for at least 15 minutes. Get medical attention as required.

**Ingestion:**

If this product is ingested and the person is conscious, induce vomiting. Do not induce an unconscious person to vomit. 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:** N/A

**AutoIgnition Temperature:** N/A

**Flammable Limits**

**Lower Limit:** Explosive Limit (LEL): N/A

**Upper Limit:** Explosive Limit (UEL): N/A

**Extinguishing Media:**

Carbon dioxide, dry chemical, foam and water fog.

**Unusual Fire and Explosion Hazards:**

Combustion can produce toxic oxide of nitrogen.

**Special Fire Fighting Procedures:**

Use SCBA apparatus operated in pressure demand or other positive pressure mode.

**General Information:**

Flammable Limits: N/A

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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:**

None.

**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: N/A

Other Ventilation: N/A

**PERSONAL PROTECTIVE EQUIPMENT****Eyes/face:**

Use splash proof chemical, safety goggles or appropriate full-face shield.

**Skin:**

Use natural rubber or neoprene gloves as required.

**Respirators:**

Normally not required.

**Other Protective Clothing/Equipment:**

If there is a possibility of exposure of an individual's body to the product, wear body covering clothes to avoid prolonged or repeated exposure.

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**\*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*****Appearance/Odor:**

Clear, water white liquid

pH: 9.5 to 11.0

Vapor Pressure: (MM HG): N/A

Vapor Density (Air=1): LT 1.0

Evaporation Rate: N/A

**Viscosity:** N/A

**Boiling Point:** 212 F. (100 C.)

**Freezing/Melting Point:** N/A

**Decomposition Temperature:** N/A

**Solubility in Water:** Soluble

**Specific Gravity:** 1.05

**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):** 0

**Percent Solids (volume):** 0

**Percent Water (volume):** 0

**Percent Volatile by Weight:** 0

**Miscellaneous:**

% Volatile/Volume: N/A

Percent Solvent (Volume): N/A

Percent Solids (Volume): N/A

Percent Water (Volume): N/A

Miscellaneous Information: None

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**\*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\***

**Chemical Stability:**

Stable: Yes

**Conditions to Avoid:**

Copper and strongly alkaline materials and products.

**Incompatibilities with Other Materials:**

N/A



**Hazardous Decomposition Products:**

Oxides of nitrogen.

**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: Cleaning Compound, N.O.I.  
DOT Hazard Class: None required.  
DOT UN Number: None required.  
IMDG Shipping Name: Non Hazardous Consumer Product

**Label Information:**

Caution: Skin & Eye Irritant. Read cautions on back panel.

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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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NAPA® MAC'S STARTING FLUID  
NM7212

<b>1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING</b>
--

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

Product name	NAPA® MAC'S STARTING FLUID
Product code	NM7212
Product Use Description	No data

<b>2. HAZARDS IDENTIFICATION</b>
----------------------------------

**Emergency Overview**

Appearance: liquid

WARNING! EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE. CONTENTS UNDER PRESSURE. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. CAUSES EYE IRRITATION. MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE DERMATITIS AND BURNS.

**Potential Health Effects**

**Routes of exposure**

Inhalation, Skin absorption, Skin contact, Eye Contact

**Eye contact**

Can cause eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes.

**Skin contact**

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

**Ingestion**

NAPA® MAC'S STARTING FLUID  
NM7212

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

### **Inhalation**

Breathing aerosol and/or mist is possible when material is sprayed. Aerosol and mist may present a greater risk of injury because more material may be present in the air than from vapor alone. 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), Individuals with preexisting heart disorders maybe more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

### **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), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), loss of appetite, loss of coordination, irregular heartbeat, narcosis (dazed or sluggish feeling)

### **Target Organs**

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: effects on hearing

### **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).

### **Reproductive hazard**

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

### **Other information**

NAPA® MAC'S STARTING FLUID  
NM7212

No data

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Concentration
n-HEPTANE	142-82-5	>=70-<80%
ETHYL ETHER	60-29-7	>=15-<20%
CARBON DIOXIDE	124-38-9	>=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. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and 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:** Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material. This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 2 - Swallowing) when deciding whether to induce vomiting.

**Treatment:** No information available.

NAPA® MAC'S STARTING FLUID  
NM7212

## **5. FIRE-FIGHTING MEASURES**

### **Suitable extinguishing media**

Water mist, Carbon dioxide (CO2), Dry chemical

### **Hazardous combustion products**

carbon dioxide and carbon monoxide, various hydrocarbons

### **Precautions for fire-fighting**

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. 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).

### **Flammability Class for Flammable Liquids**

Flammable Liquid Class IA

## **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 run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

### **Methods for cleaning up**

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

## **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. Avoid prolonged or frequently repeated skin

NAPA® MAC'S STARTING FLUID  
NM7212

contact with this material. Skin contact can be minimized by wearing impervious protective gloves. As with all products of this nature, good personal hygiene is essential. Hands and other exposed areas should be washed thoroughly with soap and water after contact, especially before eating and/or smoking. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.

### **Storage**

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

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **Exposure Guidelines**

#### **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 TLV(s).

#### **Eye protection**

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

#### **Skin and body protection**

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

NAPA® MAC'S STARTING FLUID  
NM7212**Respiratory protection**

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	liquid
<b>Form</b>	aerosol,
<b>Colour</b>	No data
<b>Odour</b>	No data
<b>Boiling point/boilingrange</b>	94.3 °F / 34.6 °C @ 1,013.232 hPa
<b>pH</b>	No data
<b>Flash point</b>	-49 °F / -45 °C
<b>Evaporation rate</b>	No data
<b>Explosion limits</b>	1.05 %(V) 36.5 %(V)
<b>Vapour pressure</b>	717.2616 hPa @ 77 °F / 25 °C
<b>Vapour density</b>	No data
<b>Density</b>	() 0.7114 g/cm3 @ 60.01 °F / 15.56 °C
	No data
<b>Solubility</b>	No data
<b>Partition coefficient: n-octanol/water</b>	No data
<b>Autoignition temperature</b>	No data

**10. STABILITY AND REACTIVITY****Stability**

Stable.

**Conditions to avoid**

Avoid heat, open flame, and prolonged storage at elevated temperatures.

**Incompatible products**

strong oxidizing agents

**Hazardous decomposition products**



NAPA® MAC'S STARTING FLUID  
NM7212

carbon dioxide and carbon monoxide, various hydrocarbons

**Hazardous reactions**

Product will not undergo hazardous polymerization.

**Thermal decomposition**

No data

<b>11. TOXICOLOGICAL INFORMATION</b>
--------------------------------------

**Acute oral toxicity**

n-HEPTANE	LD 50 Rat: 15,000 mg/kg
ETHYL ETHER	LD 50 Rat: 3,230 - 3,920 mg/kg

**Acute inhalation toxicity**

n-HEPTANE	LC 50 Rat: 103 g/m <sup>3</sup> , 4 h
ETHYL ETHER	LC 50 Rat: 32000 ppm, 4 h

**Acute dermal toxicity**

n-HEPTANE	LD 50 Rabbit: 2,000 mg/kg
-----------	---------------------------

<b>12. ECOLOGICAL INFORMATION</b>
-----------------------------------

**Aquatic toxicity**

**Acute and Prolonged Toxicity to Fish**

No data

**Acute Toxicity to Aquatic Invertebrates**

No data

**Environmental fate and pathways**

No data

NAPA® MAC'S STARTING FLUID  
NM7212

### 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

**IMDG:**

UN1950, AEROSOLS 2.1,

**IATA\_P:**

UN1950, Aerosols, flammable 2.1,

**IATA\_C:**

UN1950, Aerosols, flammable 2.1,

**CFR\_ROAD:**

UN1950, Aerosols 2.1,

**CFR\_RAIL:**

UN1950, Aerosols 2.1,

**CFR\_INWTR:**

UN1950, Aerosols 2.1,

**IMDG\_INWTR:**

UN1950, AEROSOLS 2.1,

**IMDG\_ROAD:**

UN1950, AEROSOLS 2.1,

**IMDG\_RAIL:**

UN1950, AEROSOLS 2.1,

Dangerous goods descriptions (if indicated above) may not reflect package size, 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**

WARNING! This product contains a chemical known in the State of California to cause cancer.

BENZENE

<b>SARA Hazard Classification</b>	Fire Hazard
	Acute Health Hazard

	Health	Flammability	Reactivity	Other
<b>HMIS</b>	1*	4	0	
<b>NFPA</b>	1	4	0	

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).

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## Material Safety Data Sheet (MSDS)

Mac's Windshield De-Icer

=====

MATERIAL SAFETY DATA SHEET

Effective Date: 1-1-03 Revision Date: none

Mac's Windshield De-Icer

Code: UNI Page: 1

=====

Section 1 - Product and Company Identification

PRODUCT NAME: Mac's Windshield De-Icer

MANUFACTURER'S NAME: EMERGENCY TELEPHONE NUMBER

Unifide Ind. (800)424-9300

121 Highway 36

West Long Branch, NJ 07764 MISCELLANEOUS INFORMATION

=====

MATERIAL SAFETY DATA SHEET

Effective Date: 1-1-03 Revision Date: none

Mac's Windshield De-Icer

Code: UNI Page: 2

=====

Section 1 - Product and Company Identification - Continued

MATERIAL SAFETY DATA SHEET

=====

Section 1 -- PRODUCT AND COMPANY IDENTIFICATION

-----

PRODUCT NUMBER: HMIS CODES Health 3 7000 Flammability 3 Reactivity 0 PRODUCT NAME: NAPA Windshield De-Icer MANUFACTURED By EMERGENCY TELEPHONE NO. Unifide Industries, LLC Chemtrec 1-800-424-9300 121 Highway 36, West Long Branch, NJ 07764 DATE OF PREPARATION INFORMATION TELEPHONE NO. January 1, 2003 (732) 728-1700

Section 2 -- COMPOSITION/INFORMATION ON INGREDIENTS % by WT CAS No. INGREDIENT UNITS VAPOR PRESSURE

62 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 6 107-21-1 Ethylene Glycol. ACGIH TLV 50 ppm CEILING 0.12 mm OSHA PEL 50 ppm CEILING 3 124-38-9 Carbon Dioxide ACGIH TLV 5000 ppm OSHA PEL 5000 ppm

Section 3 -- HAZARDS IDENTIFICATION

-----

ROUTES OF EXPOSURE Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use. Alcohols and acetates can be absorbed through the skin. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment. EFFECTS OF OVEREXPOSURE Irritation of eyes, skin and 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. Continued on page 2

99023 page 2

Section 4 -- FIRST AID MEASURES

-----  
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: Do not induce vomiting. Get medical attention immediately.  
=====

Section 5 -- FIRE FIGHTING MEASURES

-----  
FLASH POINT LEL UEL 68 F TCC 3.2 36.5 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. 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

=====

MATERIAL SAFETY DATA SHEET

Effective Date: 1-1-03 Revision Date: none

Mac's Windshield De-Icer

Code: UNI Page: 3

=====

Section 1 - Product and Company Identification - Continued

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove all sources of ignition. Ventilate and remove with inert absorbent.  
=====

Section 7 -- HANDLING AND STORAGE

-----  
DOL STORAGE CATEGORY 1A PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE Keep away from heat, sparks, and open flame. 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 breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. Continued on page 3  
99023 page 3  
=====

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 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 7.16 lb/gal 858 g/l SPECIFIC GRAVITY 0.86 BOILING POINT <0 - 388 F <-18 - 197 C MELTING POINT Not Available VOLATILE VOLUME 99 % EVAPORATION RATE Faster than ether VAPOR DENSITY Heavier than air SOLUBILITY IN WATER N.A. VOLATILE ORGANIC COMPOUNDS (VOC Theoretical) Volatile Weight 68.05 % Less Federally Exempt Solvents HMIS -- 3 3 0  
=====

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. 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

=====  
MATERIAL SAFETY DATA SHEET

Effective Date: 1-1-03 Revision Date: none

Mac's Windshield De-Icer

Code: UNI Page: 4  
=====

Section 1 - Product and Company Identification - Continued

birth defects in humans. Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Continued on page 4  
99023 page 4  
=====

TOXICOLOGY DATA CAS No. Ingredient Name  
=====

67-56-1 Methanol LC50 RAT 4HR 64000 ppm LD50 RAT 5630 mg/kg 107-21-1  
Ethylene Glycol. LC50 RAT 4HR Not Established LD50 RAT 4700 mg/kg 124-38-9  
Carbon Dioxide LC50 RAT 4HR Not Established LD50 RAT Not Established  
=====

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, 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  
=====

67-56-1 Methanol 62 107-21-1 Ethylene Glycol. 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 CPR and the MSDS contains all of the information required by the CPR.  
99023  
=====

END

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.

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# Unimark Oil Company Material Safety Data Sheet

UNIMARK OIL COMPANY  
484 E. 6<sup>TH</sup> ST.  
SMACKOVER, AR 71762

Information: 870-864-6275  
Emergency: 870-881-8700, Ext. 1163  
Fax: 870 864-8656  
Revision Date: 3/15/05

## SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product: NAPA Power Steering Fluid, 9800, 9832, 9801  
CAS Registry Number: Not applicable for mixtures.  
Synonyms:

Item Number:  
Generic/Chemical Name: Petroleum hydrocarbon fluid.  
Product Type: Industrial hydraulic lubricant

## SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	%	ACGIH TWA	OSHA PEL	OSHA STEL	SKIN
Hydrotreated Napthenic Distillates	Mixture	95 - 100	5 mg/m <sup>3</sup> (oil mist)	5 mg/m <sup>3</sup> (oil mist)	10 mg/m <sup>3</sup> (oil mist)	NO
Proprietary additives	Mixture	0 - 5	5 mg/m <sup>3</sup> (oil mist)	5 mg/m <sup>3</sup> (oil mist)	10 mg/m <sup>3</sup> (oil mist)	NO
Zinc salts of dialkyl dithiophosphoric acid	68649-42-3	<0.5	5 mg/m <sup>3</sup> (oil mist)	5 mg/m <sup>3</sup> (oil mist)	10 mg/m <sup>3</sup> (oil mist)	NO

## SECTION 3 HAZARDS IDENTIFICATION

WARNING: - NONE REQUIRED

**Eye Contact:** This product is not normally expected to cause eye irritation. Avoid prolonged contact with the eyes, which may cause mild eye discomfort, tearing, or blurring of vision. Based on data from similar materials.

**Skin Contact:** This product is not expected to cause skin irritation. Prolonged or repeated contact may lead to an allergic skin sensitization in some people and dermatitis (dryness, chapping and reddening of skin). Based on component data and data from similar materials.

**Inhalation:** Overexposure by inhalation of hot material may cause nonspecific discomfort, such as nausea, headache, or weakness. Caution should be taken to prevent forming aerosol or misting of this product without proper respiratory protection.

**Ingestion:** Do not ingest. Due to the expected concentration of oil (70-100%) ingestion is expected to be relatively non-toxic unless lung 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. This product has laxative properties and may result in abdominal cramps and diarrhea.

# Unimark Oil Company Material Safety Data Sheet

## SECTION 4 FIRST AID MEASURES

<b>Eye Contact:</b>	Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If irritation persists call a physician. If material is hot, treat for thermal burns and take victim to hospital immediately.
<b>Skin Contact:</b>	Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately. Wash contaminated clothing before reuse.
<b>Inhalation:</b>	If overcome by inhalation of hot vapors, remove to fresh air. Use oxygen if there is difficulty breathing or artificial respiration if breathing has stopped. Do not leave victim unattended. Seek immediate medical attention if necessary.
<b>Oral Contact:</b>	DO NOT INDUCE VOMITING. Do not induce vomiting due to aspiration hazard. Immediately give 2 glasses of water. Never give anything by mouth to an unconscious person. Should vomiting occur lower head below knees to avoid aspiration. Seek immediate medical attention.

## SECTION 5 FIRE FIGHTING MEASURES

<b>Flash Point:</b>	182°C (360°F) by Cleveland Open Cup, ASTM D 92.
<b>Upper Flammable Limit:</b>	Not determined.
<b>Lower Flammable Limit:</b>	Not Determined.
<b>Extinguishing Media:</b>	Use dry chemical, foam, water fog or carbon dioxide.
<b>Special Fire fighting Procedures:</b>	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.
<b>Unusual Fire &amp; Explosion Hazards:</b>	Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. Heavy flammable vapors may settle along ground level and low spots to create an invisible fire hazard. The vapors may extend to sources of ignition and flash back.
<b>Byproducts of Combustion:</b>	Oxides of C, Zn, Ca, P and S. Additional byproducts include hydrogen sulfide, alkyl mercaptans and other sulfides.
<b>Autoignition Temperature:</b>	Not determined.
<b>Explosion Data:</b>	Not determined. Care should always be exercised in dust/mist areas.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

<b>Spill Control Procedures (Land):</b>	Immediately turn off or isolate any source of ignition (pilot lights, electrical equipment, flames, and heaters). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill occurs notify appropriate authorities.
<b>Spill Control Procedures (Water):</b>	Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities.



# Unimark Oil Company Material Safety Data Sheet

## SECTION 6

## ACCIDENTAL RELEASE MEASURES (continued)

### Waste Disposal

#### Method:

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. Department of Transportation regulations may apply for transporting this material when spilled. See Section 14.

CAUTION - If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

## SECTION 7

## HANDLING AND STORAGE

### Handling Procedures:

Keep containers closed when not in use. Do not transfer to unmarked containers. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106 -- Flammable and Combustible Liquids. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld, or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

### Storage Procedures:

Store containers away from heat, sparks, open flame, or oxidizing materials.

#### Additional

#### Information:

No additional information.

## SECTION 8

## EXPOSURE CONTROLS / PERSONAL PROTECTION

### Personal Protection:

Applicable mainly to persons in repeated contact situations such as packaging of product, service/maintenance, and cleanup/spill control personnel.

### Respiratory

#### Protection:

None required if airborne concentrations are maintained below threshold limits listed on page 1. Otherwise a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. Where misting may occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form dust/mist air-purifying respirator.

### Eye Protection:

Eye protection is always recommended. If material is handled such that it could be splashed into the eyes, wear safety glasses with side shields or vented/splash proof goggles (ANSI Z87.1 or approved equivalent).

### Hand Protection:

Impervious gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.

### Other Protection:

Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. If handling hot material use insulated protective equipment. Launder soiled clothes. Properly dispose of contaminated leather articles and other materials, which cannot be decontaminated.

### Local Control

#### Measures:

Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as fume hoods or area fans may be used to reduce localized vapor/mist areas. 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. Eyewash stations and showers should be available in areas where this material is used and stored.

### Other:

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

# Unimark Oil Company Material Safety Data Sheet

## SECTION 9

## PHYSICAL AND CHEMICAL PROPERTIES

<b>Vapor Pressure:</b>	Negligible at STP (Standard Temperature and Pressure, 25°C at 1 ATM).
<b>API Gravity:</b>	31.3° at 15.6°C (60°F) by ASTM D 1298
<b>Density:</b>	7.24 lb./gal at 15.6°C (60°F) by ASTM D 1298
<b>Specific Gravity:</b>	0.869 at 15.6°C (60°F) by ASTM D 1298
<b>Solubility:</b>	Negligible in water, soluble in hydrocarbon solvents.
<b>Percent Volatile:</b>	Negligible at STP.
<b>Vapor Density, Air = 1:</b>	>1 at STP
<b>Evaporation Rate, n-Butyl Acetate = 1:</b>	Negligible at STP.
<b>Odor:</b>	Mild petroleum hydrocarbon odor.
<b>Appearance:</b>	Amber, clear fluid.
<b>Viscosity:</b>	5.2 cSt at 100°C (212°F) by ASTM D 445. 31.8 cSt at 40°C (104°F) by ASTM D 445.
<b>Boiling Point:</b>	Not determined. Expected to be >260°C (500°F).
<b>Pour Point:</b>	-35°C (-30°F) by ASTM D 97.
<b>Molecular Weight:</b>	Not determined.

## SECTION 10

## STABILITY AND REACTIVITY

<b>Stability:</b>	Material is stable at room temperature and pressure.
<b>Conditions To Avoid:</b>	Avoid high temperatures and product contamination.
<b>Incompatibility With Other Materials:</b>	Avoid contact with acids and oxidizing materials.
<b>Hazardous Decomposition Products:</b>	Smoke, carbon monoxide and dioxide, and other aldehydes of incomplete combustion. Oxides of C, Zn, P, S. Hydrogen sulfide and alkyl mercaptans and other sulfides may be released.
<b>Hazardous Polymerization:</b>	Will not occur.

## SECTION 11

## TOXICOLOGICAL INFORMATION

<b>Oral Toxicity:</b>	Not determined.
<b>Dermal Toxicity:</b>	Not determined.
<b>Inhalation Toxicity:</b>	On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations. Shortness of breath and cough are the most common symptoms. Based on data from similar materials.
<b>Dermal Sensitization:</b>	Prolonged or repeated contact may make skin more sensitive to other skin sensitizers. Based on data from similar materials.
<b>Chronic Toxicity:</b>	Not determined.
<b>Carcinogenicity:</b>	Not determined.
<b>Mutagenicity:</b>	This product contains zinc alkyl dithiophosphates (ZDP). Several ZDPs have been reported to have weak mutagenic activity in cultured mammalian cells but only at concentrations that were toxic to the test cells. We do not believe that there is any mutagenic risk to workers exposed to this product's concentration level of ZDP.
<b>Reproductive Toxicity:</b>	Not determined.

# Unimark Oil Company Material Safety Data Sheet

## SECTION 11 TOXICOLOGICAL INFORMATION (continued)

**Teratogenicity:** Not determined.  
**Other:** This product contains petroleum base oils, which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils require a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

## SECTION 12 ECOLOGICAL INFORMATION

**Environmental Toxicity:** This material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.  
**Environmental Fate:** No data available.

## SECTION 13 DISPOSAL CONSIDERATIONS

**Waste Disposal:** Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.  
**Disposal Considerations:** Place used, contaminated, or excess material into disposable containers and dispose of in a manner consistent with local and state regulations. Contact local environmental or health authorities for approved disposal of this material. Most used oil is reclaimed or incinerated.

## SECTION 14 TRANSPORT INFORMATION

**U.S. DOT Bulk Shipping Description:** Does not apply to bulk oil shipping.  
**U.S. DOT Non-Bulk Shipping Description:** Does not apply to non-bulk oil shipping.  
**U.S. DOT Identification Number:** Not applicable.  
**U.S. DOT Hazard Classification:** Not applicable.  
**Other:** See 49 CFR for additional requirements for descriptions, allowed modes of transport, and packaging. For more information concerning spills during transport, consult latest DOT Emergency Response Guidebook for Hazardous Materials Incidents, DOT P 5800.3.

## SECTION 15 REGULATORY INFORMATION

**Clean Water Act/Oil Pollution Act:** Under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Control Act of 1990, this material is considered an oil. Any spills or discharges that produce a visible sheen or film on surface of water, or in waterways, ditches, or sewers leading to surface water must be reported. Contact the National Response Center at 800-424-8802.

# Unimark Oil Company Material Safety Data Sheet

## SECTION 15

## REGULATORY INFORMATION (continued)

**TSCA:** All components of this material are listed in the U.S. TSCA Inventory.  
**Other TSCA:** Not applicable.  
**SARA Title III:** Section 302/304 Extremely Hazardous Substances: None.  
Section 311, 312 Hazard Categorization:  
Acute (immediate health effects): Yes.  
Chronic (delayed health effects): No.  
Fire (hazard): No.  
Reactivity (hazard): No.  
Pressure (sudden release hazard): No.  
Section 313 Toxic Chemicals:  
Zinc <0.10%.  
**CERCLA:** For stationary sources - reportable quantity: Not determined.  
Due to: Not applicable.  
For moving sources - reportable quantity: Not determined.  
Due to: Not applicable.  
Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.  
**California Prop. 65:** Not applicable.

## SECTION 16

## OTHER INFORMATION

	NFPA 704	NPCA-HMIS	KEY
<b>HEALTH:</b>	1	1	0 = Minimal
<b>FIRE:</b>	1	1	1 = Slight
<b>REACTIVITY:</b>	0	0	2 = Moderate
<b>SPECIFIC HAZARD:</b>	NONE	N/A	3 = Serious
<b>PROTECTION INDEX:</b>	N/A	B	4 = Severe

**Precautionary Labels:** WARNING  
- NONE REQUIRED

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, Unimark Oil Company must rely upon information provided by the material manufacturers or distributors.

Prepared by: Clark Smith  
Revision Date: 3-15-05  
File: NAPA PSF

INFORMATION PROVIDED IN THIS MSDS IS CONSIDERED ACCURATE AND RELIABLE BASED ON INFORMATION ISSUED FROM INTERNAL AND OUTSIDE SOURCES TO THE BEST OF UNIMARK OIL COMPANY'S KNOWLEDGE. HOWEVER, UNIMARK OIL COMPANY MAKES NO REPRESENTATIONS, GUARANTEES OR WARRANTIES, EXPRESSED OR IMPLIED, OF MERCHANTABILITY OR FITNESS FOR THE PARTICULAR PURPOSE, REGARDING THE ACCURACY OF SUCH INFORMATION OR THE RESULT TO BE OBTAINED FROM THE USE THEREOF, OR AS TO THE SUFFICIENCY OF INFORMATION HEREIN PRESENTED. UNIMARK OIL COMPANY ASSUMES NO RESPONSIBILITY FOR INJURY TO RECIPIENT OR TO THIRD PERSONS OR FOR ANY DAMAGE TO ANY PROPERTY AND RECIPIENT ASSUMES ALL SUCH RISKS.

# Unimark Oil Company Material Safety Data Sheet

UNIMARK OIL COMPANY  
484 E. 6<sup>TH</sup> ST.  
SMACKOVER, AR 71762

Information:  
Emergency:  
Fax:

870 864-6275  
870-881-8700, Ext. 1163  
870 864-8656

## SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product:** NAPA PREMIUM UNIVERSAL TRACTOR HYDRAULIC & TRANSMISSION FLUID 85-401, 85-405, 85-455

**CAS Registry Number:** Not applicable for mixtures.  
**Synonyms:** Tractor Hydraulic Fluid

**Item Number:** 123120

**Generic/Chemical Name:** Petroleum hydrocarbon fluid.

**Product Type:** Gear, transmission, wet brake hydraulic fluid

**Preparation/Revision Date:** 10/23/02

## SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS #	%	ACGIH TWA	OSHA PEL	OSHA STEL	SKIN
Hydrotreated Paraffinic & Napthenic Distillates	Mixture	85 - 95	5 mg/m <sup>3</sup> (oil mist)	5 mg/m <sup>3</sup> (oil mist)	10 mg/m <sup>3</sup> (oil mist)	NO
Proprietary additives	Mixture	5 - 15	5 mg/m <sup>3</sup> (oil mist)	5 mg/m <sup>3</sup> (oil mist)	10 mg/m <sup>3</sup> (oil mist)	NO
Zinc salts of dialkyl dithiophosphoric acid	68649-42-3	<0.5	5 mg/m <sup>3</sup> (oil mist)	5 mg/m <sup>3</sup> (oil mist)	10 mg/m <sup>3</sup> (oil mist)	NO

## SECTION 3 HAZARDS IDENTIFICATION

**WARNING:** NOT EXPECTED TO BE HAZARDOUS

**Eye Contact:** Not expected to cause prolonged or significant eye irritation.

**Skin Contact:** Contact with the skin is not expected to cause prolonged or significant eye irritation. Not expected to be harmful to internal organs if absorbed through the skin.

**Inhalation:** Overexposure by inhalation of hot material may cause nonspecific discomfort, such as nausea, headache, or weakness. Caution should be taken to prevent forming aerosol or misting of this product without proper respiratory protection.

**Ingestion:** Do not ingest. Not expected to be harmful if swallowed. Due to the expected concentration of oil (70-100%) ingestion is expected to be relatively non-toxic unless lung 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. This product has laxative properties and may result in abdominal cramps and diarrhea.

# Unimark Oil Company Material Safety Data Sheet

## SECTION 4

## FIRST AID MEASURES

<b>Eye Contact:</b>	As a precaution remove contact lenses, if worn, and flush eyes with water.
<b>Skin Contact:</b>	As a precaution, remove contaminated clothing. Wash contaminated area thoroughly with soap and water. Wash contaminated clothing before reuse.
<b>Inhalation:</b>	If exposed to excessive levels of mists or vapors in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.
<b>Oral Contact:</b>	DO NOT INDUCE VOMITING. This material is not expected to be harmful if swallowed. Do not induce vomiting due to aspiration hazard. As a precaution, give 2 glasses of water. Never give anything by mouth to an unconscious person. If vomiting occurs lower head below knees to avoid aspiration.

## SECTION 5

## FIRE FIGHTING MEASURES

<b>Flash Point:</b>	193°C (380°F) by Cleveland Open Cup, ASTM D 92.
<b>Upper Flammable Limit:</b>	Not determined.
<b>Lower Flammable Limit:</b>	Not Determined.
<b>Extinguishing Media:</b>	Use dry chemical, foam, water fog or carbon dioxide.
<b>Special Fire fighting Procedures:</b>	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.
<b>Unusual Fire &amp; Explosion Hazards:</b>	Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. Heavy flammable vapors may settle along ground level and low spots to create an invisible fire hazard. The vapors may extend to sources of ignition and flash back.
<b>Byproducts of Combustion:</b>	Oxides of C, Zn, Ca, P and S. Additional byproducts include hydrogen sulfide, alkyl mercaptans and other sulfides. Incomplete combustion can produce carbon monoxide.
<b>Autoignition Temperature:</b>	Not determined.
<b>Explosion Data:</b>	Not determined. Care should always be exercised in dust/mist areas.

## SECTION 6

## ACCIDENTAL RELEASE MEASURES

<b>Spill Control Procedures (Land):</b>	Immediately turn off or isolate any source of ignition (pilot lights, electrical equipment, flames, and heaters). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill occurs notify appropriate authorities.
<b>Spill Control Procedures (Water):</b>	Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities.

# Unimark Oil Company Material Safety Data Sheet

## SECTION 6

## ACCIDENTAL RELEASE MEASURES (continued)

### Waste Disposal

#### Method:

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. Department of Transportation regulations may apply for transporting this material when spilled. See Section 14.

CAUTION - If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

## SECTION 7

## HANDLING AND STORAGE

### Handling Procedures:

Keep containers closed when not in use. Do not transfer to unmarked containers. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106 -- Flammable and Combustible Liquids. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld, or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

### Storage Procedures:

Store containers away from heat, sparks, open flame, or oxidizing materials.

#### Additional

#### Information:

No additional information.

## SECTION 8

## EXPOSURE CONTROLS / PERSONAL PROTECTION

### Personal Protection:

Applicable mainly to persons in repeated contact situations such as packaging of product, service/maintenance, and cleanup/spill control personnel.

### Respiratory

#### Protection:

None required if airborne concentrations are maintained below threshold limits listed on page 1. Otherwise a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. Where misting may occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form dust/mist air-purifying respirator.

### Eye Protection:

Eye protection is always recommended. If material is handled such that it could be splashed into the eyes, wear safety glasses with side shields or vented/splash proof goggles (ANSI Z87.1 or approved equivalent).

### Hand Protection:

Impervious gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.

### Other Protection:

Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. If handling hot material use insulated protective equipment. Launder soiled clothes. Properly dispose of contaminated leather articles and other materials, which cannot be decontaminated.

### Local Control

#### Measures:

Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as fume hoods or area fans may be used to reduce localized vapor/mist areas. 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. Eyewash stations and showers should be available in areas where this material is used and stored.

### Other:

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

# Unimark Oil Company Material Safety Data Sheet

## SECTION 9

## PHYSICAL AND CHEMICAL PROPERTIES

<b>Vapor Pressure:</b>	Negligible at STP (Standard Temperature and Pressure, 25°C at 1 ATM).
<b>API Gravity:</b>	29.0° at 15.6°C (60°F) by ASTM D 1298
<b>Density:</b>	7.34 lb./gal at 15.6°C (60°F) by ASTM D 1298
<b>Specific Gravity:</b>	0.882 at 15.6°C (60°F) by ASTM D 1298
<b>Solubility:</b>	Negligible in water, soluble in hydrocarbon solvents.
<b>Percent Volatile:</b>	Negligible at STP.
<b>Vapor Density, Air = 1:</b>	>1 at STP
<b>Evaporation Rate, n-Butyl Acetate = 1:</b>	Negligible at STP.
<b>Odor:</b>	Mild petroleum hydrocarbon odor.
<b>Appearance:</b>	Amber Fluid.
<b>Viscosity:</b>	9.4 cSt at 100°C (212°F) by ASTM D 445. 60 cSt at 40°C (104°F) by ASTM D 445.
<b>Boiling Point:</b>	Not determined. Expected to be >260°C (500°F).
<b>Pour Point:</b>	-40°C (-40°F) by ASTM D 97.
<b>Molecular Weight:</b>	Not determined.

## SECTION 10

## STABILITY AND REACTIVITY

<b>Stability:</b>	Material is stable at room temperature and pressure.
<b>Conditions To Avoid:</b>	Avoid high temperatures and product contamination.
<b>Incompatibility With Other Materials:</b>	Avoid contact with acids and oxidizing materials.
<b>Hazardous Decomposition Products:</b>	Smoke, carbon monoxide and dioxide, and other aldehydes of incomplete combustion. Oxides of C, Zn, Ca, P and S. Hydrogen sulfide and alkyl mercaptans and other sulfides may be released.
<b>Hazardous Polymerization:</b>	Will not occur.

## SECTION 11

## TOXICOLOGICAL INFORMATION

<b>Oral Toxicity:</b>	Not determined.
<b>Dermal Toxicity:</b>	Not determined.
<b>Inhalation Toxicity:</b>	On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations. Shortness of breath and cough are the most common symptoms. Based on data from similar materials.
<b>Dermal Sensitization:</b>	Prolonged or repeated contact may make skin more sensitive to other skin sensitizers. Based on data from similar materials.
<b>Chronic Toxicity:</b>	Not determined.
<b>Carcinogenicity:</b>	Not determined.
<b>Mutagenicity:</b>	This product contains zinc alkyl dithiophosphates (ZDP). Several ZDPs have been reported to have weak mutagenic activity in cultured mammalian cells but only at concentrations that were toxic to the test cells. We do not believe that there is any mutagenic risk to workers exposed to this product's concentration level of ZDP.
<b>Reproductive Toxicity:</b>	Not determined.



# Unimark Oil Company Material Safety Data Sheet

## SECTION 11

## TOXICOLOGICAL INFORMATION (continued)

**Teratogenicity:**

Not determined.

**Other:**

This product contains petroleum base oils, which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils require a cancer warning under the OSHA Hazard Communication Standard (29 CFR 1910.1200). These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as; carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A), or possibly carcinogenic to humans (Group 2B).

## SECTION 12

## ECOLOGICAL INFORMATION

**Environmental****Toxicity:**

This material may be toxic to aquatic organisms and should be kept out of sewage and drainage systems and all bodies of water.

**Environmental Fate:**

No data available.

## SECTION 13

## DISPOSAL CONSIDERATIONS

**Waste Disposal:**

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

**Disposal****Considerations:**

Place used, contaminated, or excess material into disposable containers and dispose of in a manner consistent with local and state regulations. Contact local environmental or health authorities for approved disposal of this material. Most used oil is reclaimed or incinerated.

## SECTION 14

## TRANSPORT INFORMATION

**U.S. DOT Bulk****Shipping Description:**

Does not apply to bulk oil shipping.

**U.S. DOT Non-Bulk****Shipping Description:**

Does not apply to non-bulk oil shipping.

**U.S. DOT Identification****Number:**

Not applicable.

**U.S. DOT Hazard****Classification:**

Not applicable.

**Other:**

See 49 CFR for additional requirements for descriptions, allowed modes of transport, and packaging. For more information concerning spills during transport, consult latest DOT Emergency Response Guidebook for Hazardous Materials Incidents, DOT P 5800.3.

## SECTION 15

## REGULATORY INFORMATION

**Clean Water Act/Oil****Pollution Act:**

Under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Control Act of 1990, this material is considered an oil. Any spills or discharges that produce a visible sheen or film on surface of water, or in waterways, ditches, or sewers leading to surface water must be reported. Contact the National Response Center at 800-424-8802.

# Unimark Oil Company Material Safety Data Sheet

## SECTION 15

## REGULATORY INFORMATION (continued)

**TSCA:** All components of this material are listed in the U.S. TSCA Inventory.  
**Other TSCA:** Not applicable.  
**SARA Title III:** Section 302/304 Extremely Hazardous Substances: None.  
Section 311, 312 Hazard Categorization:  
Acute (immediate health effects): Yes.  
Chronic (delayed health effects): No.  
Fire (hazard): No.  
Reactivity (hazard): No.  
Pressure (sudden release hazard): No.  
Section 313 Toxic Chemicals:  
Zinc <0.10%.  
**CERCLA:** For stationary sources - reportable quantity: Not determined.  
Due to: Not applicable.  
For moving sources - reportable quantity: Not determined.  
Due to: Not applicable.  
Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.  
**California Prop. 65:** Not applicable.

## SECTION 16

## OTHER INFORMATION

	NFPA 704	NPCA-HMIS	KEY
<b>HEALTH:</b>	1	1	0 = Minimal
<b>FIRE:</b>	1	1	1 = Slight
<b>REACTIVITY:</b>	0	0	2 = Moderate
<b>SPECIFIC HAZARD:</b>	NONE	N/A	3 = Serious
<b>PROTECTION INDEX:</b>	N/A	B	4 = Severe

**Precautionary Labels:** WARNING  
- NOT EXPECTED TO BE HAZARDOUS

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, Unimark Oil Company must rely upon information provided by those materials manufacturers or distributors.

Prepared by: Michael S. McLemore  
Creation Date: 02/16/98  
Print Date: 10/23/02  
File: TH Fluid

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29 CFR 1910.1200 (OSHA HazCom 2012)

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

Trade name : NAPA® PREMIUM CONVENTIONAL SAE 5W-30  
MOTOR OIL

### Recommended use of the chemical and restrictions on use

<b>Details of the supplier of the safety data sheet</b> Ashland P.O. Box 2219 Columbus, OH 43216 United States of America  EHS Customer Requests@ashland.com	<b>Emergency telephone number</b> 1-800-ASHLAND (1-800-274-5263)  <b>Regulatory Information Number</b> 1-800-325-3751  <b>Product Information</b> 614-790-3333
--	---

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

### GHS Label element

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

### Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
HEAVY PARAFFINIC DISTILLATE	64742-54-7	Asp. Tox. 1; H304	36.00

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HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	6.88
Benzenesulfonic acid, C10-60- alkyl derivs., sodium salts	90194-32-4	Eye Irrit. 2A; H319	6.21
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	Asp. Tox. 1; H304	1.88

#### SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: 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.  Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:

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acne  
stomach or intestinal upset (nausea, vomiting, diarrhea)  
irritation (nose, throat, airways)

Notes to physician : No hazards which require special first aid measures.

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## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam  
Carbon dioxide (CO2)  
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide  
Hydrocarbons
- Specific extinguishing methods :  
  
Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

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## SECTION 7. HANDLING AND STORAGE

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- Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.
- Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : No materials to be especially mentioned.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	REL	5 mg/m3 Mist.	NIOSH/GUID E
		STEL	10 mg/m3 Mist.	NIOSH/GUID E
		PEL	5 mg/m3 Mist.	OSHA_TRA NS
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	PEL	500 ppm 2,000 mg/m3	OSHA_TRA NS
		REL	5 mg/m3 Mist.	NIOSH/GUID E
		STEL	10 mg/m3 Mist.	NIOSH/GUID E
		PEL	5 mg/m3 Mist.	OSHA_TRA NS
		TWA	5 mg/m3 Mist.	Z1A
		TWA	400 ppm 1,600 mg/m3	Z1A

- Engineering measures** : 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.

### Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
- Eye protection : Not required under normal conditions of use. Wear splash-

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proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:  
Safety shoes  
Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : General industrial hygiene practice.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : No data available

Flash point : > 390 °F / > 199 °C  
Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : 6 %(V)  
Calculated Explosive Limit

Lower explosion limit : 1 %(V)  
Calculated Explosive Limit

Vapour pressure : 1.3333333 hPa (20 °C)  
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : 0.876 (15.6 °C)

Density : 0.8599 g/cm3 (15.6 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n- : No data available

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octanol/water

Thermal decomposition :  
No data available

Viscosity  
Viscosity, dynamic : No data available

Viscosity, kinematic : 63 mm<sup>2</sup>/s (40 °C)

Oxidizing properties : No data available

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide  
Hydrocarbons

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation  
Skin contact  
Eye Contact  
Ingestion

### Acute toxicity

Not classified based on available information.

### Components:

HEAVY PARAFFINIC DISTILLATE:

Acute oral toxicity : LD 50 (Rat): > 15 g/kg

Acute dermal toxicity : LD 50 (Rabbit): > 5 g/kg

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg



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Acute dermal toxicity : LD 50 (Rabbit): > 5,000 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Product:**

Result: Repeated exposure may cause skin dryness or cracking.

**Components:**

HEAVY PARAFFINIC DISTILLATE:

Result: Mildly irritating to skin

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Mildly irritating to skin

Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts:

Result: Not irritating to skin

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Result: Mildly irritating to skin

**Serious eye damage/eye irritation**

Not classified based on available information.

**Product:**

Remarks: Unlikely to cause eye irritation or injury.

**Components:**

HEAVY PARAFFINIC DISTILLATE:

Result: Not irritating to eyes

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Mildly irritating to eyes

Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts:

Result: Irritating to eyes

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Result: Mildly irritating to eyes

**Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

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#### **Aspiration toxicity**

Not classified based on available information.

#### **Product:**

No aspiration toxicity classification

#### **Components:**

HEAVY PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

May be fatal if swallowed and enters airways.

#### **Further information**

#### **Product:**

Remarks: No data available

#### **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.

##### **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.

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## **SECTION 12. ECOLOGICAL INFORMATION**

#### **Ecotoxicity**

#### **Components:**

HEAVY PARAFFINIC DISTILLATE:

Toxicity to fish : LL50 (Fish): > 100 mg/l

Toxicity to daphnia and other aquatic invertebrates : EL50 (Aquatic invertebrates): > 10,000 mg/l

Toxicity to algae : EL50 (Algae, algal mat (Algae)): > 100 mg/l

Toxicity to fish (Chronic toxicity) : NOEC (Fish): 10 mg/l

Toxicity to daphnia and other aquatic invertebrates : NOEC (Aquatic invertebrates): 10 mg/l

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(Chronic toxicity)

**Persistence and degradability**

**Components:**

No data available

**Bioaccumulative potential**

**Components:**

No data available

**Mobility in soil**

**Components:**

No data available

**Other adverse effects**

No data available

**Product:**

Additional ecological : No data available  
information

**Components:**

---

**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

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

Contaminated packaging : Empty remaining contents.

---

**SECTION 14. TRANSPORT INFORMATION**

**International transport regulations**

**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**

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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

Marine pollutant	no
------------------	----

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.

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**SECTION 15. REGULATORY INFORMATION**

**SARA 311/312 Hazards** : No SARA Hazards

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

**Pennsylvania Right To Know**

HEAVY PARAFFINIC DISTILLATE	64742-54-7	50.00 - 70.00 %
HEAVY PARAFFINIC DISTILLATE	64742-54-7	30.00 - 50.00 %
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	5.00 - 10.00 %
Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts	90194-32-4	5.00 - 10.00 %
DISTILLATES (PETROLEUM), SOLVENT- DEWAXED HEAVY PARAFFINIC	64742-65-0	1.00 - 5.00 %

**New Jersey Right To Know**

HEAVY PARAFFINIC DISTILLATE	64742-54-7	50.00 - 70.00 %
HEAVY PARAFFINIC DISTILLATE	64742-54-7	30.00 - 50.00 %
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	5.00 - 10.00 %
Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts	90194-32-4	5.00 - 10.00 %
POLYOLEFIN AMIDE ALKENEAMINE	Not Assigned	1.00 - 5.00 %
DISTILLATES (PETROLEUM), SOLVENT- DEWAXED HEAVY PARAFFINIC	64742-65-0	1.00 - 5.00 %

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

**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.
AUSTR	: On the inventory, or in compliance with the inventory
KECL	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: q (quantity restricted)

**Inventories**

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL  
(Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

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## SECTION 16. OTHER INFORMATION

### Further information

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NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p>	<table border="1"> <tr> <td><b>HEALTH</b></td><td><b>1</b></td></tr> <tr> <td><b>FLAMMABILITY</b></td><td><b>1</b></td></tr> <tr> <td><b>PHYSICAL HAZARD</b></td><td><b>0</b></td></tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>1</b>	<b>FLAMMABILITY</b>	<b>1</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>1</b>						
<b>FLAMMABILITY</b>	<b>1</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

### NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

### Full text of H-Statements referred to under sections 2 and 3.

H304 May be fatal if swallowed and enters airways.  
H319 Causes serious eye irritation.

Sources of key data used to compile the Safety Data Sheet

Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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 SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

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FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

NAPA® PREM PERF HD SAE 30 MOTOR  
OIL  
NP75110

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

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

Product name NAPA® PREM PERF HD SAE 30 MOTOR OIL

Product code NP75110

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**

Unlikely to cause eye irritation or injury.

#### **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.



NAPA® PREM PERF HD SAE 30 MOTOR  
OIL  
NP75110**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**

<b>Hazardous Components</b>	<b>CAS-No.</b>	<b>Concentration</b>
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=50-<60%
HEAVY PARAFFINIC DISTILLATE	64742-54-7	>=40-<50%

**4. FIRST AID MEASURES**

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**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.

<b>5. FIRE-FIGHTING MEASURES</b>
----------------------------------

**Suitable extinguishing media**

Dry chemical, Carbon dioxide (CO<sub>2</sub>), Water spray

**Hazardous combustion products**

carbon dioxide and carbon monoxide, Hydrocarbons

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### **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.

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## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Exposure Guidelines**

#### **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

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<b>Form</b>	no data available
<b>Colour</b>	no data available
<b>Odour</b>	no data available
<b>Boiling point/boiling range</b>	no data available
<b>Melting point/range</b>	no data available
<b>Sublimation point</b>	no data available
<b>pH</b>	no data available
<b>Flash point</b>	(>)390 °F / 199 °C Cleveland open cup
<b>Ignition temperature</b>	no data available
<b>Evaporation rate</b>	no data available
<b>Lower explosion limit/Upper explosion limit</b>	1 %(V) / 6 %(V)
<b>Particle size</b>	no data available
<b>Vapour pressure</b>	0.013 hPa @ 70.00 °F / 21.11 °C Calculated Vapor Pressure
<b>Relative vapour density</b>	no data available
<b>Density</b>	0.8785 g/cm3 @ 60.1 °F / 15.6 °C
<b>Bulk density</b>	No data
<b>Water solubility</b>	no data available
<b>Solubility</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>log Pow</b>	no data available
<b>Autoignition temperature</b>	no data available
<b>Viscosity, dynamic</b>	no data available
<b>Viscosity, kinematic</b>	no data available
<b>Solids in Solution</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>Burning number</b>	no data available
<b>Dust explosion constant</b>	no data available
<b>Minimum ignition energy</b>	no data available

## 10. STABILITY AND REACTIVITY

### Stability

Stable.

### Conditions to avoid

None known.

### Incompatible products

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Strong oxidizing agents

**Hazardous decomposition products**

carbon dioxide and carbon monoxide, Hydrocarbons

**Hazardous reactions**

Product will not undergo hazardous polymerization.

**Thermal decomposition**

No data

<b>11. TOXICOLOGICAL INFORMATION</b>
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**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

<b>12. ECOLOGICAL INFORMATION</b>
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**Biodegradability**

HEAVY PARAFFINIC DISTILLATE : no data available

HEAVY PARAFFINIC DISTILLATE : no data available

# ASHLAND

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### 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

NAPA® PREM PERF HD SAE 30 MOTOR  
OIL  
NP75110**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.
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**MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES**

Not dangerous goods

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

Not dangerous goods

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods

**INTERNATIONAL MARITIME DANGEROUS GOODS**

Not dangerous goods

**TRANSPORT CANADA - INLAND WATERWAYS**

Not dangerous goods

**TRANSPORT CANADA - RAIL**

Not dangerous goods



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### TRANSPORT CANADA - ROAD

Not dangerous goods

### U.S. DOT - INLAND WATERWAYS

Not dangerous goods

### U.S. DOT - RAIL

Not dangerous goods

### U.S. DOT - ROAD

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  
HEAVY PARAFFINIC DISTILLATE  
POLYOLEFIN AMIDE ALKENEAMINE  
LUBRICANT ADDITIVE

64742-54-7  
64742-54-7

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**Pennsylvania RTK Label Information**

HEAVY PARAFFINIC DISTILLATE  
HEAVY PARAFFINIC DISTILLATE

64742-54-7  
64742-54-7

**Notification status**

US. Toxic Substances Control Act	y (positive listing)
Canada. Canadian Environmental Protection Act (CEPA).	y (positive listing)
Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	
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	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).

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29 CFR 1910.1200 (OSHA HazCom 2012)

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

Trade name : NAPA® PREMIUM CONVENTIONAL SAE 10W-30  
MOTOR OIL

### Recommended use of the chemical and restrictions on use

<b>Details of the supplier of the safety data sheet</b> Ashland P.O. Box 2219 Columbus, OH 43216 United States of America  EHS Customer Requests@ashland.com	<b>Emergency telephone number</b> 1-800-ASHLAND (1-800-274-5263)  <b>Regulatory Information Number</b> 1-800-325-3751  <b>Product Information</b> 614-790-3333
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## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

### GHS Label element

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

### Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts	90194-32-4	Eye Irrit. 2A; H319	6.22

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HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	Asp. Tox. 1; H304	2.52
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#### SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: 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.  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)
Notes to physician	: No hazards which require special first aid measures.

#### SECTION 5. FIREFIGHTING MEASURES

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- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam  
Carbon dioxide (CO2)  
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide  
Hydrocarbons
- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

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## SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.
- Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : No materials to be especially mentioned.

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## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	REL	5 mg/m3 Mist.	NIOSH/GUID E
		STEL	10 mg/m3 Mist.	NIOSH/GUID E
		PEL	5 mg/m3 Mist.	OSHA_TRA NS

**Engineering measures** : 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.

### Personal protective equipment

**Respiratory protection** : No personal respiratory protective equipment normally required.

**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 as appropriate:  
Safety shoes  
Wear resistant gloves (consult your safety equipment supplier).

**Hygiene measures** : General industrial hygiene practice.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state** : liquid

**Odour** : No data available

**Odour Threshold** : No data available

**pH** : No data available

**Melting point/freezing point** : No data available

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Boiling point/boiling range : No data available

Flash point : > 390 °F / > 199 °C  
Method: Cleveland open cup

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : 0.0133333 hPa (21.11 °C)  
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.8686 g/cm3 (15.56 °C)

Solubility(ies)

Water solubility : No data available

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Thermal decomposition :  
No data available

Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : 70 mm2/s (40 °C)

Oxidizing properties : No data available

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## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

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Conditions to avoid : excessive heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide  
Hydrocarbons

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation  
Skin contact  
Eye Contact  
Ingestion

### Acute toxicity

Not classified based on available information.

### Skin corrosion/irritation

Not classified based on available information.

#### Product:

Result: Repeated exposure may cause skin dryness or cracking.

### Components:

Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts:

Result: Not irritating to skin

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Mildly irritating to skin

### Serious eye damage/eye irritation

Not classified based on available information.

#### Product:

Remarks: Unlikely to cause eye irritation or injury.

### Components:

Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts:

Result: Irritating to eyes

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

Result: Mildly irritating to eyes

### Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

### Germ cell mutagenicity

Not classified based on available information.

### Carcinogenicity

Not classified based on available information.



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**Reproductive toxicity**

Not classified based on available information.

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**Product:**

No aspiration toxicity classification

**Components:**

HYDROTREATED LIGHT PARAFFINIC DISTILLATE:

May be fatal if swallowed and enters airways.

**Further information**

**Product:**

Remarks: No data available

**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.

**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.

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**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**

No data available

**Product:**

Additional ecological information : No data available

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## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

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

Contaminated packaging : Empty remaining contents.

## SECTION 14. TRANSPORT INFORMATION

### International transport regulations

#### 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

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#### 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

Marine pollutant	no
------------------	----

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.

#### SECTION 15. REGULATORY INFORMATION

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 313 Component(s)** : 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.

##### Pennsylvania Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	90.00 - 100.00 %
Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts	90194-32-4	5.00 - 10.00 %
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	1.00 - 5.00 %

##### New Jersey Right To Know

HEAVY PARAFFINIC DISTILLATE	64742-54-7	90.00 - 100.00 %
Benzenesulfonic acid, C10-60-alkyl derivs., sodium salts	90194-32-4	5.00 - 10.00 %
HYDROTREATED LIGHT PARAFFINIC DISTILLATE	64742-55-8	1.00 - 5.00 %
POLYOLEFIN AMIDE ALKENEAMINE	Not Assigned	1.00 - 5.00 %
LUBRICANT ADDITIVE	Not Assigned	1.00 - 5.00 %

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#### California Prop 65

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

#### 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.
AUSTR	: On the inventory, or in compliance with the inventory
ENCS	: Contact your sales representative for additional information.
KECL	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: q (quantity restricted)

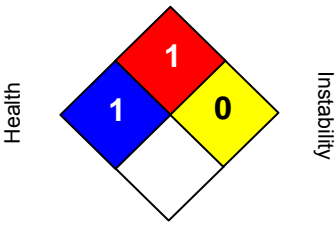
#### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

## SECTION 16. OTHER INFORMATION

#### Further information

Revision Date: 05/22/2015

NFPA:	HMIS III:						
<p>Flammability</p>  <p>Health</p> <p>Instability</p> <p>Special hazard.</p>	<table border="1"> <tr> <td><b>HEALTH</b></td><td><b>1</b></td></tr> <tr> <td><b>FLAMMABILITY</b></td><td><b>1</b></td></tr> <tr> <td><b>PHYSICAL HAZARD</b></td><td><b>0</b></td></tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>1</b>	<b>FLAMMABILITY</b>	<b>1</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>1</b>						
<b>FLAMMABILITY</b>	<b>1</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

#### NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

Full text of H-Statements referred to under sections 2 and 3.

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H304

May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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 SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

IATA-DGR : Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the "International Civil Aviation Organization"

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

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HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

NAPA® PREM PERF SAE 5W-20  
MOTOR OIL NP75150

<b>1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING</b>
--

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

Product name	NAPA® PREM PERF SAE 5W-20 MOTOR OIL
Product code	NP75150
Product Use Description	No data

<b>2. HAZARDS IDENTIFICATION</b>
----------------------------------

**Emergency Overview**

Appearance: liquid

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

**Potential Health Effects**

**Routes of exposure**

Skin contact, Inhalation, Eye Contact, Ingestion

**Eye contact**

Unlikely to cause eye irritation or injury.

**Skin contact**

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

**Ingestion**

This material is not likely to be swallowed.

**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

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MOTOR OIL NP75150

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.

**Other information**

No data

<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>
--

Components	CAS-No.	Concentration
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>=90-<=100%

<b>4. FIRST AID MEASURES</b>
------------------------------

**Eyes**



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MOTOR OIL NP75150

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate 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**

Water mist, Carbon dioxide (CO<sub>2</sub>), Dry chemical

### **Hazardous combustion products**

carbon dioxide and carbon monoxide

### **Precautions for fire-fighting**

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MOTOR OIL NP75150

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.

**Flammability Class for Flammable Liquids**  
Combustible Liquid Class IIIB

<b>6. ACCIDENTAL RELEASE MEASURES</b>
---------------------------------------

**Personal precautions**

For personal protection see section 8. Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated absorbent, soil and other materials to containers for disposal.

**Environmental precautions**

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

**Methods for cleaning up**

Absorb liquid on vermiculite, floor absorbent, or other absorbent material and transfer to hood.

<b>7. HANDLING AND STORAGE</b>
--------------------------------

**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. Keep containers closed when not in use. Do not store near extreme heat, open flame, or sources of ignition.

NAPA® PREM PERF SAE 5W-20  
MOTOR OIL NP75150

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **Exposure Guidelines**

#### **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**

<b>Physical state</b>	liquid
<b>Form</b>	No data
<b>Colour</b>	No data
<b>Odour</b>	No data

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<b>Boiling point/boiling range</b>	No data
<b>pH</b>	No data
<b>Flash point</b>	354 °F / 179 °C
<b>Evaporation rate</b>	No data
<b>Explosion limits</b>	No data
<b>Vapour pressure</b>	0.0012 hPa @ 68 °F / 20 °C
<b>Vapour density</b>	No data
<b>Density</b>	0.8555 g/cm3 @ 60.01 °F / 15.56 °C 7.15 lb/gal @ 60.00 °F / 15.56 °C
<b>Solubility</b>	No data
<b>Partition coefficient: n-octanol/water</b>	No data
<b>Autoignition temperature</b>	No data

## 10. STABILITY AND REACTIVITY

### Stability

Stable.

### Conditions to avoid

### Incompatible products

strong oxidizing agents

### Hazardous decomposition products

carbon dioxide and carbon monoxide

### Hazardous reactions

Product will not undergo hazardous polymerization.

### Thermal decomposition

No data

## 11. TOXICOLOGICAL INFORMATION

### Acute oral toxicity

DISTILLATES (PETROLEUM),

LD 50 Rat: 15 g/kg

NAPA® PREM PERF SAE 5W-20  
MOTOR OIL NP75150

HYDROTREATED HEAVY  
PARAFFINIC

**Acute inhalation toxicity**

**Acute dermal toxicity**

DISTILLATES (PETROLEUM),  
HYDROTREATED HEAVY  
PARAFFINIC

LD 50 Rabbit: 5 g/kg

**12. ECOLOGICAL INFORMATION**

**Aquatic toxicity**

**Acute and Prolonged Toxicity to Fish**

No data

**Acute Toxicity to Aquatic Invertebrates**

No data

**Environmental fate and pathways**

No data

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods** Destroy by liquid incineration. Contaminated absorbent may be deposited in a landfill in accordance with 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**

Dangerous goods descriptions (if indicated above) may not reflect package size, 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**

# ASHLAND

## SAFETY DATA SHEET

NAPA® PREM PERF SAE 5W-20  
MOTOR OIL NP75150

Page: 8  
Revision Date: 11/19/2007  
Print Date: 12/31/2007  
MSDS Number: R0366793  
Version: 1.9

### California Prop. 65

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

**SARA Hazard Classification**    Acute Health Hazard

### SARA 313 Component(s)

	Health	Flammability	Reactivity	Other
HMIS	1	1	0	
NFPA	1	1	0	

## 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).

NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200

<b>1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING</b>
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Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone	1-800-ASHLAND (1-800-274-5263)

Product name	NAPA® PREM PERF AUTOMATIC TRANSMISSION FLUID
Product code	NP75200
Product Use Description	No data

<b>2. HAZARDS IDENTIFICATION</b>
----------------------------------

**Emergency Overview**

Appearance: liquid,, red

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

**Potential Health Effects**

**Routes of exposure**

Inhalation, Skin contact, Eye Contact, Ingestion

**Eye contact**

Unlikely to cause eye irritation or injury.

**Skin contact**

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

**Ingestion**

Swallowing small amounts of this material during normal handling is not likely to  
cause harmful effects. Swallowing large amounts may be harmful. This material can get  
into the lungs during swallowing or vomiting. This results in lung inflammation and  
other lung injury.

**Inhalation**

**NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200**

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), Abdominal pain

**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).

**Reproductive hazard**

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

**Other information**

No data

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Concentration
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	64742-54-7	>=80-<90%

**4. FIRST AID MEASURES****Eyes**



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TRANSMISSION FLUID NP75200

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.

<b>5. FIRE-FIGHTING MEASURES</b>
----------------------------------

**Suitable extinguishing media**

Dry chemical, Carbon dioxide (CO2), Foam

**Hazardous combustion products**

May form: carbon dioxide and carbon monoxide, oxides of sulfur, nitrogen and phosphorus, hydrocarbons

NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200

**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.

**Flammability Class for Flammable Liquids**

Combustible Liquid Class IIIB

<b>6. ACCIDENTAL RELEASE MEASURES</b>
---------------------------------------

**Personal precautions**

For personal protection see section 8. Spills of this material are very slippery.

**Environmental precautions**

Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

**Methods for cleaning up**

Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source, dike area of spill to prevent spreading, pump liquid to salvage tank. Remaining liquid may be taken up on sand, clay, earth, floor absorbent, or other absorbent material and shoveled into containers.

**Other information**

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

<b>7. HANDLING AND STORAGE</b>
--------------------------------

**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**

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

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TRANSMISSION FLUID NP75200

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **Exposure Guidelines**

#### **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**

<b>Physical state</b>	liquid
<b>Form</b>	No data
<b>Colour</b>	red
<b>Odour</b>	hydrocarbon-like

NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200

<b>Boiling point/boiling range</b>	No data
<b>pH</b>	No data
<b>Flash point</b>	364.98 °F / 184.99 °C
<b>Evaporation rate</b>	> 1 (Ethyl Ether)
<b>Explosion limits</b>	No data
<b>Vapour pressure</b>	No data
<b>Vapour density</b>	No data
<b>Density</b>	0.862 g/cm3 @ 60.01 °F / 15.56 °C 7.29 lb/gal @ 60.00 °F / 15.56 °C
<b>Solubility</b>	No data
<b>Partition coefficient: n-octanol/water</b>	No data
<b>Autoignition temperature</b>	No data

## 10. STABILITY AND REACTIVITY

### Stability

Stable

### Conditions to avoid

### Incompatible products

Avoid contact with:, strong oxidizing agents

### Hazardous decomposition products

No data

### Hazardous reactions

Product will not undergo hazardous polymerization.

### Thermal decomposition

No data

## 11. TOXICOLOGICAL INFORMATION

### Acute oral toxicity

DISTILLATES (PETROLEUM),

LD 50 Rat: 15 g/kg

NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200

HYDROTREATED HEAVY  
PARAFFINIC

**Acute inhalation toxicity**

**Acute dermal toxicity**

DISTILLATES (PETROLEUM),  
HYDROTREATED HEAVY  
PARAFFINIC

LD 50 Rabbit: 5 g/kg

**12. ECOLOGICAL INFORMATION**

**Aquatic toxicity**

**Acute and Prolonged Toxicity to Fish**

No data

**Acute Toxicity to Aquatic Invertebrates**

No data

**Environmental fate and pathways**

No data

**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**

Dangerous goods descriptions (if indicated above) may not reflect package size, 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**

# ASHLAND

## SAFETY DATA SHEET

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Print Date: 1/2/2008

MSDS Number: R0200299

Version: 1.7

NAPA® PREM PERF AUTOMATIC  
TRANSMISSION FLUID NP75200

### California Prop. 65

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

**SARA Hazard Classification**    Acute Health Hazard

### SARA 313 Component(s)

	Health	Flammability	Reactivity	Other
HMIS	1	1	0	
NFPA	1	1	0	

## 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).

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29 CFR 1910.1200 (OSHA HazCom 2012)

## SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

### Product identifier

Trade name : NAPA® EP WHEEL BEARING GREASE

### Recommended use of the chemical and restrictions on use

<b>Details of the supplier of the safety data sheet</b> Ashland P.O. Box 2219 Columbus, OH 43216 United States of America  EHS Customer Requests@ashland.com	<b>Emergency telephone number</b> 1-800-ASHLAND (1-800-274-5263)  <b>Regulatory Information Number</b> 1-800-325-3751  <b>Product Information</b> 614-790-3333
--	---

## SECTION 2. HAZARDS IDENTIFICATION

### GHS Classification

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

### GHS Label element

This material is not considered hazardous under the OSHA Hazard Communication Standard (HazCom 2012).

### Other hazards

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

### Hazardous components

Chemical Name	CAS-No.	Classification	Concentration (%)
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	Asp. Tox. 1; H304	74.99
ASPHALT	8052-42-4	Not a hazardous	24.99

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		substance or mixture.	
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA	64742-52-5	Not a hazardous substance or mixture.	9.99

#### SECTION 4. FIRST AID MEASURES

General advice	: No hazards which require special first aid measures.
If inhaled	: If breathed in, move person into fresh air. If unconscious place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
In case of eye contact	: Remove contact lenses. Protect unharmed eye.
If swallowed	: Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.
Most important symptoms and effects, both acute and delayed	: 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.  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)
Notes to physician	: No hazards which require special first aid measures.



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## SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Water spray  
Foam  
Carbon dioxide (CO2)  
Dry chemical
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide  
sulfur oxides  
Hydrocarbons  
Aldehydes  
Ketones  
Nitrogen oxides (NOx)  
Sulphur oxides
- Specific extinguishing methods :  
  
Product is compatible with standard fire-fighting agents.
- Further information : Standard procedure for chemical fires.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.
- Other information : Comply with all applicable federal, state, and local regulations.

## SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.  
For personal protection see section 8.

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Conditions for safe storage : Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : No materials to be especially mentioned.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC	64742-65-0	PEL	500 ppm 2,000 mg/m3	OSHA_TRANS
		REL	5 mg/m3 Mist.	NIOSH/GUIDE
		STEL	10 mg/m3 Mist.	NIOSH/GUIDE
		PEL	5 mg/m3 Mist.	OSHA_TRANS
		TWA	5 mg/m3 Mist.	Z1A
		TWA	400 ppm 1,600 mg/m3	Z1A
ASPHALT	8052-42-4	TWA	0.5 mg/m3 Inhalable fraction. (as benzene solubles)	ACGIH
		Ceil_Time	5 mg/m3 Fume.	NIOSH/GUIDE
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA	64742-52-5	PEL	500 ppm 2,000 mg/m3	OSHA_TRANS
		REL	5 mg/m3 Mist.	NIOSH/GUIDE
		STEL	10 mg/m3 Mist.	NIOSH/GUIDE
		PEL	5 mg/m3 Mist.	OSHA_TRANS

**Engineering measures** : 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.

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#### Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.
- 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 as appropriate:  
Safety shoes  
Wear resistant gloves (consult your safety equipment supplier).
- Hygiene measures : General industrial hygiene practice.

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#### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : gel
- Physical state : liquid
- Colour : red
- Odour : No data available
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available  
: 640 °F / 338 °C
- Flash point : 471 °F / 244 °C
- Evaporation rate : No data available
- Flammability (solid, gas) : No data available
- Upper explosion limit : No data available
- Lower explosion limit : No data available
- Vapour pressure : < 0.01 mmHg (20 °C)
- Relative vapour density : No data available
- Relative density : 0.95 (15.6 °C)

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Density : 0.90 g/cm<sup>3</sup> (20 °C)

**Solubility(ies)**

Water solubility : negligible

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : > 315 °C

Thermal decomposition : No data available

**Viscosity**

Viscosity, dynamic : No data available

Viscosity, kinematic : > 20.5 mm<sup>2</sup>/s (40 °C)

Oxidizing properties : No data available

---

## SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous reactions : Product will not undergo hazardous polymerization.

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products  
carbon dioxide and carbon monoxide  
Hydrocarbons  
Sulphur oxides

---

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation  
Skin contact  
Eye Contact  
Ingestion

**Acute toxicity**

Not classified based on available information.

**Product:**

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Acute oral toxicity : Acute toxicity estimate (Rat): 3,019 mg/kg

Acute dermal toxicity : Acute toxicity estimate (Rabbit): 169,492 mg/kg

**Components:**

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Acute oral toxicity : LD 50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD 50 (Rabbit): > 5,000 mg/kg

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA:

Acute oral toxicity : LD 50 (Rat): > 5 g/kg

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: Not classified as acutely toxic by inhalation under GHS.

Acute dermal toxicity : LD 50 (Rabbit): > 2,000 mg/kg  
Assessment: Not classified as acutely toxic by dermal absorption under GHS.  
Remarks: No mortality observed at this dose.

**Skin corrosion/irritation**

Not classified based on available information.

**Product:**

Result: Not irritating to skin

Result: Repeated exposure may cause skin dryness or cracking.

**Components:**

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:

Result: Mildly irritating to skin

**ASPHALT:**

Result: Not irritating to skin

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA:

Species: Rabbit

Result: Not irritating to skin

**Serious eye damage/eye irritation**

Not classified based on available information.

**Product:**

Result: Not irritating to eyes

Remarks: Unlikely to cause eye irritation or injury.

**Components:**

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DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:  
Result: Mildly irritating to eyes

ASPHALT:  
Result: Possibly irritating to eyes

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA:  
Species: Rabbit  
Result: Mildly irritating to eyes

#### **Respiratory or skin sensitisation**

Skin sensitisation: Not classified based on available information.  
Respiratory sensitisation: Not classified based on available information.

#### **Components:**

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA:  
Species: Guinea pig  
Assessment: Does not cause skin sensitisation.  
Method: OECD Test Guideline 406

#### **Germ cell mutagenicity**

Not classified based on available information.

#### **Carcinogenicity**

Not classified based on available information.

#### **Reproductive toxicity**

Not classified based on available information.

#### **STOT - single exposure**

Not classified based on available information.

#### **STOT - repeated exposure**

Not classified based on available information.

#### **Aspiration toxicity**

Not classified based on available information.

#### **Product:**

No aspiration toxicity classification

#### **Components:**

DISTILLATES (PETROLEUM), SOLVENT-DEWAXED HEAVY PARAFFINIC:  
May be fatal if swallowed and enters airways.

#### **Further information**

#### **Product:**

Remarks: No data available

#### **Carcinogenicity:**

**IARC** Group 2B: Possibly carcinogenic to humans

ASPHALT 8052-42-4

#### **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.

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## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA:

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
 Exposure time: 96 h  
 Test Type: static test  
 Test substance: WAF  
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 10,000 mg/l  
 Exposure time: 48 h  
 Test Type: static test  
 Test substance: WAF  
 Method: OECD Test Guideline 202

Toxicity to algae : NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l  
 End point: Growth inhibition  
 Exposure time: 72 h  
 Test Type: static test  
 Test substance: WAF  
 Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEL (Daphnia (water flea)): 10 mg/l  
 Exposure time: 21 d  
 Test Type: semi-static test  
 Test substance: WAF  
 Method: OECD Test Guideline 211

### Persistence and degradability

DISTILLATES (PETROLEUM), HYDROTREATED HEAVY NAPHTA:

Biodegradability : Result: Inherently biodegradable  
 Biodegradation: 31 %  
 Exposure time: 28 d  
 Method: OECD Test Guideline 301F

### Bioaccumulative potential

No data available

### Mobility in soil

No data available

### Other adverse effects

No data available

### Product:

Additional ecological information : No data available

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### SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

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

Contaminated packaging : Empty remaining contents.

### SECTION 14. TRANSPORT INFORMATION

#### International transport regulations

##### 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



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#### 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

Marine pollutant	no
------------------	----

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.

#### SECTION 15. REGULATORY INFORMATION

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 313 Component(s)** : 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** Proposition 65 warnings are not required for this product based on the results of a risk assessment.

**The components of this product are reported in the following inventories:**

TSCA : On TSCA Inventory

AUSTR : On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL.

ENCS : On the inventory, or in compliance with the inventory

KECL : 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

#### Inventories

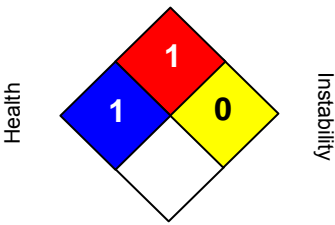
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECL (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

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## SECTION 16. OTHER INFORMATION

### Further information

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NFPA:	HMIS III:						
<p>Flammability</p> <p>Health</p> <p>Instability</p> <p>Special hazard.</p> 	<table border="1"> <tr> <td><b>HEALTH</b></td><td><b>1</b></td></tr> <tr> <td><b>FLAMMABILITY</b></td><td><b>1</b></td></tr> <tr> <td><b>PHYSICAL HAZARD</b></td><td><b>0</b></td></tr> </table> <p>0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	<b>HEALTH</b>	<b>1</b>	<b>FLAMMABILITY</b>	<b>1</b>	<b>PHYSICAL HAZARD</b>	<b>0</b>
<b>HEALTH</b>	<b>1</b>						
<b>FLAMMABILITY</b>	<b>1</b>						
<b>PHYSICAL HAZARD</b>	<b>0</b>						

### NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

### Full text of H-Statements referred to under sections 2 and 3.

H304 May be fatal if swallowed and enters airways.

Sources of key data used to compile the Safety Data Sheet

Ashland internal data including own and sponsored test reports

The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

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 SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :

ACGIH : American Conference of Industrial Hygienists

BEI : Biological Exposure Index

CAS : Chemical Abstracts Service (Division of the American Chemical Society).

CMR : Carcinogenic, Mutagenic or Toxic for Reproduction

FG : Food grade

GHS : Globally Harmonized System of Classification and Labeling of Chemicals.

H-statement : Hazard Statement

IATA : International Air Transport Association.

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IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization

ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”

IMDG : International Maritime Code for Dangerous Goods

ISO : International Organization for Standardization

logPow : octanol-water partition coefficient

LCxx : Lethal Concentration, for xx percent of test population

LDxx : Lethal Dose, for xx percent of test population.

ICxx : Inhibitory Concentration for xx of a substance

Ecxx : Effective Concentration of xx

N.O.S.: Not Otherwise Specified

OECD : Organization for Economic Co-operation and Development

OEL : Occupational Exposure Limit

P-Statement : Precautionary Statement

PBT : Persistent , Bioaccumulative and Toxic

PPE : Personal Protective Equipment

STEL : Short-term exposure limit

STOT : Specific Target Organ Toxicity

TLV : Threshold Limit Value

TWA : Time-weighted average

vPvB : Very Persistent and Very Bioaccumulative

WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act

DOT : Department of Transportation

FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act

HMIRC : Hazardous Materials Information Review Commission

HMIS : Hazardous Materials Identification System

NFPA : National Fire Protection Association

NIOSH : National Institute for Occupational Safety and Health

OSHA : Occupational Safety and Health Administration

PMRA : Health Canada Pest Management Regulatory Agency

RTK : Right to Know

WHMIS : Workplace Hazardous Materials Information System

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 531.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Naphthalene

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 or 2). Flammable solid (H228). 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: Serious eye damage or irritation (Category 2B). Causes eye irritation (H320).

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).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Naphthalene	91-20-3	C <sub>10</sub> H <sub>8</sub>	128.17	

### 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 (P302+P301+P312).

### SECTION 5 — FIRE FIGHTING MEASURES

Class IIIA combustible solid.

Flash point: 79 °C Flammable limits: Lower: 0.9% Upper: 5.9% Autoignition Temperature: 526 °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-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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Organic #3. Store with hydrocarbons, oils, esters and aldehydes. Keep container tightly closed. Store in a cool, dry place within a Flinn Chem-Saf™ bag. Ground or bond container and receiving equipment (P240). Use explosion-proof electrical and ventilating equipment (P241).

---

**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 10 ppm (OSHA/ACGIH) Readily absorbed through the skin.

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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White, volatile flakes, cubes, sphere or powder. Odor of moth balls.	Boiling point: 217.9 °C
Soluble: Absolute alcohol and ether. Insoluble in water.	Melting point: 80.2 °C
	Specific gravity: 1.0253
	Vapor density: 4.4

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Shelf life: Volatile flakes, keep tightly closed. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Toxic, irritant	ORL-RAT LD <sub>50</sub> : 490 mg/kg
Chronic effects: Possible carcinogen.	IHL-RAT LC <sub>50</sub> : N.A.
Target organs: Eyes, blood, kidneys	SKN-RAT LD <sub>50</sub> : >2500 mg/kg

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding. Flinn Suggested Disposal Method #18b is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Naphthalene, refined; Hazard class: 4.1, Flammable solid; UN number: UN1334

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (202-049-5), RCRA code U165.

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**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



## MATERIAL SAFETY DATA SHEET

PRODUCT: **NATIONAL 150 REFRIGERATION OIL** HMIS: H F R  
PRODUCT CODE: **150 OIL** 1 1 0  
CHEMICAL NAME/FAMILY: **MINERAL OIL** (CAS # 64742-52-5)

MANUFACTURER: **NATIONAL REFRIGERANTS, INC.**  
ADDRESS: 11401 Roosevelt Boulevard Phila., Pa. 19154  
INFORMATION: 800-262-0012 EMERGENCY: 800-424-9300  
DATE: 9/03 PREPARER: Ray Madariaga

### INGREDIENTS/HAZARDOUS/SARA TITLE III INFORMATION

**Distillates, (petroleum), hydrotreated heavy naphthenic** Concentration **100%**

HAZARDOUS COMPONENTS	CAS NUM	PEL	TLV	mm Hg @ TEMP
NONE				

\* Indicates toxic chemical subject to the reporting requirements of 40CFR372 and Title III Section 313.

### PHYSICAL/CHEMICAL CHARACTERISTICS

**BOILING POINT:** >500°F  
**SPECIFIC GRAVITY** (H<sub>2</sub>O=1): 0.91 @ 15.6°C  
**VAPOR DENSITY:** >10 (AIR=1)  
**EVAPORATION RATE:** NEGLIGIBLE  
**SOLUBILITY IN WATER:** INSOLUBLE  
**APPEARANCE AND ODOR:** Clear amber liquid with petroleum odor  
**VISCOSITY:** 155 SUS @ 100°F

### FIRE AND EXPLOSION HAZARD DATA

**FLASH POINT:** >300°F (ASTM D-92) **FLAMMABLE LIMITS IN AIR (VOL)** LEL: N/A UEL: N/A  
**EXTINGUISHING MEDIA:** Dry chemical, CO<sub>2</sub>, foam, waterfog, sand/earth  
**SPECIAL FIREFIGHTING PROCEDURES:** Wear self-contained breathing apparatus. Water spray is an unsuitable extinguishing agent.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None

### REACTIVITY DATA

**STABILITY:** STABLE  
**HAZARDOUS POLYMERIZATION:** NONE  
**INCOMPATIBILITY (MATERIALS TO AVOID):** Strong oxidizing agents such as chromic acid, hydrogen peroxide and bromine.  
**HAZARDOUS DECOMPOSITION OR BYPRODUCTS:** Upon combustion, CO<sub>2</sub> and CO are generated.



### **HEALTH HAZARD DATA**

**INHALATION AND SKIN ABSORPTION HEALTH RISKS:** OSHA permissible concentration of mineral oil mist in air is 5 mg/m<sup>3</sup>.

**SKIN AND EYE CONTACT:** Prolonged contact may cause minor skin irritation.

**SYMPTOMS OF EXPOSURE:** N/A

**INGESTION:** N/A

**ACUTE AND CHRONIC HEALTH HAZARDS:** N/A

<b>CARCINOGENICITY:</b>	NTP	IARC MONOGRAPHS	OSHA REGULATED
	NO	NO	NO

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** N/A

### **EMERGENCY AND FIRST AID PROCEDURES:**

**EYES:** Flush with large amounts of water for at least 15 minutes. If redness or irritation persists, contact a physician.

**SKIN CONTACT:** Wash with soap and water.

**INHALATION:** None normally required.

**INGESTION:** Call a physician.

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### **PRECAUTIONS/CONTROL MEASURES FOR SAFE HANDLING AND USE**

**STEPS TO BE TAKEN IN CASE OF RELEASE OR SPILL:** Stop leak. Dike up large spills. Use inert absorbant materials such as earth, sand or vermiculite for clean-up.

**WASTE DISPOSAL METHOD:** Dispose of in accordance with Federal, State, and Local regulations.

**PRECAUTIONS FOR STORAGE AND HANDLING:** Avoid exposure to heat and flames. Protect against eye and skin contact.

**WORK/HYGIENIC PRACTICES:** Wash thoroughly after handling.

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### **DISCLAIMER**

INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE BELIEVED TO BE ACCURATE AT THE TIME OF PREPARATION. NO WARRANTY IS MADE CONCERNING THE ACCURACY AND NO LIABILITY SHALL BE MADE FOR CLAIMS FOR USE OR RELIANCE OF THE RECOMMENDATIONS CONTAINED HEREIN.

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 181.00

Revision Date: January 27, 2015

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### n-Butyl Alcohol

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 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin corrosion or irritation (Category 2). Causes skin irritation (H315).

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).

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
n-Butyl alcohol	71-36-3	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> OH	74.12	
Synonyms: 1-Butanol; n-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 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 1C flammable liquid.

Flash point: 37 °C Flammable limits: Lower: 1.4% Upper: 11.2% Autoignition Temperature: 343 °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**

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Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. 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).

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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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 100 ppm (OSHA) TLV 20 ppm (ACGIH)

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Clear colorless liquid. Wine-like odor.

Soluble: Water (20%). Miscible with alcohol and ether.

Boiling point: 117.7 °C

Melting point: -89 °C

Refractive index: 1.3988

Specific gravity: 0.81

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with aluminum, chromium trioxide, and oxidizing materials.

Shelf life: Fair, substance may oxidize. See Section 7 for further information.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Absorbed through skin. Eye, skin, respiratory tract irritation. Dizziness. CNS depression.

Chronic effects: N.A.

Target organs: Eyes, skin, respiratory system, central nervous system.

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

ORL-RAT LD<sub>50</sub>: 790 mg/kg

IHL-RAT LC<sub>50</sub>: 8000 ppm/4H

SKN-RBT LD<sub>50</sub>: 3400 mg/kg

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**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.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Butanols. Hazard class: 3, Flammable liquid. UN number: UN1120.

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (200-751-6), RCRA code U031.

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**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 27, 2015



# MATERIAL SAFETY DATA SHEET

5100 W. Henrietta Rd.  
West Henrietta, NY 14586  
TEL: (866) 260-0501

MSDS No. 9712104  
Effective Date: November 20, 2002

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	n-Butyric Acid	<b>416-984-3000</b>  <b>NFPA</b>   <b>HAZARD RATING</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4  <b>WHMIS</b> Health 3 Flammability 2 Reactivity 0
Chemical Synonyms	Butanoic Acid	
Formula	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> COOH	
CAS No.	107-92-6	

## SECTION II DANGEROUS INGREDIENTS

Name	%	TLV Units
Butyric Acid	100%	N/A
<b>WARNING! CORROSIVE! COMBUSTIBLE!</b>		

## SECTION III PHYSICAL DATA

Melting Point (°C)	-5.2°C	Specific Gravity (H <sub>2</sub> O = 1)	0.959 @ 20°C
Boiling Point (°C)	163.5°C	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	0.43 mm @ 20°C	Evaporation Rate (Butyl acetate =1)	0.06
Vapor Density (Air=1)	3.04		
Solubility in Water	Completely.		
Appearance & Odor	Clear liquid; penetrating and obnoxious odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash point	72°C CC	Flammable Limits in Air % by Volume	Lower 2%	Upper 10%
Firefighting Procedures	Use dry chemical, CO <sub>2</sub> , 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

Product is combustible. Fire or excessive heat may produce hazardous decomposition products to be produced as dust or fume.

Auto-ignition temperature: 443°C

**TDG** Class 8 Corrosive liquid. UN 2820

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

BB0255

Chemical Stability	Yes	X	If no, under what conditions?
	No		
Incompatible with Other products	Yes	X	May react or be incompatible with oxidizing materials, alkalies.
	No		

Hazardous Decomposition Products	These products are carbon oxides. The products of degradation are less toxic than the product itself.
Reactive under what conditions	No additional information.

## SECTION VI TOXICOLOGICAL PROPERTIES

Route of Entry	Ingestion. Inhalation.
TLV	N/A
Toxicity for animals	N/A
Chronic effects on humans	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. Target organs: Respiratory system, skin, eyes.
Acute effects on humans	Corrosive to the skin and eyes. Liquid or mist may cause tissue damage, particularly to the membranes of the eyes, mouth and respiratory tract. Contact with the skin may cause blisters.

## SECTION VII PREVENTIVE MEASURES

Waste Disposal	Discharge, treatment, or disposal may be subject to local laws. Consult your local or regional authorities.
Storage	Keep in a cool place. Ground all equipment containing material. Corrosive materials should be stored in a separate safety storage cabinet or room.
Precautions	Keep away from heat. Keep away from sources of ignition. Do not breathe gas, fumes, vapor or spray. Never add water to this product.
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. Full suit. Vapor respirator. Gloves. Boots.

## 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.
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## SECTION IX PREPARATION OF THE MSDS

Rev. No.	2	Date	November 20, 2002	Approved	Michael Raszeja
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## SECTION I Identification

Produit	Acide butyrique
Synonymes	Acide butanoïque
Formule	$\text{CH}_3(\text{CH}_2)_2\text{COOH}$
# CAS	107-92-6

## Telephone D'urgence

416-984-3000

NFPA



Santé	3
Flammabilité	2
Reactivité	0

Niveau de risque

Minime	Légère	Modéré	Sérieux	Extrême
0	1	2	3	4

WHMIS

## SECTION II Ingrédients Dangereux

Nom	%	TWA
Acide butyrique	100%	Sans objet.
AVERTISSEMENT! CORROSIF! COMBUSTIBLE!		

## SECTION III Caractéristiques Physiques

Point de fusion (°C)	-5,2°C	Gravité spécifique (Eau = 1)	0,959 @ 20°C
Point d'ébullition (°C)	163,5°C	Volatilité % par volume	100%
Tension de vapeur (mm Hg)	0,43 mm @ 20°C	Taux d'évaporation (Acétate de butyl =1)	0,06
Densité de la vapeur (Air=1)	3,04		
Solubilité	Complètement dans l'eau.		
Odeur et apparence	Liquide sans couleur; odeur pénétrante et désagréable.		

## SECTION IV Risques D'incendie ou D'explosion

Point d'éclair	72°C CC	Limites d'inflammabilité % par volume	Seuil minimal 2%	Seuil maximal 10%
Moyens d'extinction	Utiliser des poudres chimiques sèches, du CO <sub>2</sub> , une mousse d'alcool ou de l'eau pulvérisée. En cas de feu, sapeur-pompier devra porter en masque adéquate ou un respirateur autonome.			

Inflammabilité et  
risques d'explosion

Le produit est combustible. Le feu ou la chaleur excessive peut produire les produits dangereux de décomposition à produire comme poussière ou vapeur.

Température d'auto-ignition: 443°C

TMD Classe 8 Liquide corrosif. UN 2820

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## SECTION V Données sur la Réactivité

BB0255

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, les alcalis.
	non		
Produits de decomposition dangereux	Ces produits sont des oxydes de carbone. Les produits de dégradation sont moins toxiques que le produit lui-même.		
Conditions de Réactivité	Aucune information additionnelle.		

## SECTION VI Propriétés Toxicologiques

Voies d'absorption	Ingestion. Inhalation.
LMP	Sans objet.
Toxicité pour les animaux	Sans objet.
Effets chroniques sur les humains	Une exposition répétée ou prolongée aux gouttelettes en suspension peut entraîner une irritation chronique des yeux ou une grave irritation de la peau. Une exposition répétée ou prolongée aux gouttelettes en suspension peut entraîner une irritation des voies respiratoires conduisant à de fréquentes infections des bronches. Les organes de cible: Système respiratoire, peau, yeux.
Effets aiguë sur les humains	Corrosif au contact de la peau et des yeux. Le liquide ou les gouttelettes de liquide en suspension peuvent endommager les tissus, particulièrement les muqueuses des yeux, de la bouche ou des voies respiratoires. Le contact avec la peau peut provoquer des brûlures.

## SECTION VII Mesures Préventives

Élimination des résidus	Consulter vos autorités locales ou régionales.
Entreposage	Conserver dans un endroit frais. Mettre les contenants de ce produit à la masse. Les matières corrosives devraient être entreposées dans une armoire ou une pièce sécuritaire indépendante.
Précautions	Conserver à l'écart de la chaleur. Conserver à l'écart de toute source d'ignition. Ne pas inhaler les gaz, fumées, vapeurs ou aérosols. Ne jamais ajouter d'eau à ce produit.
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. Vêtement de protection complet. Respirateur anti-vapeurs.

## SECTION VIII Premiers Soins

Premier Soins Particuliers à Administrer	Ingestion: Consulter un médecin ou le centre de poison commande immédiatement. Induisez le vomissement seulement s'informé par le personnel médical approprié. Contact oculaire: Vérifier si la victime porte des verres de contact et dans ce cas lui les enlever. Rincer les yeux immédiatement à l'eau courante pendant au moins 15 minutes en gardant les paupières ouvertes. Obtenir de l'aide médicale. Contact cutané: 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.
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## SECTION IX Renseignements sur la Préparation de la FS

# Rev.	2	Date	20 novembre, 2002	Vérifié par	Michael Raszeja
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## 1. Product and Company Identification

<b>Material name</b>	<b>NEUTRACIT®-2 Caustic Neutralizer</b>
<b>Version #</b>	01
<b>Revision date</b>	09-28-2011
<b>CAS #</b>	Mixture
<b>Product Codes</b>	<b>J.T.Baker: 4441, 4446, 4457, 4470</b>
<b>Manufacturer</b>	Avantor Performance Materials, Inc.
<b>Address</b>	3477 Corporate Parkway Suite #200 Center Valley, PA 18034 US
<b>Customer Service</b>	855-282-6867
<b>24 Hour Emergency</b>	908-859-2151
<b>Chemtec</b>	800-424-9300

## 2. Hazards Identification

<b>Emergency overview</b>	DANGER  Contact will irritate or burn eyes. Irritating to respiratory system and skin.  This product contains synthetic amorphous silica, not to be confused with crystalline silica such as quartz, cristobalite or tridymite, diatomaceous earth, or other naturally occurring forms of amorphous silica that frequently contain crystalline forms.
<b>OSHA regulatory status</b>	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
<b>Potential health effects</b>	
<b>Routes of exposure</b>	Inhalation. Skin contact. Eye contact. Ingestion.
<b>Eyes</b>	Severely irritating, and may seriously damage eye tissue.
<b>Skin</b>	Causes skin irritation.
<b>Inhalation</b>	Inhalation of dusts may cause respiratory irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard. May cause irritation of the gastrointestinal tract.
<b>Target organs</b>	Eyes. Skin. Upper respiratory tract.
<b>Chronic effects</b>	None known.
<b>Potential environmental effects</b>	The product components are 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.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
CITRIC ACID	77-92-9	65 - 80
FLOUR	Not available	20
PERLITE	93763-70-3	9
AMORPHOUS FUMED SILICA	7631-86-9	2
BROMOTHYMOL BLUE SODIUM SALT	34722-90-2	2

## 4. First Aid Measures

---

### First aid procedures

<b>Eye contact</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention immediately.
<b>Skin contact</b>	Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists.
<b>Inhalation</b>	Move to fresh air. Treat symptomatically. Call a physician if symptoms develop or persist.
<b>Ingestion</b>	Drink plenty of water. Seek medical advice. If ingestion of a large amount does occur, call a poison control center immediately.

### Notes to physician

Treat symptomatically.

### General advice

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.

## 5. Fire Fighting Measures

---

### Flammable properties

Dust may form explosive mixture with air.

### Extinguishing media

**Suitable extinguishing media** Water. Carbon dioxide (CO<sub>2</sub>). Dry chemical.

**Unsuitable extinguishing media** None known.

### Protection of firefighters

**Protective equipment and precautions for firefighters** Firefighters should wear full protective gear. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

### Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### Specific methods

In the event of fire, cool tanks with water spray. In the event of fire and/or explosion do not breathe fumes.

## 6. Accidental Release Measures

---

### Personal precautions

Keep unnecessary personnel away. Keep upwind. Ventilate the area. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

### Environmental precautions

Prevent further leakage or spillage if safe to do so.

### Methods for containment

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.

### Methods for cleaning up

Avoid dust formation.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Large Spills: Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airborne dust and prevent scattering by moistening with water.

Never return spills in original containers for re-use. Clean contaminated surface thoroughly. Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

---

### Handling

Keep formation of airborne dusts to a minimum. Dust may form explosive mixture with air. Avoid heat, sparks, open flames and other ignition sources. Avoid breathing dust. Do not get in eyes and avoid contact with skin and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed. Wear appropriate personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment.

### Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure Controls / Personal Protection

**Exposure guidelines** Applies to natural amorphous silica, including natural diatomaceous earth.

### Occupational exposure limits

#### U.S. - OSHA

##### Components

##### Type

##### Value

AMORPHOUS FUMED SILICA (7631-86-9)

TWA

20.0000 mppcf

0.8000 mg/m3

### 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.

### Personal protective equipment

#### Eye / face protection

Wear safety glasses with side shields (or goggles) and a face shield.

#### Skin protection

Wear appropriate chemical resistant clothing. Wear appropriate chemical resistant gloves.

#### 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. Respirator type: High-efficiency particulate respirator with full facepiece.

#### General hygiene considerations

Provide eyewash station and safety shower. 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 & Chemical Properties

### Appearance

Crystals to powder

### Color

Yellow.

### Odor

Not available.

### Odor threshold

Not available.

### Physical state

Solid.

### Form

Crystalline powder.

### pH

Not available.

### Flash point

Not available.

### Evaporation rate

Not available.

### Flammability limits in air, upper, % by volume

Not available.

### Flammability limits in air, lower, % by volume

Not available.

### Relative density

Not available.

### Solubility (water)

Slight

### Partition coefficient (n-octanol/water)

Not available

### Auto-ignition temperature

1851.8 °F (1011 °C) CITRIC ACID

### Decomposition temperature

Not available.

## 10. Chemical Stability & Reactivity Information

### Chemical stability

Stable under normal temperature conditions.

### Conditions to avoid

Avoid dust formation. Excessive heat. Exposure to moisture.

### Incompatible materials

Strong oxidizing agents. Hydrogen fluoride. Metal nitrates.

### Hazardous decomposition products

Carbon oxides. Sulfur oxides. Hydrogen bromide. May include oxides of Silicon.

## 11. Toxicological Information

### Toxicological data

#### Product

#### Test Results

NEUTRACIT®-2 Caustic Neutralizer (Mixture)

Acute Oral LD50 Rat: 9713 mg/kg estimated

#### Components

#### Test Results

CITRIC ACID (77-92-9)

Acute Oral LD50 Rat: 6730 mg/kg

#### Sensitization

Not a skin sensitizer.

#### Local effects

Severe eye irritation. May cause burns. Irritating to respiratory system and skin.

#### Chronic effects

None known.

#### Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

AMORPHOUS FUMED SILICA (CAS 7631-86-9)

3 Not classifiable as to carcinogenicity to humans.

#### Skin corrosion/irritation

Causes skin irritation.

#### Epidemiology

No epidemiological data is available for this product.

#### Mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

#### Neurological effects

None known.

#### Reproductive effects

Contains no ingredient listed as toxic to reproduction

#### Teratogenicity

No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

#### Symptoms and target organs

Irritant effects.

## 12. Ecological Information

#### Ecotoxicity

This product has no known eco-toxicological effects.

#### Environmental effects

Ecological injuries are not known or expected under normal use. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

#### Persistence and degradability

Not available.

#### Partition coefficient (n-octanol/water)

Not available

## 13. Disposal Considerations

#### Disposal instructions

Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Contaminated packaging

Offer rinsed packaging material to local recycling facilities. Since emptied containers 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.

## 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.

### CERCLA (Superfund) reportable quantity

None

### 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

**Section 311 hazardous chemical**  
Yes

### Inventory status

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)	No
New Zealand	New Zealand Inventory	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 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.

### US - Pennsylvania RTK - Hazardous Substances: Listed substance

AMORPHOUS FUMED SILICA (CAS 7631-86-9)	Listed.
PERLITE (CAS 93763-70-3)	Listed.

**Saf-T-Data**  
Health: 2 - Moderate  
Flammability: 2 - Moderate  
Reactivity: 1 - Slight  
Contact: 3 - Severe  
Lab Protective Equip: D - GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES  
Storage Color Code: G - Green (General Storage)

## 16. Labeling Info

**Label Hazard Warning** DANGER

Contact will irritate or burn eyes. Irritating to respiratory system and skin.

**Label Precautions** Keep away from heat, sparks and flame. Avoid breathing dust. Do not get in eyes and avoid contact with skin and clothing. Use only with adequate ventilation. Wash thoroughly after handling. Keep container closed.



**Label First Aid**

Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. Flush skin thoroughly with water. If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Get medical attention if irritation develops or persists. If ingestion of a large amount does occur, call a poison control center immediately.

**17. Other Information**

---

**NFPA ratings**

Health: 2  
Flammability: 1  
Instability: 0

**Disclaimer**

THE INFORMATION PRESENTED IN THIS MATERIAL SAFETY DATA SHEET (MSDS/SDS) WAS PREPARED BY TECHNICAL PERSONNEL BASED ON DATA THAT THEY BELIEVE IN THEIR GOOD FAITH JUDGMENT IS ACCURATE. HOWEVER, THE INFORMATION PROVIDED HEREIN IS PROVIDED "AS IS," AND AVANTOR PERFORMANCE MATERIALS MAKES AND GIVES NO REPRESENTATIONS OR WARRANTIES WHATSOEVER, AND EXPRESSLY DISCLAIMS ALL WARRANTIES REGARDING SUCH INFORMATION AND THE PRODUCT TO WHICH IT RELATES, WHETHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING WITHOUT LIMITATION, WARRANTIES OF ACCURACY, COMPLETENESS, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY, STABILITY, AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY WARRANTIES ARISING FROM COURSE OF DEALING, COURSE OF PERFORMANCE, OR USAGE OF TRADE. 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.

**Issue date**

09-28-2011

# NEUTRAL CLEANER

## 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: Neutral Cleaner  
Supplier's Name: INDCO, Inc.  
Supplier's Address: 4N. Railroad & Essex St., Gloucester City, NJ 08030  
HMIS Hazard Code: Health:0 Flammability:0 Reactivity:0 Other:0  
Chemical Family: Detergents  
D.O.T. Shipping Name: N/A

Emergency Phone #(856)456-6100  
Chemical Name: Blended Detergent  
Formula: N.A. Blended Product  
Hazard Class: N/A D.O.T. ID#: N/A

### SECTION 2-HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NO.	% Concentrate Range	Hazard Ratings (TLV/PEL)
None			

### SECTION 3-PHYSICAL DATA

Boiling Point (F): 212°  
Vapor Pressure: = To Water  
Vapor Density: = To Water  
Solubility In Water: Complete  
Appearance: Clear Yellow Liquid  
Odor: Lemon

Specific Gravity: 1.002  
Evaporation Rate: = To Water

### SECTION 4-FIRE AND EXPLOSION DATA

Flash Point (F): None to boiling (TCC)  
Flammable Limits: Not flammable.  
Extinguishing Media: Foam, CO<sub>2</sub>, water fog, BC/ABC extinguisher may be used in area where material is stored.  
Unusual Fire & Explosion Hazards: None known.

### SECTION 5-HEALTH HAZARD DATA

Route(s) of Entry: Inhalation:No Skin:No Ingestion:Yes  
Effects of Overexposure: May cause slight irritation of the eyes.  
Emergency & First Aid Procedures: For Eyes: Flush with water for at least fifteen minutes. Get medical aid. For Skin: Wash with soap and water. If Ingested: Give several glasses of water. Never give anything by mouth to an unconscious person. Get medical attention. Inhalation: Seek well ventilated area.  
Conditions Aggravated by Exposure: None

Threshold Limit Value: Not Est.

Listed Carcinogen, Mutagen, Teratogen (Ingredient, Source, Amount): None

### SECTION 6-REACTIVITY DATA

Stability: Stable  
Conditions to Avoid: None  
Incompatibility: Oxidizing agents.  
Hazardous Decomposition Products: None known.  
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.  
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 needed under normal condition of use.  
Ventilation: Local.  
Protective Gloves: Recommended for prolonged contact.  
Eye Protection: Not required.  
Other Protective Equipment: None needed.

### SECTION 9-SPECIAL PRECAUTIONS

Precautions to be taken in handling and storage: Store between 40° and 120° F.  
Other Precautions: 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 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.

DATE PREPARED-10/1/01 By: G.C.

# NEUTRALIZER

PAGE 02/02

## 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:** Neutralizer Floor Neutralizer and Conditioner**Supplier's Name:** INDCO, Inc.**Supplier's Address:** N. Railroad & Essex St., Gloucester City, NJ 08030**HMIS Hazard Code:** Health:1 Flammability:0 Reactivity:0 Other:0**Chemical Family:** Detergent Combination**D.O.T. Shipping Name:** N/A**Emergency Phone #:** (856)456-6100**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 NO.	% Concentrated Range	Hazard Ratings (TLV/PEL)
Citric Acid	77-92-9	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,  
Colorless Liquid  
**Odor:** Floral

**Specific Gravity:** 1.012  
**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:** May cause skin and eye irritation. Harmful or fatal if swallowed. If ingested, may cause corrosion of the mouth, esophagus and stomach.**Emergency & First Aid Procedures:** **For Eyes:** Flush with water for at least fifteen minutes. Get medical aid. **For Skin:** Flush thoroughly with water. If irritation persists get medical advice. **If Ingested:** Do not induce vomiting. Get medical assistance immediately.**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  
**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 the use of a suitable absorbent. Rinse remaining material to drains.  
**Waste disposal method:** Follow local, state, and federal regulations.

### SECTION 8-SPECIAL PROTECTION INFORMATION

**Respiratory Protection:** Not Required.  
**Ventilation:** Not Required  
**Protective Gloves:** Rubber or latex.  
**Eye Protection:** Goggles.  
**Other Protective Equipment:** Not Required.

### SECTION 9-SPECIAL PRECAUTIONS

**Precautions to be taken in handling and storage:** Store between 40° and 120° F.  
**Other Precautions:** 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-10/5/00 By: G.C.

MSDS Number: **Z6130** \* \* \* \* *Effective Date: 25~~53~~B3* \* \* \* \* *Supersedes: 2; B8D;*



From: Avantor Performance Materials, Inc.  
Saucon Valley Plaza  
3477 Corporate Parkway  
Suite #200  
Center Valley, PA 18034



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.

## NEUTRASORB® ACID NEUTRALIZER

### 1. Product Identification

**Synonyms:** Acid spill clean-up

**CAS No.:** Not applicable to mixtures.

**Molecular Weight:** Not applicable to mixtures.

**Chemical Formula:** Not applicable to mixtures.

**Product Codes:** 4442, 4456

### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Bromocresol Purple Indicator grade	115-40-2	< 0.1%	No
Calcium Carbonate	471-34-1	5 - 25%	Yes
Magnesium Oxide	1309-48-4	25 - 45%	Yes
Sodium Carbonate	497-19-8	35 - 55%	Yes

### 3. Hazards Identification

#### Emergency Overview

**DANGER! MAY CAUSE EYE BURNS. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT.**

**SAF-T-DATA<sup>(tm)</sup>** Ratings (Provided here for your convenience)

Health Rating: 3 - Severe

Flammability Rating: 1 - Slight

Reactivity Rating: 2 - Moderate

Contact Rating: 3 - Severe (Life)

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

## Potential Health Effects

---

### **Inhalation:**

Inhalation of dust may cause irritation to the respiratory tract. Symptoms from excessive inhalation of dust may include coughing and difficult breathing. Excessive contact is known to cause damage to the nasal septum. Inhalation can cause a flu-like illness (metal fume fever). This 24- to 48-hour illness is characterized by chills, fever, aching muscles, dryness in the mouth and throat and headache.

### **Ingestion:**

Sodium carbonate is only slightly toxic, but large doses may be corrosive to the gastro-intestinal tract where symptoms may include severe abdominal pain, vomiting, diarrhea, collapse and death. Magnesium oxide is slowly absorbed. Ingestion may cause rapid bowel evacuation.

### **Skin Contact:**

Excessive contact may cause irritation with blistering and redness. Solutions may cause severe irritation or burns.

### **Eye Contact:**

Contact may be corrosive to eyes and cause conjunctival edema and corneal destruction. Risk of serious injury increases if eyes are kept tightly closed. Other symptoms may appear from absorption of sodium carbonate into the bloodstream via the eyes.

### **Chronic Exposure:**

Prolonged or repeated skin exposure may cause sensitization. Excessive oral doses of calcium carbonate may produce alkalosis and hypercalcemia.

### **Aggravation of Pre-existing Conditions:**

No information found.

---

## 4. First Aid Measures

### **Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### **Ingestion:**

If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

### **Skin Contact:**

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

### **Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

### **Note to Physician:**

Consider endoscopy in all suspected cases of sodium carbonate poisoning. Perform blood analysis to determine if dehydration, acidosis, or other electrolyte imbalances occurred.

---

## 5. Fire Fighting Measures

### **Fire:**

Not considered to be a fire hazard.

### **Explosion:**

Not considered an explosion hazard, but sodium carbonate may explode when applied to red-hot aluminum. Magnesium oxide reacts violently or ignites with interhalogens such as chlorine trifluoride (ClF<sub>3</sub>) or bromine pentafluoride (BrF<sub>5</sub>), and incandescently with phosphorus pentachloride (PCl<sub>5</sub>).

### **Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire.

**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

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

---

## 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.

NEUTRASORB is NOT recommended for spills of hydrofluoric acid, fuming sulfuric acid, fuming nitric acid, or peroxy(per-) organic acids.

---

## 8. Exposure Controls/Personal Protection

**Airborne Exposure Limits:**

Magnesium Oxide:

- OSHA Permissible Exposure Limit (PEL) -  
15 mg/m<sup>3</sup> (TWA).

- ACGIH Threshold Limit Value (TLV) -  
10 mg/m<sup>3</sup> (TWA), Inhalable fraction, A4 Not classifiable as a human carcinogen.

**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):**

If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece 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 and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

---

## 9. Physical and Chemical Properties

**Appearance:**

Purple granules.

**Odor:**

\*\*\*\*\*Qf qtrguu0'

**Solubility:**

Slightly soluble in water (0.1 - 1%).

**Specific Gravity:**

No information found.

**pH:**

No information found.

**% Volatiles by volume @ 21C (70F):**

0

**Boiling Point:**

Not applicable.

**Melting Point:**

Not applicable.

**Vapor Density (Air=1):**

Not applicable.

**Vapor Pressure (mm Hg):**

Not applicable.

**Evaporation Rate (BuAc=1):**

Not applicable.

---

## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage. Hygroscopic. Readily absorbs moisture from the air.

Solutions are strong bases.

**Hazardous Decomposition Products:**

Oxides of carbon, sodium oxide and calcium oxide..

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

For sodium carbonate: fluorine, aluminum, phosphorous pentoxide, sulfuric acid, zinc, lithium, moisture, calcium hydroxide and 2,4,6-trinitrotoluene. Reacts violently with acids to form carbon dioxide. For magnesium oxide: acids, interhalogens, phosphorus pentachloride, and chlorine trifluoride. For calcium carbonate: acids, fluorine, magnesium with hydrogen.

**Conditions to Avoid:**

Moisture, heat, dusting and incompatibles.

---

## 11. Toxicological Information

For Sodium Carbonate:

Oral rat LD50: 4090 mg/kg; inhalation rat LC50: 2300 mg/m<sup>3</sup>/2H; irritation eye rabbit: 50 mg severe; investigated as a mutagen, reproductive effector. Magnesium oxide: investigated as a tumorigen.

-----\Cancer Lists\-----			
Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
-----			
Bromocresol Purple Indicator grade (115-40-2)	No	No	None
Calcium Carbonate (471-34-1)	No	No	None
Magnesium Oxide (1309-48-4)	No	No	None
Sodium Carbonate (497-19-8)	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
Bromocresol Purple Indicator grade (115-40-2)	Yes	Yes	Yes	Yes
Calcium Carbonate (471-34-1)	Yes	Yes	Yes	Yes
Magnesium Oxide (1309-48-4)	Yes	Yes	Yes	Yes
Sodium Carbonate (497-19-8)	Yes	Yes	Yes	Yes

### -----\Chemical Inventory Status - Part 2\-----

Ingredient	Korea	--Canada--		
		DSL	NDSL	Phil.
Bromocresol Purple Indicator grade (115-40-2)	No	Yes	No	Yes
Calcium Carbonate (471-34-1)	Yes	Yes	No	Yes
Magnesium Oxide (1309-48-4)	Yes	Yes	No	Yes
Sodium Carbonate (497-19-8)	Yes	Yes	No	Yes

### -----\Federal, State & International Regulations - Part 1\-----

Ingredient	-SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
Bromocresol Purple Indicator grade (115-40-2)	No	No	No	No
Calcium Carbonate (471-34-1)	No	No	No	No
Magnesium Oxide (1309-48-4)	No	No	No	No
Sodium Carbonate (497-19-8)	No	No	No	No

### -----\Federal, State & International Regulations - Part 2\-----

Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
Bromocresol Purple Indicator grade (115-40-2)	No	No	No
Calcium Carbonate (471-34-1)	No	No	No



Magnesium Oxide (1309-48-4)	No	No	No
Sodium Carbonate (497-19-8)	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.

---

## 16. Other Information

**NFPA Ratings:** Health: 2 Flammability: 0 Reactivity: 0

**Label Hazard Warning:**

DANGER! MAY CAUSE EYE BURNS. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN AND RESPIRATORY TRACT.

**Label Precautions:**

Do not get in eyes, on skin, or on clothing.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

**Label First Aid:**

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty. In all cases, get medical attention.

**Product Use:**

Spill Clean-Up

**Revision Information:**

No Changes.

**Disclaimer:**

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continued

**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

HAZARD RATINGS HMIS

**BOSTIK FINDLEY**

Health 2  
Flammability 4  
Reactivity 0  
PPE X

## 1 CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Product Name** V056260  
**MSDS Name** NEVER-SEEZ REGULAR NSA-16 12.5OZ AERO  
**CAS Number** Mixture  
**Generic Description** Aerosol Lubricant  
**Manufacturer** BOSTIK FINDLEY, INC.  
211 Boston Street  
Middleton , MA 01949 USA

### 24 Hour Emergency Assistance

Phone: 1-800-227-0332

### General Assistance

Phone: 1-978-777-0100

### MSDS Assistance

Phone: 1-978-777-0100

## 2 COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Percentage
Heptane	142-82-5	10 - 30
Hexane	110-54-3	10 - 30
Butane	106-97-8	5 - 10
Propane	74-98-6	5 - 10
Copper Powder	7440-50-8	1 - 5
Zinc Oxide	1314-13-2	0.5 - 1.5
Aluminum Powder	7429-90-5	0.5 - 1.5
Non-hazardous and other ingredients below reportable levels	Proprietary	Balance

## 3 HAZARDS IDENTIFICATION

### Emergency Overview

Product is a flammable aerosol. Pressurized container may explode when exposed to heat or flame. Contact may cause skin and eye irritation. Mist may cause nose and throat irritation. Ingestion may cause nausea, vomiting, pain, upset stomach, and diarrhea.

## POTENTIAL HEALTH EFFECTS

**SKIN CONTACT:** This product may cause irritation to the skin. Prolonged or repeated contact with this product may dry and/or defat the skin. This product may be harmful if it is absorbed through the skin.

**EYE CONTACT:** Liquid or vapors may irritate the eyes. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Eye contact may lead to permanent damage if not treated promptly.

**INHALATION:** This product may cause irritation to the respiratory system. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination. Possibly unconsciousness and asphyxiation.

**INGESTION:** This product is harmful if swallowed. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

### Target Organs

Central Nervous System. Lungs. Skin. Eyes.

## 4 FIRST AID MEASURES

### Skin

For skin contact, wash immediately with soap and water. If irritation persists, get medical attention.

### Eye

Immediately flush with plenty of water for at least 15 minutes, holding eyelids open at all times. Get medical attention immediately.

### Inhalation

Move person to non-contaminated air. If the affected person is not breathing, apply artificial respiration. Call a physician if symptoms develop or persist.

### Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. If person is conscious and can swallow, immediately give two glasses of water, but do not induce vomiting. Material is corrosive. If vomiting occurs, give fluids again. Seek immediate medical attention. Do not give anything by mouth to an unconscious or convulsing person.

### Notes To Physician

This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately. If overexposure to the solvents in this product is suspected, testing should include nervous system and brain effects including recent memory, mood, concentration, headaches and altered sleep patterns. Liver and kidney function should be evaluated.

## 5 FIRE FIGHTING MEASURES

### Extinguishing Media

Use dry chemical, carbon dioxide, or foam. Use water to cool fire-exposed containers and to protect personnel. Do not direct a solid stream of water or foam into hot, burning pools; this may result in frothing and increase fire intensity.

### Basic Fire Fighting Procedures

DANGEROUS when exposed to heat or flame. This material can be ignited by flame or spark under all normal atmospheric conditions. Vapors are heavier than air and may travel along the ground to some distant source of ignition and flash back. Pressurized Container: May explode when exposed to heat or flame. Empty containers may retain product residue including Flammable or Explosive vapors. Do not cut, drill, grind, or weld near full, partially full, or empty product containers.

### Dust Explosion Hazard

None Known

### Sensitivity To Mechanical Impact

Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

### Sensitivity To Static Discharge

Sparks generated by static discharge may ignite this product or its vapors. All containers and equipment must be bonded or grounded to minimize risk.

### Unusual Fire & Explosion Hazards

During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a buildup of internal pressures. Cool with water.

### Fire Fighting Equipment/Instructions

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

**Flash Point** -156 F (-104 C)

## 6 ACCIDENTAL RELEASE MEASURES

### Emergency Action

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. Keep upwind of the spilled material and isolate exposure. Wear appropriate protective equipment and clothing during clean-up.

### Containment

Stop discharge if safe to do so. Stop material from contaminating soil or from entering sewers or water streams. Cover spills with non-flammable absorbent and place in closed chemical waste containers.

## 7 HANDLING & STORAGE

For Commercial Use Only - Not Packaged or Labeled for Home Use!

### Handling

Keep this product from heat, sparks, or open flame. Avoid getting this material into contact with your skin and eyes. Avoid breathing mists or aerosols of this product. Use this product with adequate ventilation. Do not reuse the empty container.

### Storage

Store in a cool, dry, well-ventilated area. Do not handle or store near an open flame, heat or other sources of ignition. Keep out of direct sunlight. Do not store above 120 F (49 C).

### Empty Container Precaution

Attention! Follow label warnings even after container is emptied since empty containers may retain product residues. Do not reuse empty container without professional cleaning for food, clothing, or products for human or animal consumption, or where skin contact can occur.

## 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Engineering Controls

Provide local and general exhaust ventilation to effectively remove and prevent buildup of any vapors or mists generated from the handling of this product. Additional area ventilation or local exhaust may be required to maintain air concentrations below recommended exposure limits. Explosion proof exhaust ventilation should be used.

### Eye Protection

Wear goggles or safety glasses with side shields.

### Skin And Body Protection

Impervious gloves should be used at all times when handling this product. Recommended gloves include rubber, neoprene, nitrile or viton. Use of protective coveralls and long sleeves is recommended.

### Respiratory Protection

Avoid breathing vapor and/or mists. If airborne concentrations are above the applicable exposure limits, use NIOSH approved respiratory protection. High airborne concentrations may necessitate the use of self-contained breathing apparatus (SCBA) or a supplied air respirator.

### General

Eyewash fountains and emergency showers should be readily available. Use good industrial hygiene practices in handling this material.

### Exposure Limits

#### ACGIH - Occupational Exposure Limits - TWAs

ALUMINIUM POWDER (PYROPHORIC)	7429-90-5	10 mg/m3 TWA (metal dust)
BUTANE (CONTAINING $\geq$ 0.1% BUTADIENE (203-450-8))	106-97-8	800 ppm TWA
COPPER	7440-50-8	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dusts and mists, as Cu)
HEPTANE (N-)	142-82-5	400 ppm TWA
HEXANE	110-54-3	50 ppm TWA
PROPANE	74-98-6	2500 ppm TWA
ZINC OXIDE	1314-13-2	5 mg/m3 TWA (fume); 10 mg/m3 TWA (dust)

#### OSHA - Vacated PELs - Time Weighted Averages

ALUMINIUM POWDER (PYROPHORIC)	7429-90-5	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
BUTANE (CONTAINING $\geq$ 0.1% BUTADIENE (203-450-8))	106-97-8	800 ppm TWA; 1900 mg/m3 TWA
COPPER	7440-50-8	0.1 mg/m3 TWA (fume, dusts, mists as Cu)
HEPTANE (N-)	142-82-5	400 ppm TWA; 1600 mg/m3 TWA
HEXANE	110-54-3	50 ppm TWA; 180 mg/m3 TWA
PROPANE	74-98-6	1000 ppm TWA; 1800 mg/m3 TWA
ZINC OXIDE	1314-13-2	5 mg/m3 TWA (fume); 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)

## 9 PHYSICAL & CHEMICAL PROPERTIES

Percent Volatile	40 %
Solubility In Water	0 %
Target Solids	60 %
pH	N/A
Density	1.19 g/cc
Odor Threshold	N/A
Octanol/Water Coefficient	N/A
Odor	Solvent
Physical State	Aerosol
Freeze Protect	No

## 10 STABILITY & REACTIVITY

### Stability/Incompatibility

Stable under normal conditions.

### Hazardous Reactions/Decomposition Products

Upon decomposition of this product, the following oxides will be produced: Carbon dioxide, carbon monoxide, oxides of sulfur and nitrogen.

### Hazardous Polymerization

Will not occur.

### Conditions To Avoid

Keep away from sources of ignition. Avoid contact with Strong Oxidizers, Reducers, Acids and Alkalis.

## 11 TOXICOLOGICAL INFORMATION

### Ld50

#### NIOSH - Selected LD50s and LC50s

BUTANE (CONTAINING >= 0.1% BUTADIENE (203-450-8))	106-97-8	Inhalation LC50 Rat: 658 gm/m3/4H; Inhalation LC50 Mouse: 680 gm/m3/2H
HEPTANE (N-)	142-82-5	Inhalation LC50 Rat: 103 gm/m3/4H
HEXANE	110-54-3	Inhalation LC50 Rat: 48000 ppm/4H; Oral LD50 Rat: 28710 mg/kg
ZINC OXIDE	1314-13-2	Inhalation LC50 Mouse: 2500 mg/m3; Oral LD50 Mouse: 7950 mg/kg

## 12 ECOLOGICAL INFORMATION

**VOC (Volatile Organic Compounds)** 473 g/l

### Ecotoxicological Information

Organic solvents produce slight to moderate toxicity to aquatic life. Insufficient data exists to evaluate the effect on plants, birds or land animals.

## 13 DISPOSAL CONSIDERATIONS

We make no guarantee or warranty of any kind that the use or disposal of this product complies with all local, state, or federal laws. It is also the obligation of each user of the product mentioned herein to determine and comply with the requirements of all applicable statutes.

### Waste Disposal

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

## 14 TRANSPORT INFORMATION

### Comments

This product is regulated under ICAO for International Air Transport and IMDG for Ocean Transport as an Aerosol, Class 2.1, UN1950.

Proper Shipping Name	Consumer Commodity
UN/NA Code	ORM-D

## 15 REGULATORY INFORMATION

This MSDS is prepared and distributed pursuant to the Federal Hazard Communication Standard, 29 CFR 1910.1200.

### Federal Regulations

All components are on the U.S. EPA TSCA Inventory List.

### CERCLA/SARA - Hazardous Substances and their Reportable Quantities

COPPER	7440-50-8	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches)
HEXANE	110-54-3	5000 lb final RQ; 2270 kg final RQ
ZINC OXIDE	1314-13-2	statutory RQ = 1 pound (0.454 kg)

Based on an evaluation of the components used, this product does contain hazardous ingredients identified as per 29 CFR 1910.1200.

### State Regulations

If this product contains any ingredients listed under California Proposition 65, they will be noted below:

### International Regulations

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and contains all the information required by the Controlled Products Regulations.

This is a "controlled product" under the Canadian Workplace Hazardous Materials Information System (WHMIS). Class D Division 2 Sub-division B. and Class B Division 5.

### SARA 302 EXTREMELY HAZARDOUS SUBSTANCES

Not Regulated



**SARA 311/312 HAZARD CATEGORIES**

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

**SARA 313 TOXIC CHEMICALS**

Component	CAS Number	Percentage
Hexane	110-54-3	10 - 30
Copper Powder	7440-50-8	1 - 5
Zinc Oxide	1314-13-2	0.5 - 1.5
Aluminum Powder	7429-90-5	0.5 - 1.5

**16 OTHER INFORMATION****Disclaimer**

The data in this MSDS has been compiled from publicly available sources. This data relates only to the designated product and not to the use of said product in combination with other materials. 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 which exist. Responsibility for proper precautions and safe use of the product lies with the user. All data in this MSDS is typical of the product as a whole, and does not represent any individual lot or batch, therefore, Bostik Findley, Inc. makes no warranty about the accuracy of the data herein and assumes no liability for the use of such data. It is the responsibility of the user to comply with all applicable federal, state, and local laws and regulations.

**Issue Date** 11-Dec-2002 **Supercedes** 23-Aug-2002  
**Prepared By** Richard Sontag

**MSDS Sections Reviewed and/or Updated**

Composition / Information on Ingredients: Ingredients

Fire Fighting Measures: Fire Fighting Measures: Fire & Explosion Properties

Physical & Chemical Properties: Physical & Chemical Properties

Regulatory Information: Regulatory Ratings

# Material Safety Data Sheet

Infosafe No. 2BK00 Issue Date: September 1999

ISSUED by BOSTIK

Product Name: **NEVER-SEEZ REGULAR**

**Not classified as hazardous according to criteria of NOHSC**

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## COMPANY DETAILS

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**Company Name** BOSTIK FINDLEY AUSTRALIA PTY LTD (ABN 003 893 838)

**Address** 51 - 71 High Street Thomastown  
VIC 3074

**Tel/Fax** Tel: 03 9279 9333 Fax: 03 9279 9270

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## IDENTIFICATION

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**Product Name** NEVER-SEEZ REGULAR

**Proper Shipping Name** None Allocated

<b>Other Names</b>	<b><u>Name</u></b>	<b><u>Mancode</u></b>
	Never-Seez NS-10	046663
	Never-Seez NS-130B	046701
	Never-Seez NS-160	046590
	Never-Seez NS-168	046604
	Never-Seez NS-40	046582
	Never-Seez NS-425B	046728
	Never-Seez NSB-16	046620
	Never-Seez NSB-4	046671
	Never-Seez NSBT-16	046647
	Never-Seez NSBT-8	046639
	Never-Seez NSC-1	046655
	Never-Seez NS-164	046795
	Never-Seez NS-45B	046698
	Never-Seez NS-6	046566
	Never-Seez Regular, 450g Squeeze bottle	256528
	Never-Seez Regular, 250g Brush top	256536

	Never-Seez Regular, 500g Brush top	256544
	Never-Seez Regular, 100g Tube	256552
<b>UN Number</b>	None Allocated	
<b>DG Class</b>	None Allocated	
<b>Packing Group</b>	None Allocated	
<b>Hazchem Code</b>	None Allocated	
<b>Poisons Schedule</b>	Not Scheduled	
<b>Product Use</b>	An anti-seize, extreme pressure metal lubricant for general industrial use.	

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## Physical Data

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<b>Appearance</b>	Silvery grey paste with greaselike odour.
<b>Vapour Pressure</b>	Not available
<b>Specific Gravity</b>	1.21 g/cm <sup>3</sup>
<b>Flash Point</b>	93 $\pm$ 2C (200 $\pm$ 2F)
<b>Flamm. Limit LEL</b>	Not available
<b>Solubility in Water</b>	0.1%

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## Other Properties

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## Ingredients

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<b>Ingredients</b>	<b><u>Name</u></b>	<b><u>CAS</u></b>	<b><u>Proportion</u></b>
	Grease		60-100 %
	Synthetic graphite	7782-42-5	10-30 %
	Copper Powder	7440-50-8	1-10 %
	Zinc oxide	1314-13-2	1-10 %
	Aluminium flake	7429-90-5	1-10 %

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## HEALTH HAZARD INFORMATION

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### Health Effects

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<b>Acute - Swallowed</b>	May be harmful if swallowed. May cause gastrointestinal tract discomfort or damage.
<b>Acute - Eye</b>	May be an eye irritant.
<b>Acute - Skin</b>	Repeated or prolonged skin contact may lead to irritation.

<b>Acute - Inhaled</b>	May be harmful by inhalation at elevated temperatures and cause respiratory irritation, dry throat, mucous membrane irritation, weakness, coughing, headache, dizziness, nausea, vomiting.
<b>Chronic</b>	Long term over-exposure may lead to dermatitis.

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### First Aid

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<b>Swallowed</b>	If swallowed, give patient 1 or 2 glasses of water to drink and seek immediate medical advice. Never give anything by mouth to an unconscious or convulsing person.
<b>Eye</b>	Wash eyes with copious amounts of water for at least 15 minutes. Seek medical attention.
<b>Skin</b>	Remove excess material then wash area with plenty of soap and water. If irritation occurs seek medical advice.
<b>Inhaled</b>	Remove patient to fresh air and give artificial respiration if necessary. Seek medical advice.

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### Advice to Doctor

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**Advice to Doctor** Treat symptomatically.

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### Other Health Hazard Information

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### PRECAUTIONS FOR USE

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<b>Exposure Limits</b>	No exposure standard is available for the product as such. Exposure standards for the hazardous components are as follows (NOHSC-1995): Copper: TWA: 0.2mg/m <sup>3</sup> - fume Aluminium: TWA: 5mg/m <sup>3</sup> - fume Zinc Oxide: TWA: 5mg/m <sup>3</sup> , STEL: 10mg/m <sup>3</sup> - fume TWA is the time weighted average concentration of the work atmosphere over a normal 8-hour work day and a 40-hour work week. Nearly all workers may be repeatedly exposed to this level, day after day, without adverse effect. These TWAs are issued as guidelines for good practice. All atmospheric contamination should be kept to as low a level as is practically possible. These TWAs should not be used as fine lines between safe and dangerous concentrations.
<b>Eng. Controls</b>	Use with adequate ventilation.

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### Personal Protection

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<b>Protective Equip.</b>	Avoid contact with skin and eyes. Wear protective, impervious gloves and safety glasses.
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### Flammability

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<b>Fire Hazards</b>	Combustible
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## SAFE HANDLING INFORMATION

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### Storage and Transport

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<b>Storage and Transport</b>	Store under cool, dry conditions (10-30°C) away from direct sunlight and sources of heat. Keep containers closed when not in use. Sea transport IMDG - 9029 UN No. - 3077 DG Class - 9 PG - III EMS - none MFAG - none Marine Pollutant - Yes
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<b>Proper Shipping Name</b>	None Allocated
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### Spills and Disposal

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<b>Spills &amp; Disposal</b>	Material is not pourable. If dropped, shovel into clearly labelled containers for either re-use or disposal as per statutory regulations. Thoroughly clean area where spill occurred.
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### Fire/Explosion Hazard

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<b>Fire/Explos. Hazard</b>	Keep containers away from flame or heat. Fire-fighting personnel should wear self-contained breathing apparatus and protective clothing. Extinguishing Media: Foam, dry chemical, carbon dioxide and water spray. Hazardous Decomposition Products: Burning will produce oxides of carbon, oxides of nitrogen, sulphur, smoke and other toxic fumes.
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<b>Hazardous Reaction</b>	Incompatible with strong oxidising agents and acids.
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<b>Hazchem Code</b>	None Allocated
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## OTHER INFORMATION

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<b>Toxicology</b>	No toxicity data is available for the product as such.
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<b>Manufacturers Advice</b>	REASON FOR UPDATE: General revision SUPERSEDES: Issue dated 28th January, 1997.
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<b>Technical Data</b>	Refer Product Information Bulletin.
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<b>User Codes</b>	
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**User Code**

Field 2

SEE PAGE 1

**Other  
Information**

N/A - Not Applicable

NOHSC - National Occupational Health and Safety Commission (Worksafe Aust.)

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**CONTACT POINT**

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**Contact**

& 24 Hour Emergency Telephone:

R & D Laboratory Manager

(03) 9279-9315 or

Mobile: 0418 961 812

Regulatory Affairs Officer

(03) 9279-9320 or

Mobile: 0419 335 187

**...End Of MSDS...**

[Close this window](#)

SDS

**Common Name:** PUMP PROTECTOR LT**Manufacturer:** DELTA FIRST**SDS Revision Date:** 1/7/2015**SDS Format:** GHS-US**Grainger Item Number(s):** 4RR05**Manufacturer Model Number(s):**

## SDS Table of Contents

Click the desired link below to jump directly to that section in the SDS.

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DEDICATED TO PRODUCING QUALITY RUST PROTECTION PRODUCTS FOR 20+ YEARS!

DELTA FIRST LLC

MANUFACTURERS OF FINE PRODUCTS FOR THE PAINT AND TIRE INDUSTRIES

SAFETY DATA SHEET

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION



PUMP PROTECTOR LT

1.1 PRODUCT IDENTIFICATION: DELTA FIRST PUMP PROTECTOR LT

1.2 PRODUCT BRAND & NUMBER: CAMPBELL HAUSFELD PUMP PROTECTOR LT

1.3 RECOMMENDED USE OF THE PRODUCT AND RESTRICTIONS ON USE:  
THIS PRODUCT IS DESIGNED FOR USE IN PRESSURE SPRAY PAINT SYSTEMS TO CLEAN  
AND PROTECT THE INTERIOR MECHANISM.

1.4 MANUFACTURER'S NAME: DELTA FIRST LLC

ADDRESS:  
105 BUCKNELL CT STE B  
ATLANTA GA 30336

1.5 INFORMATION PHONE #S: 1-404-349-2560

EMERGENCY PHONE #: 1-404-349-2560

## SECTION 2 - HAZARDS IDENTIFICATION



### 2.1 CLASSIFICATION OF PRODUCT:

THIS PRODUCT IS AN AQUEOUS MIXTURE OF PROPYLENE GLYCOL, SODIUM NITRITE AND 1,2 - BENZISOTHIAZOLIN - 3 - ONE. IT IS CLASSIFIED AS HAZARDOUS

EXCLAMATION MARK

GHS07: HARMFUL IF SWALLOWED

R22: HARMFUL IF SWALLOWED - DUE TO 1.0% OF SODIUM NITRITE

R53: MAY CAUSE LONG TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

### 2.2 GHS LABEL ELEMENTS:

THE PRODUCT IS CLASSIFIED AND LABELED ACCORDING TO THE GLOBALLY HARMONIZED SYSTEM (GHS)

### 2.3 HAZARD PICTOGRAM: EXCLAMATION MARK

GHS07: HARMFUL IF SWALLOWED

### 2.4 SIGNAL WORD: WARNING

### 2.5 HAZARD-DETERMINING COMPONENTS OF LABELING:

1.0%	SODIUM NITRITE	CAS 007-010-00-4
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0.05%	1,2 - BENZISOTHIAZOLIN-3-ONE	CAS 2634-33-5
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### 2.6 HAZARD STATEMENTS:

H302: ACUTE ORAL TOXICITY CATEGORY 4 (SLIGHT)

H413: CHRONIC AQUATIC TOXICITY CATEGORY 4 ( SLIGHT )

### 2.7 PRECAUTIONARY STATEMENTS:

#### PREVENTION:

P102: KEEP OUT OF REACH OF CHILDREN

P103: READ LABEL BEFORE USE

P261: AVOID BREATHING MISTS/VAPORS/SPRAY

P264: WASH HANDS WITH SOAP AND WATER THOROUGHLY AFTER HANDLING

P270: DO NOT EAT OR SMOKE WHEN USING THIS PRODUCT

P272: CONTAMINATED WORK CLOTHING SHOULD NOT BE ALLOWED OUT OF THE WORKPLACE

P273: AVOID RELEASE TO THE ENVIRONMENT

P280: WEAR PROTECTIVE GLOVES AND EYE/FACE PROTECTION

#### RESPONSE:

P101:

IF MEDICAL ADVICE IS NEEDED, HAVE THE PRODUCT LABEL OR CONTAINER AT HAND

P301+P312:

IF SWALLOWED: CALL THE POISON CONTROL CENTER

P330: RINSE MOUTH

#### DISPOSAL:

P501:

DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

#### OTHER HAZARDS:

THE PRODUCT IS RATED AS HARMFUL IF SWALLOWED. INGESTION OF LARGE QUANTITIES



OF GLYCOLS MAY CAUSE KIDNEY DAMAGE. THE PRODUCT MAY BE MILDLY IRRITATING TO THE RESPIRATORY SYSTEM, EYES, AND SKIN. AS FOR ALL CHEMICALS PERSONS SHOULD NOT EXPOSE OPEN WOUNDS, CUTS, ABRASIONS, OR IRRITATED SKIN TO THIS MATERIAL.

2.8 TRADE NAME: PUMP PROTECTOR LT

3.0 CLASSIFICATION SYSTEM:

NFPA RATINGS (SCALE 0-4):

HEALTH 1  
FIRE 1  
REACTIVITY 0

HMIS RATINGS (SCALE 0-4):

HEALTH 1  
FIRE 1  
REACTIVITY 0

### SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS



3.1 CHEMICAL CHARACTERIZATION: MIXTURES

3.2 DESCRIPTION:

MIXTURE OF SUBSTANCES LISTED BELOW WITH NONHAZARDOUS ADDITIONS.

3.3 DANGEROUS COMPONENTS	CAS #	% BY WT	
PROPYLENE GLYCOL	57-55-6	30 - 45%	GRAS (GENERALLY REGARDED AS SAFE)
SODIUM NITRITE	7632-00-0	=<1.5%	R25, R50, OX. SOL. 3, H272, ACUTE. TOX 3, H301; AQUATIC ACUTE 1, H400
1,2-BENZISOTHIAZOLIN-3-ONE	2634-33-5	<0.05%	R22, S23, S24/S25

### SECTION 4 - FIRST AID MEASURES



4.1 DESCRIPTION OF FIRST AID MEASURES:

AFTER INHALATION: SUPPLY FRESH AIR, CONSULT DOCTOR IN CASE OF COMPLAINTS

AFTER EYE CONTACT:

IN CASE OF CONTACT, REMOVE ANY CONTACT LENSES, IMMEDIATELY FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION.

SKIN CONTACT:

WASH AFFECTED AREA WITH SOAP AND WATER. CONSULT A DOCTOR IF IRRITATION DEVELOPS

AFTER INGESTION: IF SYMPTOMS APPEAR AND PERSIST SEEK MEDICAL ADVICE.

IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED:

NO FURTHER INFORMATION IS AVAILABLE.

### SECTION 5 - FIRE-FIGHTING MEASURES



5.1 EXTINGUISHING MEDIA:

ALL EXTINGUISHING AGENTS THAT ARE APPROPRIATE FOR THE SURROUNDING FIRE.

**5.2 PROTECTIVE EQUIPMENT:**

WEAR SELF CONTAINED BREATHING APPARATUS PRESSURE DEMAND (NIOSH) APPROVED OR EQUIVALENT AND FULL PROTECTIVE GEAR TO PREVENT CONTACT WITH SKIN OR EYES.

**5.3 UNUSUAL FIRE OR EXPLOSION HAZARDS:**

TOXIC GASES MAY BE PRODUCED DURING A FIRE

**5.4 HAZARDOUS COMBUSTION PRODUCTS:**

CARBON OXIDES, CO AND CO<sub>2</sub>, NITROGEN OXIDES AND POSSIBLE UNKNOWN GASES.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:**  
NOT REQUIRED

**6.2 CONTAINMENT AND ENVIRONMENTAL PRECAUTIONS:**

UTILIZE STANDARD LIQUID ABSORPTION MATERIAL AND DIKE WHERE NECESSARY, DILUTE WITH PLENTY OF WATER. DO NOT ALLOW TO ENTER SEWERS/SURFACE OR GROUND WATER. ENSURE ADEQUATE VENTILATION. DISPOSE OF COLLECTED MATERIAL IN ACCORDANCE WITH TO REGULATIONS.

**6.3 REFERENCE TO OTHER SECTIONS:**

SEE SECTION 7 FOR INFORMATION ON SAFE HANDLING  
SEE SECTION 8 FOR INFORMATION ON PERSONAL PROTECTIVE GEAR  
SEE SECTION 13 FOR DISPOSAL INFORMATION

**SECTION 7 - HANDLING AND STORAGE****7.1 HANDLING/STORAGE PRECAUTIONS:**

ENSURE GOOD VENTILATION AND EXHAUST. PREVENT THE FORMATION OF AEROSOLS. STORE IN TIGHTLY CLOSED ORIGINAL CONTAINERS. GUARD AGAINST PUNCTURE.

**7.2 INFORMATION ABOUT PROTECTION AGAINST EXPLOSION AND FIRES:**

PROTECT AGAINST STRONG OXIDIZERS AND STRONG ACIDS

**7.3 SPECIFIC END USES:** NO FURTHER INFORMATION AVAILABLE

**SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 ADDITIONAL INFORMATION ABOUT DESIGN OF TECHNICAL SYSTEMS:**

NO FURTHER DATA: SEE SECTION 7

**8.2 COMPONENTS WITH OCCUPATIONAL EXPOSURE LIMITS:**

57-55-6	PROPYLENE GLYCOL	WEEL LONG TERM VALUE: 10 MG/M3
2634-33-5	1,2 BENZISOTHIAZOLIN-3-ONE	TIME WEIGHTED AVERAGE (TWA): 0.1 MG/M3

**ADDITIONAL INFORMATION:**

THE LISTS THAT WERE VALID DURING THE CREATION WERE USED AS BASIS.

**8.3 EXPOSURE CONTROLS:****GENERAL PROTECTIVE AND HYGIENIC MEASURES:**

KEEP AWAY FROM FOODSTUFFS, BEVERAGES, AND FEED.  
IMMEDIATELY REMOVE ALL SOILED AND CONTAMINATED CLOTHING  
WASH HANDS BEFORE AND AFTER BREAKS AND THE END OF WORK.  
AVOID CONTACT WITH EYES AND SKIN

**BREATHING EQUIPMENT:** NOT REQUIRED

**PROTECTION OF HANDS:**

UTILIZE GLOVES THAT ARE CHEMICALLY RESISTANT AND DURABLE ENOUGH TO WITHSTAND THE RIGORS OF MANUAL LABOR. ACTUAL "HANDS ON" EXPERIENCE IS NEEDED TO DETERMINE THE EFFICACY OF WORK GLOVES.

EYE PROTECTION: TIGHTLY SEALED GOGGLES

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES****9.1 PROPERTIES:**

APPEARANCE: BLUE LIQUID

ODOR: CHARACTERISTIC

ODOR THRESHOLD: NOT DETERMINED

FLAMMABILITY: NOT FLAMMABLE

SOLUBILITY IN WATER: FULLY MISCIBLE

BOILING POINT: >212 DEG. F

FLASH POINT: N/A

IGNITION TEMPERATURE: N/A

AUTO IGNITION: NOT DETERMINED

DANGER OF EXPLOSION: NOT DETERMINED

DECOMPOSITION TEMPERATURE: NOT DETERMINED

SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 1.02

PH: 10 +/- .5

VAPOR PRESSURE @ 20 C (68 F): NOT DETERMINED

**DENSITY:**

RELATIVE DENSITY: NOT DETERMINED

VAPOR DENSITY: NOT DETERMINED

EVAPORATION RATE: NOT DETERMINED

PARTITION COEFFICIENT (N-OCTANOL/WATER): NOT DETERMINED

BOILING POINT: NOT DETERMINED

MELTING POINT: NOT APPLICABLE

FREEZE POINT: <-8 DEG. C, <22 DEG. F

VISCOSITY: NOT DETERMINED

**SECTION 10 - STABILITY AND REACTIVITY****10.1 INFORMATION ON STABILITY AND REACTIVITY:**

REACTIVITY: NO FURTHER INFORMATION AVAILABLE

CHEMICAL STABILITY: STABLE UNDER NORMAL CONDITIONS

THERMAL DECOMPOSITION / CONDITIONS TO AVOID:

NO DECOMPOSITION IF USED TO ACCORDING TO SPECIFICATIONS

INCOMPATIBILITY: OXIDIZING AGENTS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: NONE KNOWN

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

## SECTION 11 - TOXICOLOGICAL INFORMATION



### 11.1 INFORMATION ON TOXICOLOGY:

THIS PRODUCT IS A MIXTURE AND HAS NOT BEEN TESTED AS A WHOLE BUT NOT IS EXPECTED TO BE TOXIC.

### 11.2 ADDITIONAL TOXICOLOGICAL INFORMATION:

TOXICITY DATA FOR SODIUM NITRITE:

LD50 (RAT): 85 MG/KG

TOXICITY DATA FOR PROPYLENE GLYCOL:

PEOPLE WITH PRE-EXISTING KIDNEY OR LIVER DAMAGE MAY BE SUSCEPTIBLE TO HARMFUL EFFECTS AFTER INGESTION

TOXICITY DATA FOR 1,2-BENZIOTHIAZOLIN-3-ONE:

LD50: 1.020 MG/KG (RAT)

### 11.3 CARCINOGENIC CATEGORIES:

THIS PRODUCT IS NOT EXPECTED TO BE CARCINOGENIC

## SECTION 12 - ECOLOGICAL INFORMATION



### 12.1 TOXICITY:

AQUATIC TOXICITY: NO FURTHER RELEVANT INFORMATION AVAILABLE

### 12.2 PERSISTENCE AND DEGRADABILITY:

THERE IS NO DATA ON THE PRODUCT AS A WHOLE, HOWEVER STUDIES SUGGEST THAT PROPYLENE GLYCOL AND SODIUM NITRITE DO NOT BIOACCUMULATE

### 12.3 MOBILITY IN SOIL: NO FURTHER RELEVANT INFORMATION AVAILABLE

### 12.4 ADDITIONAL ECOLOGICAL INFORMATION:

GENERAL NOTES:

WATER HAZARD CLASS 1 (SELF ASSESSMENT): SLIGHTLY HAZARDOUS FOR WATER

### 12.5 RESULTS OF PBT AND VPVB ASSESSMENT:

PBT AND VPVB: NOT APPLICABLE

## SECTION 13 - DISPOSAL CONSIDERATIONS



### 13.1 WASTE TREATMENT METHODS:

RECOMMENDATIONS:

MUST NOT BE DISPOSED OF TOGETHER WITH HOUSEHOLD GARBAGE. DO NOT ALLOW PRODUCT TO REACH SEWAGE SYSTEM

### 13.2 UNCLEANNED PACKAGES:

RECOMMENDATIONS: DISPOSAL MUST BE MADE ACCORDING TO OFFICIAL REGULATIONS

### 13.3 RECOMMENDED CLEANSING AGENT: WATER, IF NECESSARY WITH CLEANING AGENTS

## SECTION 14 - TRANSPORT INFORMATION



### 14.1 UN - NUMBER:

DOT, ADR, IMGD, IATA: NON-REGULATED MATERIAL

## 14.2 UN PROPER SHIPPING NAME:

DOT, ADR, IMDG, IATA: NON-REGULATED MATERIAL

## 14.3 TRANSPORT HAZARD CLASS (ES)

DOT, ADR, IMDG, IATA CLASS: NON-REGULATED MATERIAL

## 14.4 PACKING GROUP:

DOT, ADR, IMDG, IATA: NON-REGULATED MATERIAL

## 14.5 ENVIRONMENTAL HAZARDS:

MARINE POLLUTANT: NO

## 14.6 SPECIAL PRECAUTIONS FOR USER: NOT APPLICABLE

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC  
CODE: NOT APPLICABLE

## 14.8 UN "MODEL REGULATION":

**SECTION 15 - REGULATORY INFORMATION**15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR  
THE SUBSTANCE OR MIXTURE:

## SARA:

SECTION 335 (EXTREMELY HAZARDOUS SUBSTANCES:  
NONE OF THE INGREDIENTS ARE LISTED

## SECTION 313 (SPECIFIC TOXIC CHEMICAL LISTINGS):

7632-00-0                SODIUM NITRITE

## 15.2 TSCA (TOXIC SUBSTANCES CONTROL ACT): ALL INGREDIENTS ARE LISTED

## 15.3 PROPOSITION 65:

CHEMICALS KNOWN TO CAUSE CANCER: NONE OF THE INGREDIENTS ARE LISTED

CHEMICALS KNOWN TO CAUSE REPRODUCTIVE TOXICITY FOR FEMALES:  
NONE OF THE INGREDIENTS ARE LISTEDCHEMICALS KNOWN TO CAUSE REPRODUCTIVE TOXICITY FOR MALES:  
NONE OF THE INGREDIENTS ARE LISTEDCHEMICALS KNOWN TO CAUSE DEVELOPMENTAL TOXICITY:  
NONE OF THE INGREDIENTS ARE LISTED

## 15.4 CARCINOGENIC CATEGORIES:

EPA (ENVIRONMENTAL PROTECTION AGENCY): NONE OF THE INGREDIENTS ARE LISTED

15.5 NIOSH-CA (NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH):  
NONE OF THE INGREDIENTS ARE LISTED

## 15.6 GHS LABEL ELEMENTS:

THE PRODUCT IS CLASSIFIED AND LABELED ACCORDING TO THE GLOBALLY HARMONIZED  
SYSTEM (GHS)

## 15.7 HAZARD PICTOGRAMS:

GHS07: EXCLAMATION MARK

## 15.8 SIGNAL WORD: WARNING

## 15.9 HAZARD-DETERMINING COMPONENTS OF LABELING: 1.0% SODIUM NITRITE

## 15.91 HAZARD STATEMENTS:

CAUSES EYE IRRITATION. MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR  
REPEATED EXPOSURE.

## 15.92 PRECAUTIONARY STATEMENTS:

DO NOT BREATHE DUST/FUME/GAS/MIST/VAPORS/SPRAY

WASH THOROUGHLY AFTER HANDLING

## 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

IF YOU FEEL UNWELL, GET MEDICAL ATTENTION/ADVICE

DISPOSE OF CONTENTS/CONTAINER IN ACCORDANCE WITH  
LOCAL/REGIONAL/NATIONAL/INTERNATIONAL REGULATIONS

## 15.93 NATIONAL REGULATIONS:

THE PRODUCT IS SUBJECT TO BE LABELED ACCORDING WITH THE PREVAILING VERSION  
OF THE REGULATIONS ON HAZARDOUS SUBSTANCES

## 15.94 STATES RIGHT TO KNOW:

57-55-6      PROPYLENE GLYCOL    35-45%

7632-00-0    SODIUM NITRITE      =<1.5%    OX SOL, 3, H272, ACUTE TOX 3, H301,  
   AQUATIC ACUTE 1, H400

CHEMICAL SAFETY ASSESSMENT: HAS NOT BEEN CARRIED OUT

**SECTION 16 - OTHER INFORMATION**

CREATED: 1/07/15

SUPERSEDES: 10/13/09

ADDITIONAL COMMENTS: NONE

## ABBREVIATIONS AND ACRONYMS:

## ADR:

ACCORD EUROPEEN SUR TRANSPORT DES MARCHANDISES DANGEREUSES PAR ROUTE  
(EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS  
GOODS BY ROAD)

## ADN:

THE EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS  
GOODS BY INLAND WATERWAYS

IMDG: INTERNATIONAL MARITIME CODE FOR DANGEROUS GOODS

DOT: US DEPARTMENT OF TRANSPORTATION

IATA: INTERNATIONAL AIR TRANSPORT ASSOCIATION

ACGIH: AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS

EINECS: EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES

ELINCS: EUROPEAN LIST OF NOTIFIED CHEMICAL SUBSTANCES

CAS: CHEMICAL ABSTRACT SERVICE (DIVISION OF THE AMERICAN CHEMICAL SOCIETY)

NFPA: NATIONAL FIRE PROTECTION ASSOCIATION (USA)

HMIS: HAZARD MATERIALS IDENTIFICATION SYSTEM (USA)

VOC: VOLATILE ORGANIC COMPOUNDS (USA, EU)

LC50: LETHAL CONCENTRATION, 50%

LD50: LETHAL DOSE, 50%

OX, SOL 3: OXIDIZING SOLIDS, HAZARD CATEGORY 3

ACUTE TOX 3: ACUTE TOXICITY, HAZARD CATEGORY 3

ACUTE TOX 4: ACUTE TOXICITY, HAZARD CATEGORY 4

EYE IRRIT 2B: SERIOUS EYE DAMAGE/EYE IRRITATION, HAZARD CATEGORY 2B

STOT RE 2:

SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE, HAZARD CATEGORY 2

AQUATIC ACUTE 1:

HAZARDOUS TO THE AQUATIC ENVIRONMENT - ACUTE HAZARD, CATEGORY 1

DISCLAIMER:

JUDGMENTS AS TO THE SUITABILITY OF INFORMATION HEREIN FOR THE PURCHASER'S PURPOSES ARE NECESSARILY THE PURCHASER'S RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, DELTA FIRST, LLC, EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS, AND ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE PURCHASER'S INTENDED PURPOSE OR FOR CONSEQUENCES OF ITS USE.



# MATERIAL SAFETY DATA SHEET **FL Viscosity Oil Co.**

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### NEW HOLLAND AMBRA MASTERGOLD HSP ENGINE OILS – MONO GRADES

CAS Number: Mixture

SYNONYMS: 10W, 30

#### Company Information

FL Viscosity Oil Company  
600-H Joliet Road  
Willowbrook, IL 60527

#### Transportation Emergency Response

CHEMTREC (800) 424-9300

#### Product Information

MSDS Requests: (630) 850-4000 Website: [www.viscosityoil.com](http://www.viscosityoil.com)

Product Information: (630) 850-4000 Website: [www.viscosityoil.com](http://www.viscosityoil.com)

## SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Components	Hazardous (Y/N)	CAS Number	Amount
Base Lubricating Oils	No	Mixture	80-85%
Detergent / Inhibitor System	No	Mixture	15-20%
Pour Point Depressant	No	Mixture	<1 %

## SECTION 3 HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

- MAY CAUSE EYE DISCOMFORT UPON DIRECT CONTACT
- MAY CAUSE MINOR SKIN IRRITATION UPON PROLONGED CONTACT

### IMMEDIATE HEALTH EFFECTS

**Eye contact:** May cause mild, short-lasting discomfort to eyes, based on testing of similar products and/or components.

**Skin contact:** Negligible irritation to skin at ambient temperatures. Prolonged or repeated contact may result in oil acne which is characterized by blackheads with possible secondary infection. Injection of pressurized hydrocarbons under the skin can cause inflammation and swelling, as well as severe, permanent tissue damage. The initial wound at the injection site may not appear to be serious at first, but, if left untreated, could result in disfigurement or amputation of the affected part.



**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 the formation of an aerosol or misting of this product. The permissible exposure limit (PEL) and threshold limit value (TLV) for this product as oil mist is 5 mg/m<sup>3</sup>. Exposures below 5 mg/m<sup>3</sup> appear to be without significant health risk. The short-term exposure limit for this product as an oil mist is 10 mg/m<sup>3</sup>.

**Ingestion:** This product is relatively low toxicity by ingestion. This product has laxative properties and may result in abdominal cramps and diarrhea.

## **DELAYED OR OTHER HEALTH EFFECTS**

**Cancer:** None of the components in this material are listed as carcinogens by IARC, NTP, ACGIH or OSHA.

**Other:** On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations. Shortness of breath and cough are the most common symptoms.

See Section 11 for additional information. Risk depends on duration and level of exposure.

## **SECTION 4 FIRST AID MEASURES**

**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 take victim to hospital immediately.

**Skin contact:** Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately. If material is injected under the skin, seek medical attention immediately.

**Note to physicians:** In an accident involving high-pressure equipment, this type of product may be injected under the skin. Immediate treatment at a surgical emergency center is recommended, no matter how small and insignificant the wound may appear.

**Inhalation:** This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions.

**Ingestion:** Do not induce vomiting. Seek medical attention.

## **SECTION 5 FIRE FIGHTING MEASURES**

### **FIRE CLASSIFICATION:**

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

**NFPA RATINGS:** Health: 1      Flammability: 1      Reactivity: 0  
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protective Equipment Index recommendation)

### **FLAMMABLE PROPERTIES:**

Flash point: 430 °F (ASTM D-92 Cleveland Open Cup)

Autoignition temperature: No Data

Flammable (Explosive) limits (% by volume in air) Lower: No Data    Upper: No Data

**Extinguishing Media:** Use dry chemical, foam, or carbon dioxide.

**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.

**Unusual Fire and Explosive Conditions:** Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material. Consult Hazards Identification Information in Section 3, Personal Protection information in Section 8, Fire Fighting Measures in Section 5, and Reactivity data in Section 9.

**Spill Management:** Contain spill immediately. Do not allow spill to enter sewers or watercourses. Remove all sources of ignition. 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.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

## SECTION 7 HANDLING AND STORAGE

Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame or oxidizing materials. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106--flammable and combustible liquids.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

**HMIS RATINGS:** Health: 1 Flammability: 1 Physical Hazard: 0 PPE: See note 1. (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protective Equipment Index recommendation)

### PERSONAL PROTECTIVE EQUIPMENT

**Eye protection:** Eye protection is not required under normal conditions of 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.

**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:** 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.

### Occupational Exposure Limits (OSHA)

Component	TWA	STEL
Base Lubricating Oils	5 MG / M <sup>3</sup>	10 MG / M <sup>3</sup>
Detergent / Inhibitor System	No Data Available	No Data Available
Pour Point Depressant	No Data Available	No Data Available

Note 1: Employers must determine appropriate PPE for the actual conditions under which this material is used in their workplace.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

The data below are typical values and do not constitute a specification.

Boiling point:	No Data
Pour point:	Varies
Percent volatile:	NIL
Vapor density (air=1):	10
Appearance:	Dark Liquid
Evaporation rate (ethyl ether=1):	1000 X Slower
Odor:	Characteristic Petroleum Odor
Specific gravity:	0.88
Vapor pressure:	< 1 MM HG @ 68 °F
Molecular weight:	No Data
Solubility:	Negligible In Water

## SECTION 10 STABILITY AND REACTIVITY

Stability (thermal, light, etc.):	Stable
Conditions to avoid:	None
Hazardous polymerization:	Will Not Occur
Incompatibility materials to avoid:	May react with strong oxidizing agents
Hazardous decomposition products:	None

## SECTION 11 TOXICOLOGICAL INFORMATION

### IMMEDIATE HEALTH EFFECTS

**Eye Irritation:** The eye irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Irritation:** The skin irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for similar materials or product components.

**Oral Toxicity:** The oral toxicity hazard is based on evaluation of data for similar materials or product components.

**Inhalation Toxicity:** The inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

## SECTION 12 ECOLOGICAL INFORMATION

**Ecotoxicity:** This material is not expected to be toxic beyond to aquatic organisms. The ecotoxicity hazard is based on evaluation of data for similar materials or product components.

**Ready Biodegradability:** This material is not expected to be readily biodegradable. The biodegradability of this product is based on evaluation of data for similar materials or product components.

## SECTION 13 DISPOSAL CONSIDERATIONS

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 material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

## SECTION 14 TRANSPORTATION INFORMATION

The description shown may not apply to all shipping situations. Consult 40CFR, or appropriate Dangerous Goods Regulations, for additional requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**Dot Shipping Description:** Not regulated as a hazardous material for transportation.

**IMO/IMDG Shipping Description:** Not regulated as dangerous goods for transportation under the IMDG code.

## SECTION 15 REGULATORY INFORMATION

### EPCRA 311/312 CATEGORIES:

Immediate (acute) health effects:	Yes
Delayed (chronic) health effects	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactivity hazard	No

**LISTED CHEMICALS:**

This product contains the following SARA Title II, Section 313 chemicals:

Zinc Compounds      CAS# None      WT. % 1.7

**CHEMICAL INVENTORIES:**

All components comply with the chemical inventory requirements of TSCA (United States).

**WHMIS CLASSIFICATION:**

This product is not a controlled substance under the Canadian WHMIS regulations.

<b>SECTION 16 OTHER INFORMATION</b>
-------------------------------------

This mixture may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, FL Viscosity Oil Company must rely upon the hazard evaluation of such components submitted to Viscosity Oil by that product's manufacturer or importer.

**DISCLAIMER OF WARRANTY:**

The information contained herein is based upon data available to us, and reflects our best professional judgment. However, no warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data, 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 any 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 purpose.



# MATERIAL SAFETY DATA SHEET

FL Viscosity Oil Co.

## SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

### NEW HOLLAND AMBRA MULTI G 134

CAS Number: Mixture

SYNONYMS: Tractor Hydraulic Fluid

### Company Information

FL Viscosity Oil Company

600-H Joliet Road

Willowbrook, IL 60527

### Transportation Emergency Response

CHEMTREC (800) 424-9300

### Product Information

MSDS Requests: (630) 850-4000 Website: [www.viscosityoil.com](http://www.viscosityoil.com)

Product Information: (630) 850-4000 Website: [www.viscosityoil.com](http://www.viscosityoil.com)

## SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Components	Hazardous (Y/N)	CAS Number	Amount
Base Lubricating Oils	No	Mixture	75-90%
Detergent / Inhibitor System	No	Mixture	5-10%
Viscosity Index Improver	No	Mixture	5-10%
Pour Point Depressant	No	Mixture	<1 %
Silicone Antifoam Additive	No	Trade Secret	<1%

## SECTION 3 HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

- MAY CAUSE EYE DISCOMFORT UPON DIRECT CONTACT
- MAY CAUSE MINOR SKIN IRRITATION UPON PROLONGED CONTACT

### IMMEDIATE HEALTH EFFECTS

**Eye contact:** May cause mild, short-lasting discomfort to eyes, based on testing of similar products and/or components.

**Skin contact:** Negligible irritation to skin at ambient temperatures. Prolonged or repeated contact may result in oil acne which is characterized by blackheads with possible secondary infection.

Injection of pressurized hydrocarbons under the skin can cause inflammation and swelling, as well as

severe, permanent tissue damage. The initial wound at the injection site may not appear to be serious at first, but, if left untreated, could result in disfigurement or amputation of the affected part.

**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 the formation of an aerosol or misting of this product. The permissible exposure limit (PEL) and threshold limit value (TLV) for this product as oil mist is 5 mg/m<sup>3</sup>. Exposures below 5 mg/m<sup>3</sup> appear to be without significant health risk. The short-term exposure limit for this product as an oil mist is 10 mg/m<sup>3</sup>.

**Ingestion:** This product is relatively low toxicity by ingestion. This product has laxative properties and may result in abdominal cramps and diarrhea.

## DELAYED OR OTHER HEALTH EFFECTS

**Cancer:** None of the components in this material are listed as carcinogens by IARC, NTP, ACGIH or OSHA.

**Other:** On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. This condition is usually asymptomatic as a result of repeated small aspirations. Shortness of breath and cough are the most common symptoms.

See Section 11 for additional information. Risk depends on duration and level of exposure.

## SECTION 4 FIRST AID MEASURES

**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 take victim to hospital immediately.

**Skin contact:** Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately. If material is injected under the skin, seek medical attention immediately.

**Note to physicians:** In an accident involving high-pressure equipment, this type of product may be injected under the skin. Immediate treatment at a surgical emergency center is recommended, no matter how small and insignificant the wound may appear.

**Inhalation:** This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions.

**Ingestion:** Do not induce vomiting. Seek medical attention.

## SECTION 5 FIRE FIGHTING MEASURES

### FIRE CLASSIFICATION:

OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as flammable or combustible.

**NFPA RATINGS:** Health: 1 Flammability: 1 Reactivity: 0  
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protective Equipment Index recommendation)

### FLAMMABLE PROPERTIES:

Flash point: 400°F (ASTM D-92 Cleveland Open Cup)

Autoignition temperature: > 800 °F

Flammable (Explosive) limits (% by volume in air) Lower: No Data Upper: No Data

**Extinguishing Media:** Use dry chemical, foam, or carbon dioxide.

**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.

**Unusual Fire and Explosive Conditions:** Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Protective Measures:** Eliminate all sources of ignition in vicinity of spilled material. Consult Hazards Identification Information in Section 3, Personal Protection information in Section 8, Fire Fighting Measures in Section 5, and Reactivity data in Section 9.

**Spill Management:** Contain spill immediately. Do not allow spill to enter sewers or watercourses. Remove all sources of ignition. 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.

**Reporting:** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

## SECTION 7 HANDLING AND STORAGE

Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame or oxidizing materials. Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106--flammable and combustible liquids.

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

**HMIS RATINGS:** Health: 1 Flammability: 1 Physical Hazards: 0 PPE: See note 1. (0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:-Personal Protective Equipment Index recommendation)

### PERSONAL PROTECTIVE EQUIPMENT

**Eye protection:** Eye protection is not required under normal conditions of 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.

**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:** 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.

### Occupational Exposure Limits (OSHA)

Component	TWA	STEL
Base Lubricating Oils	5 MG / M <sup>3</sup>	10 MG / M <sup>3</sup>
Detergent / Inhibitor System	No Data Available	No Data Available
Viscosity Index Improver	No Data Available	No Data Available
Pour Point Depressant	No Data Available	No Data Available
Silicone Antifoam Additive	No Data Available	No Data Available

Note 1: Employers must determine appropriate PPE for the actual conditions under which this material is used in their workplace.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

The data below are typical values and do not constitute a specification.

Boiling point:	> 800 °F
Pour point:	- 35 °F
Percent volatile:	No Data
Vapor density (air=1):	No Data
Appearance:	Light Bodied Amber Liquid
Evaporation rate (ethyl ether=1):	No Data
Odor:	Slight Sulfur Odor
Specific gravity:	0.88
Vapor pressure:	No Data
Molecular weight:	Varies
Solubility:	Insoluble in water, Soluble In Hydrocarbons

## SECTION 10 STABILITY AND REACTIVITY

Stability (thermal, light, etc.):	Stable
Conditions to avoid:	None
Hazardous polymerization:	Will Not Occur
Incompatibility materials to avoid:	May react with strong oxidizing agents
Hazardous decomposition products:	None

## SECTION 11 TOXICOLOGICAL INFORMATION

### IMMEDIATE HEALTH EFFECTS

**Eye Irritation:** The eye irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Irritation:** The skin irritation hazard is based on evaluation of data for similar materials or product components.

**Skin Sensitization:** The skin sensitization hazard is based on evaluation of data for similar materials or product components.

**Oral Toxicity:** The oral toxicity hazard is based on evaluation of data for similar materials or product components.

**Inhalation Toxicity:** The inhalation toxicity hazard is based on evaluation of data for similar materials or product components.

## SECTION 12 ECOLOGICAL INFORMATION

**Ecotoxicity:** This material is not expected to be toxic beyond to aquatic organisms. The ecotoxicity hazard is based on evaluation of data for similar materials or product components.

**Ready Biodegradability:** This material is not expected to be readily biodegradable. The biodegradability of this product is based on evaluation of data for similar materials or product components.

## SECTION 13 DISPOSAL CONSIDERATIONS

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 material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

## SECTION 14 TRANSPORTATION INFORMATION

The description shown may not apply to all shipping situations. Consult 40CFR, or appropriate Dangerous Goods Regulations, for additional requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**Dot Shipping Description:** Not regulated as a hazardous material for transportation.

**IMO/IMDG Shipping Description:** Not regulated as dangerous goods for transportation under the IMDG code.

## SECTION 15 REGULATORY INFORMATION

### EPCRA 311/312 CATEGORIES:

Immediate (acute) health effects:	Yes
Delayed (chronic) health effects	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactivity hazard	No

### LISTED CHEMICALS:

This product contains the following SARA Title II, Section 313 chemicals:

Zinc Compounds      CAS# None      WT. % 1.7

### CHEMICAL INVENTORIES:

All components comply with the chemical inventory requirements of TSCA (United States).

### WHMIS CLASSIFICATION:

This product is not a controlled substance under the Canadian WHMIS regulations.

## SECTION 16 OTHER INFORMATION

This mixture may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, FL Viscosity Oil Company must rely upon the hazard evaluation of such components submitted to Viscosity Oil by that product's manufacturer or importer.

### DISCLAIMER OF WARRANTY:

The information contained herein is based upon data available to us, and reflects our best professional judgment. However, no warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data, 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 any 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 purpose.

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 541.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Nickel 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: 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).

Hazard class: Skin corrosion or irritation (Category 2). Causes skin irritation (H315).

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). Avoid breathing dust or fumes (P261).

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 1). May cause cancer (H350). Nickel compounds are known human carcinogens by inhalation of dust (IARC-1).

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 through prolonged or repeated exposure (H372).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Nickel chloride, hexahydrate	7791-20-0	NiCl <sub>2</sub> ·6H <sub>2</sub> O	237.72	
Synonyms: Nickel(II) chloride; Nickelous chloride; Nickel dichloride				

### SECTION 4 — FIRST AID MEASURES

**If exposed or concerned:** Call a POISON CENTER or physician (P311). **If inhaled:** If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing (P342+P311). **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 (P301+P310). **If on skin:** Rinse cautiously with water for several minutes (P351). **If skin irritation occurs:** Get medical advice/attention (P362). Take off contaminated clothing and wash before reuse (P333+P313). **If swallowed:** Rinse mouth. Immediately call a POISON CENTER or physician (P301+P330+P310).

### 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.

---

**SECTION 7 — HANDLING AND STORAGE**

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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 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). Contaminated clothing should not be allowed out of the workplace (P272). Use only in a hood or in a well-ventilated area. Wear respiratory protection (P284).

Exposure guidelines: PEL 1 mg/m<sup>3</sup> (OSHA), 0.1 mg/m<sup>3</sup> (inhalable fraction) (ACGIH)

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Green scales. Odorless.

Melting point: 1001 °C

Soluble: Water, alcohol, and ammonium hydroxide

Specific gravity: 3.55

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with peroxides.

Shelf life: Poor, deliquescent. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Toxic, irritant, sensitizer, GI disturbances

ORL-RAT LD<sub>50</sub>: 105 mg/kg

Chronic effects: Known carcinogen, dermatitis

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: Lungs

SKN-RBT LD<sub>50</sub>: 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.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

---

Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #27f 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 (231-743-0).

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**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

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 539.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Nickel

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: Sensitization, skin (Category 1). May cause an allergic skin reaction (H317). Avoid breathing dust (P261).

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).

Hazard class: Specific target organ toxicity, repeated exposure (Category 1). Causes damage to organs through prolonged or repeated exposure (H372). Do not eat, drink or smoke when using this product (P270).

Nickel is a known human carcinogen by inhalation as dust or fume (IARC-1). Nickel in shot form is less hazardous than in dust form.

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Nickel	7440-02-0	Ni	58.69	

### 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.

**If on skin:** Rinse cautiously with water for several minutes (P302+P351). Wash contaminated clothing before reuse (P363).

**If swallowed:** Rinse mouth. Call a POISON CENTER or physician if you feel unwell.

### SECTION 5 — FIRE FIGHTING MEASURES

Flammable as dust or fume.

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.

---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #1. Store with metals and metal hydrides.  
Store in a cool, dry place. When in dust form, use only in a hood or in a well-ventilated area.

---

**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

---

Wear protective gloves and eye protection (P280). Contaminated clothing should not be allowed out of the workplace (P272). Wash hands thoroughly after handling (P264).

Exposure guidelines: PEL 1 mg/m<sup>3</sup> (OSHA); TLV 1.5 mg/m<sup>3</sup> (inhalable fraction) (ACGIH)

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Malleable, silver-gray metal, pellets, shot, powder and strips.

Melting point: 1455 °C

Odorless.

Specific gravity: 8.908

Soluble: Attacked by acids. Highly resistant to strong alkalies.

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with acids, oxidizing agents, and sulfur. Nickel may react violently with titanium, ammonium nitrate, potassium perchlorate, and hydrazoic acid.

Shelf life: Indefinite, if stored properly.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Harmful dust, irritant, sensitizer

ORL-RAT LD<sub>50</sub>: N.A.

Chronic effects: Possible carcinogen

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: Lungs, nose

SKN-RBT LD<sub>50</sub>: 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 #27a 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 (231-111-4), RCRA code D001, D003.

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**SECTION 16 — OTHER INFORMATION**

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Revision Date: March 25, 2014

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 543.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Nickel 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 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 4). Harmful if swallowed or inhaled (H302+332).

Do not eat, drink or smoke when using this product (P270). Avoid breathing dust and fumes (P261).

Hazard class: Skin corrosion or irritation (Category 2). Causes skin irritation (H315).

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). Avoid breathing dust or fumes (P261).

Hazard class: Serious eye damage or irritation (Category 1). Causes serious eye damage (H318).

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).

Hazard class: Specific target organ toxicity, repeated exposure (Category 1). Causes damage to organs through prolonged or repeated exposure (H372). 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
Nickel nitrate hexahydrate	13478-00-7	$\text{Ni}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$	290.82	
Synonyms: Nickel(II) nitrate; Nickelous nitrate; Nickel dinitrate				

### 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 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. Dangerous fire 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 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.



---

**SECTION 7 — HANDLING AND STORAGE**

---

Flinn Suggested Chemical Storage Pattern: Inorganic #3. Store with amides, nitrates, nitrites and azides.

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). Use only in a hood or well-ventilated area (P271).

---

**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

---

Wear protective gloves, protective clothing, eye protection, and face protection (P280). Wash hands thoroughly after handling (P264). Contaminated clothing should not be allowed out of the workplace (P272). Use only in a hood or well-ventilated area (P271). In case of inadequate ventilation, wear respiratory protection (P285).

Exposure guidelines: PEL 1 mg/m<sup>3</sup> (OSHA), 0.1 mg/m<sup>3</sup> (inhalable fraction) (ACGIH)

---

**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

---

Green crystals. Odorless.

Soluble: Water, alcohol, and ammonium hydroxide

Boiling point: 136.7 °C

Melting point: 55 °C

Specific gravity: 2.065

---

**SECTION 10 — STABILITY AND REACTIVITY**

---

Avoid contact with strong reducers and strong acids.

Shelf life: Poor, deliquescent. See Section 7 for further information.

---

**SECTION 11 — TOXICOLOGICAL INFORMATION**

---

Acute effects: Sensitizer, irritant

Chronic effects: Known carcinogen by dust inhalation.

Target organs: Lungs

ORL-RAT LD<sub>50</sub>: 1620 mg/kg

IHL-RAT LC<sub>50</sub>: N.A.

SKN-RBT LD<sub>50</sub>: 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 #27f is one option.

---

**SECTION 14 — TRANSPORT INFORMATION**

---

Shipping name: Nickel Nitrate. Hazard class: 5.1, Oxidizer. UN number: UN2725.

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (236-068-5), 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

[Back](#)

## **MATERIAL SAFETY DATA SHEET**

### **Nickel-Safe Ice Machine Cleaner**



PDF Version of MSDS

#### **I - PRODUCT IDENTIFICATION**

**Company Name:** Nu-Calgon Wholesaler, Inc. **Tel No:** (314) 469-7000, (800) 554-5499  
**Address:** 2008 Altom Court, St. Louis, MO 63146-4151 **CHEMTREC:** (800) 424-9300  
**Product Name:** Nickel-Safe Ice Machine Cleaner **Product Number:** 4287  
**Synonyms:** Descaler for nickel-plated ice machines

#### **II - HAZARDOUS INGREDIENTS OF MIXTURES**

<b><u>MATERIAL</u></b>	<b><u>CAS#</u></b>	<b><u>% By Wt</u></b>	<b><u>TLV</u></b>	<b><u>PEL</u></b>
phosphoric acid	7664-38-2	<30	1mg/m3	1mg/m3
citric acid	77-92-9	<5	ne	ne

All ingredients are TSCA listed.

#### **III - PHYSICAL DATA**

**Vapor Pressure:** N/A **Vapor Density (Air=1) 60-90°F:** N/A  
**Evaporation Rate:** (ether=1) N/A **VOC Content (% by wt.):** ~30  
**Solubility in H<sub>2</sub>O:** Complete **pH @ 1% Solution:** ~2.0  
**Freezing Point °F:** 0 **pH as Distributed:** < 1  
**Boiling Point °F:** >200°F **Appearance:** Green liquid  
**Specific Gravity H<sub>2</sub>O=1 @25°C:** 1.188 **Odor:** Mild chemical odor

#### **IV - FIRE AND EXPLOSION**

**Flash Point F:** None **Flammable Limits:** N/A  
**Extinguishing Media:** Product is nonflammable or combustible.  
**Special Fire Fighting Procedures:** None known.  
**Unusual Fire and Explosion Hazards:** N/A

#### **V - REACTIVITY DATA**

**Stability - Conditions to avoid:** Stable, none known.  
**Incompatibility:** Strong bases, ammonia, chlorine bleach.  
**Hazardous Decomposition Products:** Forced ignition of dried residues may produce oxides of phosphorus.  
**Conditions Contributing to Hazardous Polymerizations:** Will not occur.

#### **VI - HEALTH HAZARD DATA**

**EFFECTS OF OVEREXPOSURE (Medical Conditions Aggravated/Target Organ Effects),**  
**A. ACUTE (Primary Route of Exposure) EYES:** Severely irritating to eyes on contact. May cause burns. (Primary Route of Exposure) **SKIN:** Causes severe irritation. May cause burns on prolonged contact. **INHALATION:** Mists irritating to upper respiratory tract. **INGESTION:** Severely irritating to mouth, throat and stomach.

**B. SUBCHRONIC, CHRONIC, OTHER:** None known.

**C. MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:**

#### **VII - EMERGENCY AND FIRST AID PROCEDURES**

**INHALATION:** Remove to fresh air.

**EYES:** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

**SKIN:** Flush skin with plenty of water for at least 15 minutes. If irritation persists, get medical attention.

**INGESTION:** Do NOT induce vomiting. Give 1 or 2 glasses of water to dilute. Get immediate medical attention.

### VIII - SPILL OR LEAK PROCEDURE

**Spill Management:** Small spills may be mopped up and residues flushed to drain with water. Rinse mop before storing. Neutralize with dilute solution of soda ash.

**Waste Disposal Methods:** Unused material is corrosive waste (D002). Used material may be sewered in accordance with all applicable regulations.

### IX - PROTECTION INFORMATION/CONTROL MEASURES

**Respiratory:** Not normally required.

**Eye Protection:** Splash goggles. **Glove:** Rubber Gloves.

**Other Clothing and Equipment:** None normally required.

**Ventilation:** Good general ventilation.

### X - SPECIAL PRECAUTIONS

**Precautions to be taken in Handling and Storing:** This product will withstand an occasional accidental freezing without loss of performance. Thaw and remix before use.

**Additional Information:** This is a complete product. Do not add or mix with other chemicals.

#### NFPA HMIS RATING

Health Hazard.....: 2 Health Hazard.....: 2

Fire Hazard.....: 0 Fire Hazard.....: 0

Reactivity.....: 0 Reactivity.....: 0

Specific Hazard....: Personal Protection....: X (Sec. 9)

**Revision Date: 06/23/2004**

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

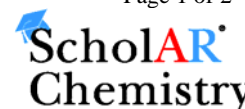
While Seller believes that the information contained herein is accurate, such information is offered solely for its customers' consideration and verification under their specific use conditions.

**Category:** ↵ICE MACHINE

[Back](#)

# Nicotine Solution

MSDS # 487.00



## Section 1: Product and Company Identification

### Nicotine Solution

**Synonyms/General Names:** Cigarette Water Extract: 1 mg / 10 mL**Product Use:** For educational use only**Manufacturer:** Columbus Chemical Industries, Inc., Columbus, WI 53925.

### 24 Hour Emergency Information Telephone Numbers

**CHEMTREC (USA): 800-424-9300****CANUTEC (Canada): 613-424-6666**

Scholar Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

## Section 2: Hazards Identification

*Brownish-tan liquid, mild sweet odor.*

HMIS (0 to4)

Health	3
Fire Hazard	0
Reactivity	0

**DANGER!** Highly toxic, poison by ingestion.

Target organs: Central nervous system.

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

## Section 3: Composition / Information on Ingredients

Nicotine (54-11-5) 0.1%.

Water (7732-18-5), &gt;99%.

## Section 4: First Aid Measures

*Always seek professional medical attention after first aid measures are provided.***Eyes:** Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.**Skin:** Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.**Ingestion:** Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration.

## Section 5: Fire Fighting Measures

Non-combustible solution. When heated to decomposition, emits acrid NO<sub>x</sub> fumes.**Protective equipment and precautions for firefighters:** Use foam or dry chemical to extinguish fire.

Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.



## Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all ignition sources and ventilate area. Contain spill with sand or absorbent material and place material in a sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

## Section 7: Handling and Storage

**Blue****Handling:** Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.**Storage:** Store in Toxic Storage Area [Blue Storage] with other toxic material. Store in a dedicated poison cabinet. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

## Section 8: Exposure Controls / Personal Protection

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with a dust cartridge. Exposure guidelines: Barium compounds: OSHA PEL: 0.5 mg/m<sup>3</sup>, ACGIH: TLV: 0.5 mg/m<sup>3</sup>, STEL: Not Available.

## Section 9: Physical and Chemical Properties

<b>Molecular formula</b>	C <sub>10</sub> H <sub>14</sub> N <sub>2</sub> .	<b>Appearance</b>	Tan solution.
<b>Molecular weight</b>	162.24.	<b>Odor</b>	No odor.
<b>Specific Gravity</b>	N/A.	<b>Odor Threshold</b>	N/A.
<b>Vapor Density (air=1)</b>	N/A.	<b>Solubility</b>	Soluble in water.
<b>Melting Point</b>	N/A.	<b>Evaporation rate</b>	N/A. ( <i>Butyl acetate</i> = 1).
<b>Boiling Point/Range</b>	N/A.	<b>Partition Coefficient</b>	N/A. ( <i>log P<sub>OW</sub></i> ).
<b>Vapor Pressure (20°C)</b>	N/A.	<b>pH</b>	N/A.
<b>Flash Point:</b>	N/A.	<b>LEL</b>	N/A.
<b>Autoignition Temp.:</b>	N/A.	<b>UEL</b>	N/A.

N/A = Not available or applicable

## Section 10: Stability and Reactivity

**Stability:** Stable under normal conditions of use and storage. Avoid heat and ignition sources.

**Incompatibility:** Strong oxidizers, acids

**Shelf life:** Indefinite if stored properly.

## Section 11: Toxicology Information

**Acute Symptoms/Signs of exposure:** *Eyes:* Redness, tearing, itching, burning, conjunctivitis. *Skin:* Redness, itching.

**Ingestion:** Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. **Inhalation:** Irritation of mucous membranes, coughing, wheezing, shortness of breath,

**Chronic Effects:** No information found.

**Sensitization:** none expected

*Nicotine:* LD50 [oral, rat]; 50 mg/kg; LC50 [rat]; N/A; LD50 Dermal [rabbit]; N/A

*Material has not been found to be a carcinogen nor produce genetic, reproductive, or developmental effects.*

## Section 12: Ecological Information

**Ecotoxicity (aquatic and terrestrial):** Toxic to beneficial microorganisms (e.g. soil and sewage treatment microorganisms).. Do not release to environment.

## Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Use a licensed chemical waste disposal firm for proper disposal.

## Section 14: Transport Information

<b>DOT Shipping Name:</b>	Nicotine.	<b>Canada TDG:</b>	Nicoitne.
<b>DOT Hazard Class:</b>	6.1, pg II.	<b>Hazard Class:</b>	6.1, pg II.
<b>Identification Number:</b>	UN1654.	<b>UN Number:</b>	UN1654.

## Section 15: Regulatory Information

**EINECS:** Listed.

**TSCA:** All components are listed or are exempt.

**WHMIS Canada:** D1B: Toxic material causing immediate/serious effects.

**California Proposition 65:** Listed.

*The 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.*

## Section 16: Other Information

**Current Issue Date:** January 23, 2009

*Disclaimer: Scholar Chemistry and Columbus Chemical Industries, Inc., ("S&C") believes that the information herein is factual but is not intended to be all inclusive. The information relates only to the specific material designated and does not relate to its use in combination with other materials or its use as to any particular process. Because safety standards and regulations are subject to change and because S&C has no continuing control over the material, those handling, storing or using the material should satisfy themselves that they have current information regarding the particular way the material is handled, stored or used and that the same is done in accordance with federal, state and local law. S&C makes no warranty, expressed or implied, including (without limitation) warranties with respect to the completeness or continuing accuracy of the information contained herein or with respect to fitness for any particular use.*

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 551.00

Revision Date: March 25, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Ninhydrin 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 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 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).

Hazard class: Skin corrosion or irritation (Category 2). Causes skin irritation (H315).

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).

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
n-Butyl alcohol	71-36-3	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>2</sub> CH <sub>2</sub> OH	74.12	99%
Ninhydrin	485-47-2	C <sub>6</sub> H <sub>4</sub> -1,2-(CO) <sub>2</sub> CO ·H <sub>2</sub> O	195.15	0.5%
Synonyms: Protein and amino acid test solution; Fingerprint test solution.				

### 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. Call a POISON CENTER or physician if you feel unwell (P302+P301+P312).

### SECTION 5 — FIRE FIGHTING MEASURES

Class 1C flammable liquid due to n-butyl alcohol content.

Flash point: 37 °C Flammable limits: Lower: 1.4% Upper: 11.2% Autoignition Temperature: 343 °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**  
None  
established

### 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**

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Flinn Suggested Chemical Storage Pattern: Organic #2. Store with alcohols, glycols, amines and amides. 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).

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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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 n-butyl alcohol) PEL 100 ppm (OSHA); TLV 20 ppm (ACGIH)

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Amber-colored liquid. Odor of butyl alcohol.

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with acid chlorides, acid anhydrides, oxidizing agents, copper, and sources of ignition.

Shelf life: Indefinite, if stored properly.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Absorbed through skin. Eye, skin, respiratory tract irritation. Dizziness. CNS depression.

Chronic effects: N.A.

Target organs: Eyes, skin, respiratory system, central nervous system.

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

ORL-RAT LD<sub>50</sub>: 790 mg/kg (as n-butyl alcohol)

IHL-RAT LC<sub>50</sub>: 8000 ppm/4H (as n-butyl alcohol)

SKN-RBT LD<sub>50</sub>: 3400 mg/kg (as n-butyl alcohol)

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.

Flinn Suggested Disposal Method #18b is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Butanols. Hazard class: 3, Flammable liquid. UN number: UN1120.

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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Not listed.

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**SECTION 16 — OTHER INFORMATION**

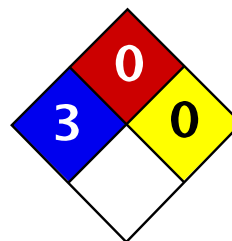
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Consult your copy of the *Flinn Science Catalog/Reference Manual* for additional information about laboratory chemicals.

Revision Date: March 25, 2014





Health	3
Fire	0
Reactivity	0
Personal Protection	

## Material Safety Data Sheet

### Nitric Acid, 1.0N MSDS

#### Section 1: Chemical Product and Company Identification

**Product Name:** Nitric Acid, 1.0N

**Catalog Codes:** SLN1744

**CAS#:** Mixture.

**RTECS:** Not applicable.

**TSCA:** TSCA 8(b) inventory: Water; Nitric acid, fuming

**CI#:** Not applicable.

**Synonym:** Nitric Acid solution, 1 N

**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](http://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
Water	7732-18-5	93.7
Nitric acid, fuming	7697-37-2	6.3

**Toxicological Data on Ingredients:** Nitric acid, fuming LD50: Not available. LC50: Not available.

#### 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), 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. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. 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: Not available.

MUTAGENIC EFFECTS: Not available.



**TERATOGENIC EFFECTS:** Not available.

**DEVELOPMENTAL TOXICITY:** Not available.

The substance may be toxic to lungs, mucous membranes, upper respiratory tract, eyes, teeth.

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 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. 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. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**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:**

Slightly explosive in presence of reducing materials, of organic materials, of metals, of alkalis.

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:**

Reacts explosively with metallic powders, carbides, cyanides, sulfides, alkalies and turpentine.  
Can react explosively with many reducing agents.  
Arsine, phosphine, tetraborane all oxidized explosively in presence of nitric acid.  
Cesium and rubidium acetylides explode in contact with nitric acid.  
Explosive reaction with Nitric Acid + Nitrobenzene + water.  
Detonation with Nitric Acid + 4-Methylcyclohexane.  
(Nitric acid, fuming)

**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. Oxidizing material.  
Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. 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 container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Do not breathe gas/fumes/ vapor/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 alkalis.

**Storage:**

Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

**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:**

Nitric acid, fuming  
TWA: 2 STEL: 4 (ppm) from ACGIH (TLV) [United States] [1999]  
TWA: 2 STEL: 4 (ppm) [Australia]  
TWA: 2 STEL: 4 from NIOSH  
TWA: 5 STEL: 10 (mg/m<sup>3</sup>) from NIOSH  
TWA: 2 STEL: 4 (ppm) from OSHA (PEL) [United States]

TWA: 5 STEL: 10 (mg/m<sup>3</sup>) from OSHA (PEL) [United States] Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** Not applicable.

**Color:** Not available.

**pH (1% soln/water):** Acidic.

**Boiling Point:** The lowest known value is 83°C (181.4°F) (Nitric acid, fuming). Weighted average: 99.23°C (210.6°F)

**Melting Point:** May start to solidify at -41.6°C (-42.9°F) based on data for: Nitric acid, fuming.

**Critical Temperature:** Not available.

**Specific Gravity:** Weighted average: 1.02 (Water = 1)

**Vapor Pressure:** The highest known value is 6.4 kPa (@ 20°C) (Nitric acid, fuming). Weighted average: 2.49 kPa (@ 20°C)

**Vapor Density:** The highest known value is 2.3 (Air = 1) (Nitric acid, fuming). Weighted average: 0.7 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** The highest known value is 0.29 ppm (Nitric acid, fuming)

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, diethyl ether.

**Solubility:**

Easily soluble in cold water, hot water.

Soluble in diethyl ether.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials

**Incompatibility with various substances:**

Reactive with alkalis.

Slightly reactive to reactive with reducing agents, combustible materials, organic materials, metals, acids.

**Corrosivity:**

Extremely corrosive in presence of copper.

Non-corrosive in presence of glass, of aluminum, of stainless steel(304), of stainless steel(316).

**Special Remarks on Reactivity:**

A strong oxidizer.

Reacts violently with alcohol, organic material, turpene, charcoal.  
Violent reaction with Nitric acid + Acetone and Sulfuric acid.  
Nitric Acid will react with water or steam to produce heat and toxic, corrosive and flammable vapors.  
(Nitric acid, fuming)

**Special Remarks on Corrosivity:**

Severe corrosive effect on brass.  
No 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:**

LD50: Not available.  
LC50: Not available.

**Chronic Effects on Humans:**

Contains material which may cause damage to the following organs: lungs, mucous membranes, upper respiratory tract, eyes, teeth.

**Other Toxic Effects on Humans:**

Very hazardous in case of skin contact (irritant), of ingestion, .  
Hazardous in case of skin contact (corrosive), of eye contact (corrosive).  
Slightly hazardous in case of inhalation (lung sensitizer, lung corrosive, skin permeator).

**Special Remarks on Toxicity to Animals:** LDL - Lowest Published Lethal Dose [Human] - Route: Oral; Dose: 430 mg/kg  
(Nitric acid, fuming)

**Special Remarks on Chronic Effects on Humans:**

May cause adverse reproductive effects (effects on newborn and fetotoxicity) based on animal data. (Nitric acid, fuming)

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects:

Skin: Causes severe skin irritation with possible burns. It may be absorbed through the skin

Eyes: Severely irritates eyes with possible eye burns.

Ingestion: Harmful if swallowed. Causes serious gastrointestinal tract irritation with possible burns, nausea, vomiting, severe abdominal pain.

Inhalation: May cause irritation of the mucous membranes and respiratory tract with burning pain in the nose and throat, coughing, sneezing, wheezing, shortness of breath and pulmonary edema. Other symptoms may include nausea, and vomiting.

Chronic Potential Health Effects:

Repeated inhalation may produce changes in pulmonary function and/or chronic bronchitis. It may also affect behavior (headache, dizziness, drowsiness, muscle contraction or spasticity, weakness, loss of coordination, mental confusion), and urinary system (kidney failure, decreased urinary output after several hours of uncorrected circulatory collapse).

Repeated exposure may cause discoloration and/or erosion of teeth (dental enamel).

Eye irritation and respiratory tract signs and symptoms resembling those of frequent upper respiratory viral infections have been associated with chronic nitric acid exposure.

## 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:**

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:** : Nitric Acid UNNA: 2031 PG: II

**Special Provisions for Transport:** Marine Pollutant

### Section 15: Other Regulatory Information

**Federal and State Regulations:**

New York release reporting list: Nitric acid, fuming

Rhode Island RTK hazardous substances: Nitric acid, fuming

Pennsylvania RTK: Nitric acid, fuming

Florida: Nitric acid, fuming

Minnesota: Nitric acid, fuming

Massachusetts RTK: Nitric acid, fuming

New Jersey: Nitric acid, fuming

TSCA 8(b) inventory: Water; Nitric acid, fuming

SARA 302/304/311/312 extremely hazardous substances: Nitric acid, fuming

SARA 313 toxic chemical notification and release reporting: Nitric acid, fuming

CERCLA: Hazardous substances.: Nitric acid, fuming: 1000 lbs. (453.6 kg);

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):** CLASS E: Corrosive liquid.

**DSCL (EEC):**

**HMIS (U.S.A.):**

**Health Hazard:** 3

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:**

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

**Health:** 3

**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 10:59 AM

**Last Updated:** 10/10/2005 10:59 AM

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# SAFETY DATA SHEET

**Airgas**

Nitrogen

## Section 1. Identification

<b>GHS product identifier</b>	: Nitrogen
<b>Chemical name</b>	: nitrogen
<b>Other means of identification</b>	: nitrogen (dot); nitrogen gas; Nitrogen NF, Nitrogen FG
<b>Product use</b>	: Synthetic/Analytical chemistry.
<b>Synonym</b>	: nitrogen (dot); nitrogen gas; Nitrogen NF, Nitrogen FG
<b>SDS #</b>	: 001040
<b>Supplier's details</b>	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
<b>24-hour telephone</b>	: 1-866-734-3438

## Section 2. Hazards identification

<b>OSHA/HCS status</b>	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	: GASES UNDER PRESSURE - Compressed gas

### GHS label elements

**Hazard pictograms**

:



**Signal word**

: Warning

**Hazard statements**

: Contains gas under pressure; may explode if heated.  
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.

**Prevention**

: Not applicable.

**Response**

: Not applicable.

**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** : nitrogen  
**Other means of identification** : nitrogen (dot); nitrogen gas; Nitrogen NF, Nitrogen FG

### CAS number/other identifiers

**CAS number** : 7727-37-9  
**Product code** : 001040

Ingredient name	%	CAS number
Nitrogen	100	7727-37-9

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 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. 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. 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** : Contact with rapidly expanding gas may cause burns or frostbite.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Contact with rapidly expanding gas may cause burns or frostbite.  
**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** : 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. 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. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
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. 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.

- 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. Avoid breathing gas. 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** : 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.
- Large spill** : Immediately contact emergency personnel. Stop leak if without risk. 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. 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.

## Section 7. Handling and storage

**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). 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
Nitrogen	Oxygen Depletion [Asphyxiant]

**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. 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	: Gas. [Compressed gas.]
Color	: Colorless.
Molecular weight	: 28.02 g/mole
Molecular formula	: N <sub>2</sub>
Boiling/condensation point	: -196°C (-320.8°F)
Melting/freezing point	: -210.01°C (-346°F)
Critical temperature	: -146.95°C (-232.5°F)
Odor	: Odorless.
Odor threshold	: Not available.
pH	: Not available.
Flash point	: [Product does not sustain combustion.]
Burning time	: Not applicable.
Burning rate	: Not applicable.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: 0.967 (Air = 1) Liquid Density@BP: 50.46 lb/ft <sup>3</sup> (808.3 kg/m <sup>3</sup> )
Specific Volume (ft <sup>3</sup> /lb)	: 13.8889
Gas Density (lb/ft <sup>3</sup> )	: 0.072
Relative density	: Not applicable.
Solubility	: Not available.
Solubility in water	: Not available.
Partition coefficient: n-octanol/water	: 0.67
Auto-ignition temperature	: Not available.
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	: 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.
Hazardous polymerization	: Under normal conditions of storage and use, hazardous polymerization will not occur.

## Section 10. Stability and reactivity

### 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** : Contact with rapidly expanding gas may cause burns or frostbite.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Contact with rapidly expanding gas may cause burns or frostbite.  
**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

**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.

## Section 11. Toxicological information

<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: 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 <sub>ow</sub>	BCF	Potential
Nitrogen	0.67	-	low

### Mobility in soil






**Soil/water partition coefficient (K<sub>oc</sub>)** : 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.

## Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
<b>UN number</b>	UN1066	UN1066	UN1066	UN1066	UN1066
<b>UN proper shipping name</b>	NITROGEN, COMPRESSED	NITROGEN, COMPRESSED	NITROGEN, COMPRESSED	NITROGEN, COMPRESSED	NITROGEN, COMPRESSED
<b>Transport hazard class(es)</b>	2.2 	2.2 	2.2 	2.2 	2.2 

## Section 14. Transport information

<b>Packing group</b>	-	-	-	-	-
<b>Environment</b>	No.	No.	No.	No.	No.
<b>Additional information</b>	<u>Limited quantity</u> Yes.  <u>Packaging instruction</u> <b>Passenger aircraft</b> Quantity limitation: 75 kg  <b>Cargo aircraft</b> Quantity limitation: 150 kg	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).  <u>Explosive Limit and Limited Quantity Index</u> 0.125  <u>Passenger Carrying Road or Rail Index</u> 75	-	-	<u>Passenger and Cargo Aircraft</u> Quantity limitation: 75 kg <u>Cargo Aircraft Only</u> 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:** This material is listed or exempted.  
**United States inventory (TSCA 8b):** This material is 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** : Sudden release of pressure

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Nitrogen	100	No.	Yes.	No.	No.	No.

## Section 15. Regulatory information

### 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.

### International regulations

#### International lists

#### National inventory

Australia	: This material is listed or exempted.
Canada	: This material is listed or exempted.
China	: This material is listed or exempted.
Europe	: This material is listed or exempted.
Japan	: Not determined.
Malaysia	: Not determined.
New Zealand	: This material is listed or exempted.
Philippines	: This material is listed or exempted.
Republic of Korea	: This material is listed or exempted.
Taiwan	: This material is listed or exempted.

### Canada

WHMIS (Canada)	: Class A: Compressed gas.
CEPA Toxic substances:	This material is not listed.
Canadian ARET:	This material is not listed.
Canadian NPRI:	This material is not 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.

## Section 16. Other information

Canada Label requirements : Class A: Compressed gas.

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

Health	0
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
Press. Gas Comp. Gas, H280	Expert judgment

### History

**Date of printing** : 8/7/2015

**Date of issue/Date of revision** : 8/7/2015

**Date of previous issue** : No previous validation

**Version** : 0.01

**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

**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**

**SECTION 1**

**PRODUCT AND COMPANY IDENTIFICATION**

Trade Name: OATEY #5 PASTE FLUX  
Product No.: 30011, 30012, 30013, 30014, 30041, 53017, 53200  
Product Use: Flux for soldering.  
Formula: See Section 2  
Synonyms: Flux for Soldering Copper Pipe  
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 Department  
Preparation Date: May 1, 2009

**SECTION 2**

**COMPOSITION/INFORMATION ON INGREDIENTS**

<u>INGREDIENTS:</u>	<u>% wt/wt:</u>	<u>CAS NUMBER:</u>	<u>ACGIH TLV TWA:</u>	<u>OSHA PEL TWA:</u>
Petrolatum	60 - 100%	8009-03-8	5 mg/m3 (oil mist)	5 mg/m3 (oil mist)
Zinc Chloride	10 - 30%	7646-85-7	1 mg/m3(fume) 2 mg/m3 STEL	1 mg/m3(fume)
Ammonium Chloride	1 - 5%	12125-02-9	10 mg/m3 (fume) 20 mg/m3 STEL	None Established

**SECTION 3**

**HAZARDS IDENTIFICATION**

Emergency Overview:  
Yellow paste with a slight odor. May cause burns to the eye and skin. Inhalation of fumes may cause respiratory irritation, metal fume fever, chills, nausea and vomiting. Swallowing may cause burns to the mouth or throat, vomiting, diarrhea and kidney or liver disorders. May be harmful if swallowed. Symptoms may be delayed.

OSHA Hazard Classification: Corrosive, target organ effects

**SECTION 4**

**FIRST AID MEASURES**

CALL 1-877-740-5015 or 1-303-623-5716 COLLECT

Skin: Remove contaminated clothing. Wash thoroughly with soap and water. Call a physician or poison control center if irritation persists.

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: Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Keep victim quiet and warm. Call a poison control center or physician immediately.

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: 540 Degrees F (282 Degrees C)  
Flammability: LEL = Not determined, UEL = Not determined  
Extinguishing Small Fires: Use dry chemical, CO2, water, or foam extinguisher  
Media: Large Fires: Evacuate area and call Fire Department immediately  
Special Fire Firefighters should wear positive pressure self-contained  
Fighting breathing apparatus and full protective clothing for fires in  
Procedure: areas where chemicals are used or stored  
Unusual Fire and None known.  
Explosion  
Hazards:  
Hazardous Hydrocarbons, hydrogen chloride, zinc fumes, ammonia, smoke,  
Decomposition carbon monoxide, carbon dioxide and nitrogen oxides.  
Products:

**SECTION 6 ACCIDENTAL RELEASE MEASURES**

Spill or Ventilate area. Stop leak if it can be done without risk. Personnel  
Leak cleaning up the spill should wear appropriate personal protective  
Procedures: equipment. Take up spill with sand, earth or other absorbent material  
and place into a clean, dry leak-proof container.

**SECTION 7 HANDLING AND STORAGE**

Handling: Do not get in eyes. Do not get on skin or clothing. Do not take  
internally. Avoid breathing vapors or fumes. Use only with adequate  
ventilation. Wash thoroughly after handling. Keep container closed when  
not in use. Handle with care. Keep out of reach of children.  
Storage: Store in original, labeled container.  
Other: Containers, even empty will retain residue and may be harmful.

**SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

Ventilation: Good general ventilation (equivalent to outdoors) should be adequate  
for normal use. For operations where the TLV may be exceeded,  
mechanical ventilation such as local exhaust may be needed to maintain  
exposure levels below applicable limits.  
Respiratory For operations where the TLV may be exceeded, a NIOSH approved  
Protection: particulate 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 Wear rubber gloves.  
Protection:  
Eye Safety glasses with sideshields or safety goggles.  
Protection:  
Other: Eye wash and safety shower should be available.

**SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Point: 638 Degrees F (337 Degrees C)  
Melting Point: Not determined  
Vapor Pressure: Not determined  
Vapor Density: (Air = 1) Greater than 1  
Volatile Components: 7-10%  
Solubility In Water: Negligible  
pH: Not applicable  
Specific Gravity: 1.1  
Evaporation Rate: Not applicable  
Appearance: Yellow Paste  
Odor: Very little odor  
Will Dissolve In: Methylene Chloride  
Material Is: Paste

**SECTION 10 STABILITY AND REACTIVITY**

Stability: Stable.  
Conditions To Avoid: None.  
Hazardous: Hydrocarbons, hydrogen chloride, zinc fumes, ammonia, smoke,  
Decomposition: smoke, carbon monoxide, carbon dioxide and nitrogen oxides.  
Products:  
Incompatibility/ Strong oxidizing agents, potassium, cyanides and sulfides.  
Materials To Avoid:  
Hazardous: Will not occur.  
Polymerization:

**SECTION 11 TOXICOLOGICAL INFORMATION**

Inhalation: Fumes from heated product may be corrosive to mucous membranes and the respiratory system. Fumes may cause burning sensation, coughing, wheezing, shortness of breath, cyanosis, fever, chills, muscular pain, anemia, metallic taste in the mouth, headache, nausea, vomiting, sweating, diarrhea and pulmonary edema. Fumes may cause stannosis, a mild benign pneumoconiosis. Repeated inhalation of fumes may cause occupational asthma. Symptoms may be delayed.  
Skin: Contact may cause irritation, ulcerations, burns or dermatitis. Symptoms may be delayed.  
Eye: Vapors or fumes may cause redness, pain, blurred vision and corneal damage. Direct contact may cause burns and eye damage with possible blindness. Symptoms may be delayed.  
Ingestion: May cause irritation or burns to the mouth and throat, nausea, vomiting or diarrhea. Death may occur from strictures of the esophagus and pylorus. Symptoms may be delayed.  
Toxicity Data: Petrolatum: No data available  
Zinc Chloride: Oral rat LD50: 350 mg/kg  
Ammonium Chloride: Oral rat LD50: 1,650 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.  
Mutagenicity: None of the components have been found to be mutagenic.  
Reproductive Toxicity: None of the components are known to cause adverse reproductive effects.  
Medical Conditions: Persons with pre-existing skin, lung, kidney or liver disorders may be at increased risk from exposure to this product.  
Aggravated By  
Exposure:

**SECTION 12 ECOLOGICAL INFORMATION**

No data available.

**SECTION 13 DISPOSAL CONSIDERATIONS**

Waste Disposal: Dispose of in accordance with federal, state, and local regulations.  
It is the responsibility of the end-user to determine at the time of disposal of the product.

RCRA Hazardous Waste Number: None  
EPA Hazardous Waste ID Number: None  
EPA Hazard Waste Class: None

**SECTION 14 TRANSPORT INFORMATION**

DOT

Proper Shipping Name: Not regulated  
Hazard Class/Packing Group: None  
UN/NA Number: None  
Hazard Labels: None

IMDG

Proper Shipping Name: Not regulated  
Hazard Class/Packing Group: None  
UN Number: None  
Label: None

2004 North American Emergency Response Guidebook Number: None

**SECTION 15 REGULATORY INFORMATION**

Hazard Category for Section 311/312: Acute Health, Chronic Health

Section 302 Extremely Hazardous Substances (TPQ): This product does not contain chemicals regulated under SARA Section 302.  
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements:

<u>Chemical</u>	<u>CAS #</u>	<u>% wt</u>
Zinc Chloride	7646-85-7	10-30%

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 Zinc Chloride (30% max) of 1,000 lbs, is 3,300 lbs.

<u>Chemical</u>	<u>CAS #</u>	<u>RQ, lbs.</u>
Zinc Chloride	7646-85-7	1,000
Ammonium Chloride	12125-02-6	5,000

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 chemicals regulated under California Proposition 65.

TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

Canadian WHMIS Classification: Class E; 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: 3    Flammability: 1    Reactivity: 0    Special: None

HMIS Hazard Signal: Health: 3\*    Flammability: 1    Reactivity: 0    PPE: B

**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.



## **TAPE HEAD CLEANER 16OZ 095**

### **MSDS Number**

BVKTZ

### **National Stock Number**

7850-00N051319

### **Product Name**

TAPE HEAD CLEANER 16OZ 095

### **Manufacturer**

SPRAYWAY INC

### **Product Identification**

Product ID:TAPE HEAD CLEANER 16OZ 095

MSDS Date:05/26/1992

FSC:7850

NIIN:00N051319

MSDS Number: BVKTZ

### **Responsible Party**

SPRAYWAY INC

484 VISTA AVE

ADDISON , IL 60101

US

Emergency Phone: 800-228-5635 EXT 009

Info Phone: 708-628-3000

Preparer: PHILLIP T. MILLER

Cage: 55772

### **Contractor**

SPRAYWAY INC

ADDISON, IL 60101-4421

US

708-628-3000

Cage: 55772

### **Ingredients**

ETHANE, 1,1,2-TRICHLORO-1,2,2-TRIFLUORO-;

CAS: 76-13-1

RTECS: KJ4000000

Fraction By Weight: 97.4%

OSHA PEL1000 PPM

ACGIH TLV: 1000 PPM;1250 STEL

CARBON DIOXIDE

CAS: 124-38-9

RTECS: FF6400000

Fraction By Weight: 2-3%

OSHA PEL5000 PPM



ACGIH TLV: 5000PPM;30000 STEL

SHOULD BE CONSIDERED ONLY AS A LAST RESORT IN LIFE

RTECS: 9999999ZZ

OF ARC WELD, OPEN FLAMES/HOT SURF. HEAT &/OR UV

RTECS: 9999999ZZ

1910.132 AND CFR 1910.133.

RTECS: 9999999ZZ

## Hazards

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:RESP IRRIT, HDCH, DIZZ & NAUS. RPTD  
SKIN CONT MAY CAUSE DEFAT RSLTG IN IRRIT. EYE CONT MAY CAUSE IRRIT.  
INGEST OF AEROSOLS IS NOT A LIKELY RTE. CHLOROCARBON MATLS HAVE  
PRDCD SENSIT OF MYOCARDIUM TO EP INEPHRINE IN LAB ANIMALS & COULD  
HAVE SIMILAR EFT IN HUMANS. ADRENOMIMETICS (E.G., EPINEPHRINE) MAY  
(EFTS OF OVEREXP)  
Explanation of Carcinogenicity:NOT RELEVANT  
Effects of Overexposure:HLTH HAZ: BE CONTRAINDICATED EXCEPT FOR  
LIFE-SUSTAINING USES IN HUMANS ACUTELY OR CHRONICALLY EXPOSED TO  
CHLOROCARBONS .  
Medical Cond Aggravated by Exposure:PREEXISTING SKIN/EYE DISORDERS MAY  
BE AGGRAVATED BY EXPOS TO PROD.IN SCREENING STUDIES W/EXPER  
ANIMALS, EXPOS TO TRICHLOROTRIFLUOROETHANE @ APPROX 5000PPM &  
ABOVE, FOLLOWED BY A LG INTRAVENOUS(SUPDAT)

## First Aid

First Aid:EYE:FLUSH W/PLENTY OF WATER FOR @ LST 15 MIN WHILE HOLDING  
LIDS OPEN. GET MED ATTN IF IRRIT PERSISTS. SKIN: REMOVE CONTAMD  
CLTHG. FLUSH SKIN W/WATER, FOLLOWED BY WASHING W/SOAP & WATER. IF  
IRRIT OCCUR S, GET MED ATTN. DO NOT REUSE CLTHG UNTIL CLEANED.  
INHAL: REMOVE TO FRESH AIR & PROVIDE OXYGEN IF BRTHG IS DFCLT. GIVE  
ARTF RESP IF NOT BRTHG. GET MED ATTN. INGEST: GET MED ATTN. NOTE TO  
PHYS:(SUPDAT)

## Fire Fighting

Lower Limits:NON-FLAMM  
Upper Limits:NON-FLAMM  
Extinguishing Media:CARBON DIOXIDE, FOAM &/OR DRY CHEM MAY BE USED.  
Fire Fighting Procedures:NIOSH/MSHA APPRVD PRESS DEMAND SCBA & FULL  
PROT EQUIP. CONTRS SHOULD BE COOLED W/WATER TO PVNT VAP PRESS BUILD  
UP. USE EQUIP/SHIELD, AS REQD, TO (SUPDAT)  
Unusual Fire/Explosion Hazard:@ ELEVATED TEMPS (OVER 54C-130F) CONTRS  
EXPOSED TO DIRECT FLAME/HEAT CONT SHOULD BE COOLED W/WATER TO PVNT  
WEAKENING OF CONTR STRUCTURE. THERMAL DECOMP(SUPDAT)

## Accidental Release

Spill Release Procedures:REMOVE ALL SOURCES OF IGNIT & VENT AREA. SOAK  
UP SPILL W/AN INERT ABSORB & PLACE INTO A DESIGNATED DISP CONTR.  
CONSULT LOCAL REGULATORY AGENCY FOR PROPER DISPOSITION OF MATL.  
Neutralizing Agent:NONE SPECIFIED BY MANUFACTURER.

## Handling

Handling and Storage Precautions:AVOID BRTHG VAP.KEEP AWAY FROM HEAT &  
FLAME.USE W/ADEQ VENT. DO NOT PUNCT/INCIN CONTRS.DO NOT EXPOSE TO  
DIRECT SUNLIGHT/STORE @ TEMPS ABOVE 130F(54C).



Other Precautions:STORE AS LEVEL 1 AEROSOL (NFPA 30B). PLEASE READ & FOLLOW DIREC ON PROD LBL; THEY ARE YOUR BEST GUIDE TO USING PROD IN MOST EFTIVE WAY, & GIVE NEC SFTY PREC TO PROTECT YOUR HLTH. NO SMOKING IN AREA OF USE. DO NOT USE IN GEN VICIN (ING 4)

## Exposure Controls

Respiratory Protection:NONE REQUIRED IF GOOD VENT IS MAINTAINED. IF EXPOS EXCEEDS OCCUP EXPOS LIM, USE A NIOSH/MSHA APPRVD RESP TO PVNT OVEREXP.

Ventilation:LOC EXHST IS ADEQ UNDER NORM CNDTNS, MECH VENT IS OPTIONAL.

Protective Gloves:CHEMICAL RESISTANT GLOVES.

Eye Protection:ANSI APPVD CHEM WORK GOGG .

Other Protective Equipment:WEAR IMPERVIOUS CLTHG TO PVNT SKIN CONT.

Work Hygienic Practices:ENSURE STRICT SANIT CNDTNS ARE CONFORMED TO WHEN WORKING AROUND CHEMS. PROT CLTHG & EQUIP SHOULD BE I/A/W 29CFR (ING 5)

Supplemental Safety and Health

FIRE FIGHT PROC:PROT PERS FROM BURST, RUPTURE/VENT CONTRS. EXPLO

HAZ:PRODS MAY INCL HCL & PHOSGENE . STAB (CNDTS):CAUSE BURSTING.

MED CNDTNS:EPINEPHRINE CHALLENGE, HAS INDUCED SERIOUS CARDIAC IR

REG. FIRST AID:BECAUSE OF INCR RISK OF ELICITING CARDIAC

DYSRHYTHMIAS, CATECHOLAMINE DRUGS, SUCH AS EPINEPHRINE, (ING 3)

## Chemical Properties

Vapor Pres:110@130F

Vapor Density:>1

Spec Gravity:>1(H\*20=1)

Evaporation Rate & Reference:Solubility in Water:NEGLIGIBLE

Appearance and Odor:COLORLESS LIQUID SPRAY; FAINT ETHEREAL ODOR

## Stability

Stability Indicator/Materials to Avoid:YES

ALKALI/ALKALINE EARTH METALS, HEAT, OPEN FLAME & OXIDIZING AGENTS.

Stability Condition to Avoid:DO NOT STORE ABOVE 54C-130F. KEEP AWAY FROM HEAT, DIRECT SUNLIGHT, OPEN FLAMES/SPARKS. DROPPING OF CONTRS MAY (SUPDAT)

Hazardous Decomposition Products:CARBON DIOXIDE, CARBON MONOXIDE, HALOGEN ACIDS, PHOSGENE & ADDNL TOX CHEMS MAY BE FORMED IN SM AMTS. HCL .

## Disposal

Waste Disposal Methods:DO NOT PUNCT/INCIN CONTRS. WHEN CONTENTS ARE DEPLETED CONTINUE TO DEPRESS BUTTON UNTIL ALL GAS IS EXPELLED. DISPOSE OF CONTR I/A/W LOCAL, STATE, AND FEDERAL REGULATIONS.

Disclaimer (provided with this information by the compiling agencies):

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# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Product number** 715-002  
**Product name** Industrial White Grease  
**Effective date** 22-Jun-2011  
**Company information** Sprayway, Inc.  
1005 Westgate  
Addison, IL 60101 United States  
**Company phone** General Assistance 1-630-628-3000  
**Emergency telephone US** 800-424-9300  
**Emergency telephone outside US** 703-527-3887  
**Version #** 08  
**Supersedes date** 31-May-2011

## 2. Hazards Identification

**Emergency overview** Aerosol. Will be easily ignited by heat, spark or flames. CONTENTS UNDER PRESSURE.  
Irritating to skin. Irritating to eyes. Irritating to respiratory system. Prolonged exposure may cause chronic effects. EXTREMELY FLAMMABLE

**Potential health effects**

**Routes of exposure** Inhalation. Skin contact.

**Eyes** Causes eye irritation.

**Skin** Irritating to 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. Irritating to respiratory system.

**Ingestion** Exposure by ingestion of an aerosol is unlikely. May cause delayed lung damage.

**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
Petroleum Distillate	64742-52-5	30 - 40
Aliphatic Petroleum Solvent	64742-89-8	30 - 40
Propane	74-98-6	15 - 20
Paraffinic, Naphthenic Solvent	64742-47-8	8 - 10
Non-hazardous and other components below reportable levels		1 - 2.5

## 4. First Aid Measures

**First aid procedures**

**Eye contact** Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists after washing.

**Skin contact** Wash off immediately with plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention if irritation develops and persists.

**Inhalation** Move to fresh air. For breathing difficulties, oxygen may be necessary. Do not use mouth-to-mouth method if victim inhaled the substance. 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 if symptoms develop or persist.

**Ingestion**

Do not induce vomiting without advice from poison control center. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. 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.

**Notes to physician**

Symptoms may be delayed.

**5. Fire Fighting Measures****Flammable properties**

Heat may cause the containers to explode. 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**

Water fog. Carbon dioxide (CO2). Dry chemicals.

**Protection of firefighters****Protective equipment and precautions for firefighters**

In case of fire and/or explosion do not breathe fumes. Containers should be cooled with water to prevent vapor pressure build up. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

**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.

**Methods for cleaning up**

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 surface thoroughly to remove residual contamination.

**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. Use only in area provided with appropriate exhaust ventilation. Do not use if spray button is missing or defective. Do not re-use empty containers. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin. Avoid contact with eyes. Wear personal protective equipment. Avoid prolonged exposure.

**Storage**

Contents under pressure. Do not puncture, incinerate or crush. Keep away from heat and sources of ignition. Avoid exposure to long periods of sunlight. Store in cool place. Store in a well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. Level 2 Aerosol.

**8. Exposure Controls / Personal Protection****Exposure limits****ACGIH****Components****CAS #****TWA****STEL****Ceiling**

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

**Personal protective equipment****Eye / face protection**

Not normally needed.

**Skin protection**

Wear protective gloves.

**Respiratory protection**

None required where adequate ventilation conditions exist. 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**

368.6 °F (187.2 °C) estimated

Product name: White Lithium Grease Lubricating Spray

Product #: 715-Industrial White Grease

MSDS US

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<b>Color</b>	White.
<b>Density</b>	0.722 g/cm3 estimated
<b>Flammability (HOC)</b>	26.798 kJ/g estimated
<b>Flash back</b>	Yes
<b>Flash point</b>	-156 °F (-104.4 °C) Propellant
<b>Form</b>	Aerosol.
<b>Freezing point</b>	Not available
<b>Odor</b>	Solvent.
<b>pH</b>	Not applicable
<b>Physical state</b>	Liquid.
<b>Pressure</b>	70 - 90 psig @ 70F
<b>Solubility</b>	Partially
<b>Specific gravity</b>	0.7221 estimated

## 10. Chemical Stability & Reactivity Information

<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	May include oxides of carbon. No hazardous decomposition products are known.

## 11. Toxicological Information

<b>Acute effects</b>	Acute LD50: 2886 mg/kg estimated, Rat, Dermal Acute LC50: 4 mg/l/4h estimated, Rat, Inhalation
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### Component analysis - LD50

#### Toxicology Data - Selected LD50s and LC50s

Aliphatic Petroleum Solvent	64742-89-8	Oral LD50 Mouse 5000 mg/kg; Dermal LD50 Rabbit 3000 mg/kg
Paraffinic, Naphthenic Solvent	64742-47-8	Inhalation LC50 Rat >5.2 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg
Petroleum Distillate	64742-52-5	Inhalation LC50 Rat 2.18 mg/L 4 h; Oral LD50 Rat >5000 mg/kg; Dermal LD50 Rabbit >2000 mg/kg
Propane	74-98-6	Inhalation LC50 Rat 658 mg/L 4 h

<b>Sensitization</b>	Not expected to be hazardous by OSHA criteria.
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<b>Teratogenicity</b>	Not expected to be hazardous by OSHA criteria.
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## 12. Ecological Information

<b>Ecotoxicity</b>	LC50 480 mg/L estimated, Fish, 96.00 Hours, EC50 2568 mg/L estimated, Daphnia, 48.00 Hours, IC50 14696 mg/L estimated, Algae, 72.00 Hours, Contains a substance which causes risk of hazardous effects to the environment.
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## 13. Disposal Considerations

<b>Waste codes</b>	D001: Waste Flammable material with a flash point <140 F
<b>Disposal instructions</b>	Contents under pressure. Dispose of this material and its container to hazardous or special waste collection point. 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:

<b>Proper shipping name</b>	Consumer commodity
<b>Hazard class</b>	ORM-D
<b>Subsidiary hazard class</b>	None
<b>Additional information:</b>	
<b>Packaging exceptions</b>	156, 306
<b>Packaging non bulk</b>	156, 306
<b>Packaging bulk</b>	None

**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** None



## 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)	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**

Aliphatic Petroleum Solvent	64742-89-8	Present
Paraffinic, Naphthenic Solvent	64742-47-8	Present
Petroleum Distillate	64742-52-5	Present
Propane	74-98-6	Present

## 16. Other Information

**Further information** HMIS® is a registered trade and service mark of the NPCA.

Product name: White Lithium Grease Lubricating Spray  
 Product #: 715-Industrial White Grease

MSDS US  
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**HMIS® ratings**

Health: 1  
Flammability: 3  
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. The information in the sheet was written based on the best knowledge and experience currently available. 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.

**MSDS sections updated**

Exposure Controls / Personal Protection: Respiratory protection

**Prepared by**

Regulatory Compliance

## MATERIAL SAFETY DATA SHEET

EPA Reg. No. 47371-131-1658

EPA Est. No. 1658-MO-1

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0

HMIS RATING: Health = 2 Flammability = 1 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (543N-69B)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: NON-ACID RESTROOM  
DISINFECTANT/CLEANERAddress: 302 North Fourth Street  
St. Joseph, MO 64501

Date Prepared: October 1, 2008 (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	%
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	2.54
n-Alkyl (C <sub>14</sub> 50%, C <sub>12</sub> 40%, C <sub>16</sub> 10%) dimethyl benzyl ammonium chloride	8001-54-5	not established	N/A	N/A	1.69
Alcohols, C <sub>9-11</sub> , ethoxylated	68439-46-3	not established	N/A	N/A	---
Edtate Disodium	139-33-3	not established	N/A	N/A	---
Deionized water	7732-18-5	none	N/A	N/A	---

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 210°F      Specific Gravity (H<sub>2</sub>O = 1): 25°C = 1.00 & 39°C = 1.00  
 Vapor Pressure (mm Hg.): 17.6      Percent Volatile by Volume (%): 94.7  
 Vapor Density (AIR = 1): 0.6      Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete      Appearance and Odor: clear, Light blue liquid; floral odor  
 pH of concentrate: 7.2 - 8.2

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: >200°F (Tag Closed Cup)      Flammable Limits: LEL = Not applicable      UEL = Not applicable  
 Extinguishing Media: Foam, alcohol foam, carbon dioxide, dry chemical, water  
 Special Fire Fighting Procedures: Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. 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: N/A  
 Incompatibility (Materials to Avoid): Strong oxidizing and reducing agents.  
 Hazardous Decomposition Products or Byproducts: Thermal decomposition may produce toxic vapors/fumes of Hydrogen chloride, amines, and other organic materials, and oxides of carbon and nitrogen  
 Hazardous Polymerization: Will not occur      Conditions to Avoid: None known to Hillyard

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? yes      Skin? yes      Eye? Yes      Ingestion? yes

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. From previous experience with a 2 oz. per gallon alkaline quat, the oral LD50 (rat): 1850 mg/kg; Dermal LD50 (Rabbit): 4430 mg/kg.; Eye: Diluted product 1:64 (rabbit) essentially non-irritating; Skin irritation: Diluted product 1:64 (rabbit) Non-irritating. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known to Hillyard.

## Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No      I.A.R.C. Monographs = No      OSHA = No

Signs and Symptoms of Exposure: Direct eye contact with concentrate can cause severe eye irritation; and direct skin contact will produce severe irritation, which upon prolonged contact may produce burns. Overexposure to fine fog mist of product can produce irritation of the mucous membranes. Ingestion can produce immediate burning pain in the mouth, throat and abdomen; severe swelling of the larynx; skeletal muscle paralysis affecting the ability to breathe; circulatory shock; and /or convulsions.

## SECTION VI -- HEALTH HAZARD DATA continued:

**Medical Conditions Generally Aggravated by Exposure:** None known to manufacturer.

**Emergency and First Aid Procedures:** Eyes: Flush with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician is not available, flush for additional 15 minutes and then transport victim to medical care. Skin: Wash with large amounts of running water, and soap if available, for 15 minutes; Remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminated shoes before reuse. Ingestion: If swallowed, immediately give 3-4 glasses of milk (if unavailable, give water). DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person. Inhalation: Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available. Get immediate medical attention. NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Supplemental oxygen and other measures to support breathing may be needed to combat circulatory shock. Persistent convulsions may be controlled by the cautious intravenous injection of a short acting barbiturate drug.

## SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps To Be Taken In Case Material Is Released Or Spilled:** Caution. Floors may become slippery. Wear appropriate protective gear and respiratory protection where mist or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred). Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers of recovery or disposal. Keep spill out of sewers and open bodies of water.

**Waste Disposal Method:** Dispose of in compliance with all federal, state and local laws and regulations. Incineration is the preferred method.

**Precautions To Be Taken In Handling And Storing:** Keep away from children.

**Other Precautions:** 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 & Community Right to Know Act of 1986 and 40 CFR Part 372.

## SECTION VIII -- CONTROL MEASURES

**Ventilation:** In processes where mists or vapors must be generated, proper ventilation must be provided in accordance with good ventilation practices. **Respiratory Protection (Specify Type):** In processes where mists or vapors may be generated, a

NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls. **Protective Gloves:**

Rubber or neoprene, when needed, to prevent skin contact with concentrate. **Eye Protection:** Wear chemical splash goggles

where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions. **Other Protective**

**Clothing or Equipment:** Eye wash; safety shower, protective clothing (long sleeves, coveralls or other, as appropriate), when needed to prevent skin contact with concentrate. **Work / Hygienic Practices:** Wash hands 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 **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.

# MATERIAL SAFETY DATA SHEET

(COMPLIES WITH 29CFR 1910.1200)

## SECTION I - CHEMICAL PRODUCT & COMPANY IDENTIFICATION

**Identity (As Used on Label and List):** Non-Butyl Plus  
**Product Class:** Water-based degreaser  
**Emergency Telephone Number:** 800-255-3924  
**Telephone Number for Information:** 651-481-1900  
**Manufacturer's Name and Address:**  
Multi-Clean®,  
600 Cardigan Road  
Shoreview, MN 55126

## SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS

### Hazardous Components (Specific Chemical Identity):

Chemical	Common Name(s)	%
A	Sodium Metasilicate Pentahydrate CAS #6834-92-0	1 - 5
B	Ethoxylated Alcohol CAS #34398-01-1	1 - 5
C	Dipropylene Glycol Methyl Ether CAS #34590-94-8	1 - 5
D	Propylene Glycol n-Butyl Ether CAS #5131-66-8	1 - 5
E	Water CAS #7732-18-5	60 - 100

## SECTION III - HAZARDS IDENTIFICATION

### Emergency Overview

**Appearance and Odor:** Blue liquid, mild solvent odor.

**Primary Hazards:** Corrosive

### Potential Health Hazards

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

**Eye:** May cause chemical burns.

**Skin:** May cause chemical burns.

**Ingestion:** May be harmful if swallowed.

**Inhalation:** Overexposure to vapors may be harmful.

**Signs and Symptoms of Exposure:** Irritation on direct contact.

**Carcinogenicity:** NTP? No IARC Monographs? No

**OSHA Regulated?** No

**Target Organ (s):** Skin, eyes, respiratory system. Gross exposure to vapors may affect central nervous system, liver and kidneys.

**Medical Conditions Generally Aggravated by Exposure:** N. Av.

**Health Hazards, Chronic:** Over exposure to Dipropylene Glycol Monomethyl Ether or its components has apparently been found to cause the following effects in laboratory animals: Mild, reversible liver effects.

## SECTION IV - FIRST AID MEASURES

### Emergency and First Aid Procedures:

**If Swallowed:** Do not induce vomiting. If the person can swallow, give several glasses of water. Obtain immediate medical attention. **Eye Contact:** Flush eyes with running water for at least 15 minutes. Obtain medical attention immediately. **Skin Contact:** Flush thoroughly with cool water. Remove and wash contaminated clothing before reuse.

**Sources Used:** Raw material data, general toxicology from the trade for similar products.

## SECTION V - FIRE FIGHTING MEASURES

**Flammability:** No **Autoignition Temperature:** N. Ap.

**Flash Point (method used):** None

**Flammable Limits:** N. Ap. LEL UEL

**Extinguishing Media** N. Ap.

**Water?** **Foam?** **Water Fog?**  
**Alcohol Foam?** **CO<sub>2</sub>?** **Dry Chemical?**  
**Vaporizing Liquid?** **Other?**

**Special Fire Fighting Procedures:** N. Ap.

**Unusual Fire and Explosion Hazards:** N. Av.

**TDG Flammability Classification:** Non-flammable

**Sensitivity to Mechanical Impact:** None

**Sensitivity to Static Discharge:** None

## SECTION VI - ACCIDENTAL RELEASE MEASURES

### Steps to be Taken in Case Material is Released or Spilled:

Dike and contain spill with inert material (sand, earth, etc). Collect spill with mop, absorbent material (example: floor-dri) or vacuum. Thoroughly rinse affected area with water.

## SECTION VII - HANDLING AND STORAGE

### Precautions to be Taken in Handling and Storing:

Normal care in handling and storage.

**Other Precautions:** Keep out of reach of children. Keep from freezing.

## SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

**Respiratory Protection (Specify Types):** Not required

**Ventilation:** Local Exhaust: Not required **Special:** Not required

**Mechanical (General):** Ventilate to keep vapor levels below PEL and TLV, listed in Section XI. **Other:** Not

required

**Protective Gloves:** Natural rubber or synthetic.

**Eye Protection:** Approved safety goggles or glasses. **Footwear:** Chemical resistant

**Other Protective Clothing or Equipment:** Not required

**Work/Hygienic Practices:** Do not contaminate food or beverages with cleaning chemicals.

## SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

**Boiling Point:** Approximately 212°F

**pH:** 13.1 +/- 0.2

**Specific Gravity (H<sub>2</sub>O) = 1:** 1.05

**% Volatile:** > 75

**Vapor Density (Air = 1):** > 1

**Odor Threshold:** N. Av.

**Evaporation Rate (Butyl Acetate = 1):** N. Av.

**Oil/Water Distribution**

**Solubility in Water:** Complete

**Coefficient:** N. Av.

**Vapor Pressure (MM HG):** N. Av.

**Melting Point:** N. Ap.

## SECTION X - STABILITY AND REACTIVITY

**Stability:** **Unstable:** **Stable:** X

**Conditions to Avoid:** N. Ap.

**Incompatibility (materials to avoid):** N. Av.

**Hazardous Decomposition or By-products:** N. Av.

**Hazardous Polymerization:** May occur:

**Will not occur:** X

**Conditions to Avoid:** N. Ap.

## SECTION XI - TOXICOLOGICAL INFORMATION

Chemical	OSHA PEL	ACGIH TLV	Recom.	LD50	LC50
A	N. Ap.	N. Ap.	2 mg/M <sup>3</sup>	800 mg/kg (rat, oral)	N. Av.
B	N. Av.	N. Av.	N. Av.	0.7-1.7 gm/kg (rat, oral)	N. Av.
C	100 ppm (skin)	100 ppm (skin)	N. Av.	5.6 gm/kg (rat, oral)	>33,000 ppm (rat)
D	None	None	N. Av.	3,300 mg/kg (rat, oral)	N. Av.
E	N. Ap.	N. Ap.	N. Av.	N. Av.	N. Av.

**Teratogen, Mutagen, Reproductive Toxin Status:** No known relevance to humans.

**Toxicologically Synergistic Products:** N. Av.

## SECTION XII - ECOLOGICAL INFORMATION

**Ecotoxicological Information:** N. Av.

**Chemical Fate Information:** N. Av.

## SECTION XIII - DISPOSAL CONSIDERATIONS

### Waste Disposal Method:

Dispose of spilled material in accordance with local, state and federal regulations. Waste from normal cleaning procedures may be sewerred, depending on the materials and/or contaminants being cleaned as well as state, federal and local sewer commission regulations.

**RCRA Hazard Class:** D002, characteristic corrosive

## SECTION XIV - TRANSPORT INFORMATION

**Shipping Classification:** Corrosive liquid, basic inorganic, N.O.S. (Containing sodium metasilicate), Class 8

**UN Number:** 3266

**Packing Group:** II

## SECTION XV - PREPARATION DATA

**Prepared By:** Ron Camp

**Telephone Number:** 651-481-1900

**Date:** 4-12

## SECTION XVI - REGULATORY INFORMATION

### US Federal Regulations

**TSCA Status:** All ingredients listed.

**CERCLA Reportable Quality:** N. Av.

### SARA Title III

**Section 302 Extremely Hazardous Chemicals:** None

**Section 311/312 Hazard Category:** Immediate health, chronic health.

**Section 313 Toxic Chemicals:** None

### State Regulations

### International Regulations

**WHMIS Controlled Product Hazard Class:** E

## SECTION XVII - OTHER INFORMATION

None

N. Ap. - Not Applicable; N. Av. - Not Available

## NFPA SYSTEM

2 A. Health Hazard 0 A. Fire Hazard 0 A. Reactivity Hazard

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# 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.

## MATERIAL SAFETY DATA SHEET

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<sub>2</sub> and Dry Chemical.

Hazards from combustion products: Acid 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: Acid 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.



# MATERIAL SAFETY DATA SHEET

## SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

<u>Company Name</u> Nu-Calgon Wholesaler, Inc.	<u>Phone Number</u> (314) 469-7000 / (800) 554-5499		<u>CHEMTREC</u> (800) 424-9300	
<u>Street Address</u> 2008 Altom Court	<u>City</u> St. Louis	<u>State</u> MO	<u>Postal Code</u> 63146-4151	<u>Last Update</u> 1/25/07
<u>Product Name</u> Nu-Brite	<u>Product Number</u> 4291	<u>Product Use</u> Coil Cleaner/Degreaser		<u>EPA Registration #</u> N/A

## SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Ingredients</u>	<u>% By Wt.</u>	<u>CAS Number</u>	<u>TLV</u>	<u>PEL</u>
Sodium Hydroxide (Caustic Soda)	20-30%	1310-73-2	2mg/M3 (TWA/STEL)	2 mg/M3
Nonionic Surfactant	1-10%	Proprietary	None Established	None Established

## SECTION 3 – HAZARD IDENTIFICATION

**Emergency Overview:** CORROSIVE LIQUID. Contains Sodium Hydroxide. Do not get in eyes, on skin or clothing. Avoid breathing spray or mist. Use only with adequate personal protection equipment.

### Potential Health Effects

**Eyes:** Prolonged contact with eyes will cause severe irritation, possibly burns and permanent damage.

**Skin:** Contact with skin can cause severe irritation with pain, possibly produce severe chemical burns and destroy tissues; irritation may be delayed.

**Ingestion:** Harmful or fatal if swallowed - causes severe burns of the mouth, throat and stomach if ingested.

**Inhalation:** Inhalation of generated mists or spray may cause respiratory irritation or chemical burns of mouth, throat, and stomach.

**Chronic Exposure:** Chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis.

**Carcinogenicity:** None

**Medical Conditions Aggravated by Exposure:** An existing dermatitis and respiratory illnesses.

## SECTION 4 – FIRST AID MEASURES

**Eyes:** Flush eyes with water for at least 30 minutes and call a physician immediately. Speed of action is essential.

**Skin:** Remove contaminated clothing. Wash with large amounts of soap and water. If skin still feels slippery or if irritation persists, continue washing. Consult a physician in the case of any prolonged irritation..

**Ingestion:** Do not induce vomiting. Immediately give large quantities of water or (preferably) milk and call a physician. Speed of action is essential.

**Inhalation:** Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call a physician.

## SECTION 5 – FIREFIGHTING MEASURES

**Flash Point:** None to Boiling °F

**Autoignition Temp:** N/A°C/N/A°F

**Hazardous Products of Combustion:** Burning may produce oxides of carbon and other substances.

**Flammable Limits in Air:** N/A

**Extinguishing Media:** This product is not combustible. Water spray, foam, CO2, or dry chemicals may be used in areas where this product is stored.

**Fire and Explosion Hazards:** None

**Special Firefighting Procedures:** Do not enter confined fire spaces without protective clothing and a self-contained air supply.

## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Spill or Leak:** CORROSIVE LIQUID. Before attempting clean up, refer to personal protection information. Do not touch or walk through spilled material. Stop leak if you can without risk. Dike ahead of large spills to prevent run-off. Mop, pump or take up with sand or other inert absorbent and reclaim into containers for reuse, recycle or proper disposal.

## SECTION 7 – HANDLING AND STORAGE

**Handling Procedures and Equipment:** CORROSIVE MATERIAL. Avoid contact with corrosion sensitive metals, leather and wood. Do not get in eyes, on skin or clothing. Sprays and generated mists can be dangerous. Use only according to dilution instructions and with adequate protective clothing.

**Storage Requirements:** CORROSIVE MATERIAL. Keep container closed when not in use. DOT Class: Corrosive liquid, basic, inorganic, n.o.s. (contains sodium hydroxide), 8, UN3266, PG-II. KEEP OUT OF REACH OF CHILDREN. Store away from acids and oxidizing materials.

## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

**Respiratory Protection:** Specific use conditions (spraying/confined spaces) where regulatory limits for NaOH are exceeded may require local exhaust ventilation to prevent release of mist &/or vapors into work environment. If ventilation is not adequate, use NIOSH/MSHA approved respirator with alkaline mist/gas cartridge & full face piece.

**Eye Protection:** Close fitting safety glasses/goggles/ face shield depending upon conditions of use.

**Protective Clothing:** Impervious protective clothing appropriate to minimize contact (ie: rubber boots, apron, faceshield) especially where sprayback/misting conditions exist. Rubber protective gloves.

**Exposure Guidelines:** NaOH TLV = 2mg/M3. Eye wash station and safety shower in handling area.

**Specific Engineering Controls (such as ventilation, enclosed process):** Insure adequate ventilation to control NaOH airborne concentration below TLV of 2Mg/M3. Eye wash station and safety shower in handling area.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical Form:</b> Liquid	<b>Freezing Point:</b> ~0°C/~32~0°F	<b>% Volatile by Weight:</b> ~76%
<b>Color:</b> Blue	<b>Vapor Density [air =1]:</b> Not Determined	<b>Evaporation Rate:</b> (vs. H2O): About the same.
<b>Odor:</b> No distinct odor	<b>Vapor Pressure:</b> Not Determined	<b>Specific Gravity:</b> (H2O=1.0): 1.252 (+/- 0.005)
<b>Boiling Point:</b> 100°C/212°F	<b>Solubility in Water:</b> Complete	<b>pH (concentrate):</b> 10% pH=13.3 (+/- 0.5)

## SECTION 10 – STABILITY AND REACTIVITY

**Chemical Stability:** Stable

**Hazardous Polymerization:** None

**Incompatibilities:** Strong acids/oxidizers. Do not mix with chlorinated detergents (bleach).

**Reactive Conditions to avoid:** Do not mix with chlorinated detergents (bleach) or any other chemicals.

**Decomposition Products:** Burning may produce oxides of carbon and other substances.

## SECTION 11 – TOXICOLOGICAL INFORMATION

<b>Hazardous Ingredients</b>	<b>CAS #</b>	<b>EINECS #</b>	<b>LD 50 of Ingredient (Specify Species)</b>	<b>LC50 of Ingredient (Specify Species)</b>
Sodium Hydroxide	1310-73-2	No Data.	1350 mg/kg (Oral ; Rat)	358 mg/L (Fathead Minnow)
Nonionic Surfactant	Proprietary	No Data.	>5.0 g / kg (Oral ; Rat)	Not Determined

## SECTION 12 – ECOLOGICAL INFORMATION

<b>Hazardous Ingredients</b>	<b>Aquatic Toxicity Data</b>
Sodium Hydroxide	LC50 (96 hr.) (fathead minnow) : 358 mg/L
Nonionic Surfactant	Not Determined

## SECTION 13 – DISPOSAL CONSIDERATIONS

**Waste Disposal:** Dispose of in an approved waste facility according to Federal, State and local regulations.

## SECTION 14 – TRANSPORTATION INFORMATION

**Special Shipping Information:** No Data.

<u>Purview</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
<b>DOT</b> (Land)	Corrosive liquid, basic, inorganic, n.o.s. (contains sodium hydroxide)	UN3266	II	8
<b>IMO</b> (Water)	No Data.	No Data.	No Data.	No Data.
<b>ICAO</b> (Air)	No Data.	No Data.	No Data.	No Data.

## SECTION 15 – REGULATORY INFORMATION

<b>WHMIS Classification:</b> (Workplace Hazardous Material Information System)	Class E - Corrosive Material
<b>SARA Title III:</b> (Superfund Amendments & Reauthorization Act)	Contains no Section 313 listed substances subject to reporting requirements.
<b>OSHA:</b> (Occupational Safety & Health Administration)	OHSA Hazardous - Corrosive Liquid. Acute & Chronic Hazard.
<b>TSCA:</b> (Toxic Substance Control Act)	All ingredients are TSCA registered.
<b>VOC:</b> (volatile Organic Compounds)	Less than 1%
<b>CPR:</b> (Canadian Controlled Products Regulations)	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations.
<b>EINECS:</b> (European Inventory of Existing Commercial Chemical Substances)	No Data.
<b>DSL / NDSL:</b> (Canadian Domestic Substance List)(Non-Domestic Substance List)	Not all ingredients within this product are on the DSL and/or NDSL.
<b>CERCLA:</b> (Comprehensive Response Compensation & Liability Act)	RQ = >5,000 lbs (NaOH)
<b>IDL:</b> (Canadian Ingredient Disclosure List)	Sodium hydroxide is listed on the IDL.
<b>NFPA (HMIS) Rating:</b> (Hazardous Materials Identification System)	Health = 3   Flammability = 0   Reactivity = 1

## SECTION 16 – OTHER INFORMATION

No Data.

The information contained herein is based on the data available to us and is believed to be correct. However, Nu-Calgon Wholesaler Inc. makes no warranty, expressed, or implied, regarding the accuracy of this data or the results to be obtained from the use thereof. Nu-Calgon Wholesaler Inc. assumes no liability for injury from the use of the product described herein.



## Section 1 – Product & Company Identification

## Section 2 – Hazards Identification

This product is a liquid that is insoluble in water. Direct eye contact may cause minor, short term irritation. Short term skin exposure is not expected to be irritating. Inhalation and ingestion are not anticipated routes of exposure during normal conditions of use.

- Eye

This product is not expected to cause eye irritation under normal conditions of use. Symptoms of slight eye irritation may result when direct contact occurs, or when exposed to high mist levels in poorly ventilated areas.

- Skin

Short term skin contact is not expected to cause skin irritation. Prolonged or repeated direct exposure to the skin may result in symptoms of irritation and redness. In severe cases, prolonged or repeated contact may result in dermatitis accompanied by symptoms of irritation, itching, dryness, cracking and/or inflammation.



Product Name.....: RIDGID Nu-Clear Thread Cutting Oil

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- Inhalation:

This product has low volatility and so is not expected to cause respiratory tract irritation during normal conditions of use. Exposure to high mist levels in poorly ventilated areas may cause upper respiratory tract irritation and difficulty breathing.

- Ingestion:

Ingestion may cause slight stomach irritation and discomfort.

- Potential Chronic Health Effects

No further data known.

- Medical Conditions Aggravated By Exposure:

No further data known.

- Carcinogenicity:

This product is not listed as a known or suspected carcinogen by IARC, OSHA or the NTP.

---

### Section 3 – Composition / Information On Ingredients

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Components listed in this section may contribute to the potential hazards associated with exposure to the concentrate. The product may contain additional non-hazardous or trade secret components.

<u>Component:</u>	<u>CAS #</u>	<u>% By Weight</u>
Mineral Oil	64742-54-7	> 95
Sulfur Additive Package	Mixture	< 5

#### CARCINOGENIC COMPONENTS:

This product contains no carcinogens.

Product Name.....: RIDGID Nu-Clear Thread Cutting Oil

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**Section 4 – First Aid Measures**

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**EYE CONTACT:**

Upon direct eye contact, hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. If irritation is due to exposure to mist or vapors, remove the individual to fresh air. If irritation persists, flush the eyes with clean water until the irritation subsides. If symptoms persist, contact a physician.

**SKIN CONTACT:**

Remove product from the skin by washing with a mild soap and water. Contaminated clothing should be removed to prevent prolonged exposure. If symptoms of exposure persist, contact a physician.

**INHALATION:**

Inhalation is not an expected route of exposure. If respiratory irritation or distress occurs, remove the employee to fresh air. Contact a physician or other medical professional if irritation or distress persists.

**INGESTION:**

If small amounts are ingested, first aid measures are not likely to be necessary. If larger amounts are ingested or if symptoms of ingestion occur, dilute stomach contents with two glasses of water or milk. (NOTE: Do NOT give anything by mouth to an unconscious person.) Do not induce vomiting without medical supervision. If vomiting occurs spontaneously, keep airway clear. If symptoms of ingestion persist, seek medical attention.

**NOTE TO PHYSICIANS:**

No further data known.

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**Section 5 – Fire Fighting Measures**

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**FIRE AND EXPLOSIVE PROPERTIES:**

Flashpoint.....:	385°F Cleveland Open Cup
Flammability Limits .....	LEL - N/A
	UEL - N/A

Product Name.....: RIDGID Nu-Clear Thread Cutting Oil

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#### EXTINGUISH MEDIA:

In accordance with NFPA guidance, dry chemical, foam or CO2 fire extinguishers are all acceptable. Note that while water fog extinguishers are also acceptable, do NOT apply a direct stream of water onto burning product because it may cause spreading and increase fire intensity.

#### UNUSUAL FIRE AND EXPLOSION HAZARDS:

No further data known.

#### FIRE-FIGHTING PROCEDURES AND EQUIPMENT:

Emergency responders in the danger area should wear bunker gear and self-contained breathing apparatus for fires beyond the incipient stage. See Section 8 of the MSDS for other PPE to be worn as conditions warrant.

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### **Section 6 – Accidental Release Measures**

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#### PERSONAL PRECAUTIONS:

Use personal protection recommended in Section 8.

#### ENVIRONMENTAL:

This material is a water pollutant. Do not let spilled or leaking material enter waterways.

#### CLEAN-UP MEASURES:

Important: As with any spill or leak, before responding, ensure that you are familiar with the potential hazards and recommendations of the MSDS. Appropriate personal protective equipment must be worn.

If possible, safely contain the spill with dikes or other spill response equipment appropriate for petroleum or organic material releases. Take measures to prevent spreading of product. Note that while product will ignite, it will not readily burn. However, as a precaution, eliminate ignition sources. Prevent from entering sewers or waterways. Large volumes may be transferred to an appropriate container for proper disposal. Small volumes or residues may be soaked up with absorbents. Spill response materials should be collected for proper disposal.

Product Name.....: RIDGID Nu-Clear Thread Cutting Oil

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## Section 7 – Handling And Storage

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### HANDLING:

As with any industrial chemical, handle the product in a manner that minimizes exposure to practicable levels. Prior to handling, consult Section 8 of this MSDS to evaluate personal protective equipment needs. Open containers slowly to relieve any pressure. Follow all other standard industrial hygiene practices.

Empty containers may contain product residue. All safety precautions taken when handling this product should also be taken when handling empty drums and containers. Keep containers closed when not in use.

Product residue in empty containers is combustible but will not readily burn. Note, however, that excessive heating or cutting of empty containers may create an ignition source sufficient to start a fire and, in extreme cases, cause an explosion.

### STORAGE:

Protect product quality by storing indoors and away from extreme temperatures. Close all containers when not in use.

### SPECIAL COMMENTS:

No further data known.

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## Section 8 – Exposure Controls / Personal Protection

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### EXPOSURE GUIDELINES:

#### Component

Mineral Oil	ACGIH TLV:	5 mg / m3 (as mist)
	ACGIH STEL:	10 mg / m3 (as mist)
	OSHA PEL:	5 mg / m3 (as mist)
Sulfur Additive Package	No information	

Product Name.....: RIDGID Nu-Clear Thread Cutting Oil

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#### ENGINEERING CONTROLS:

Normal general ventilation is expected to be adequate. It is recommended that ventilation be designed in all instances to maintain airborne concentrations at lowest practicable levels. Ventilation should, at a minimum, prevent airborne concentrations from exceeding any exposure limits.

The user may wish to refer to 29 CFR 1910.1000(d) (2) and the ACGIH "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices" (Appendix C) for the determination of exposure limits of mixtures. An industrial hygienist or similar professional may be consulted to confirm that the calculated exposure limits apply.

#### PERSONAL PROTECTIVE EQUIPMENT:

Selection of personal protective equipment should be based upon the anticipated exposure and made in accordance with OSHA's Personal Protective Equipment Standard found in 29 CFR 1910 Subpart I. The following information may be used to assist in PPE selection.

- Eye Protection

Wear eye protection appropriate to prevent eye exposure. Where splashing is not likely, chemical safety glasses with side shields are recommended. Where splashing may occur, chemical goggles or full face shield is recommended.

- Skin Protection

Gloves are not normally needed during normal conditions of use. If health effects are experienced, oil or chemical resistant gloves such as butyl or nitrile are recommended.

Where splashing or soaking is likely, wear oil or chemical resistant clothing to prevent exposure.

Product Name.....: RIDGID Nu-Clear Thread Cutting Oil

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- Respiratory Protection

A respirator may be worn to reduce exposure to vapors, dust or mist. Select a NIOSH/MSHA approved respirator appropriate for the type and physical character of the airborne material. A self-contained breathing apparatus is recommended in all situations where airborne contaminant concentration has not been confirmed to be below safe levels. Respirator use should comply with the OSHA Respirator Protection Standard found in 29 CFR 1910.134.

- General Hygiene Considerations

Wash thoroughly after handling.

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### Section 9 – Physical And Chemical Properties

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Physical Appearance:.....:	Clear Yellow
Odor. ....:	Mild Petroleum
Physical State.....:	Liquid
Water Solubility.....:	Insoluble
Specific Gravity.....:	.878

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### Section 10 – Stability And Reactivity

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#### STABILITY:

This product is stable.

#### CONDITIONS TO AVOID:

Avoid contact with incompatible materials and exposure to extreme temperatures.

#### INCOMPATIBLE MATERIALS:

This product is incompatible with strong oxidizing agents.

Product Name.....: RIDGID Nu-Clear Thread Cutting Oil

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**DECOMPOSITION PRODUCTS MAY INCLUDE:**

Thermal decomposition products are dependent on combustion conditions. A complex mixture of airborne solid, liquid, particulates and gasses may evolve when the material burns. Combustion by-products may include:

oxides of carbon

oxides of sulfur

incompletely burned hydrocarbons as fumes and smoke

**POSSIBILITY OF HAZARDOUS REACTIONS:**

This product is not expected to polymerize

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**Section 11 – Toxicological Information**

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**EYE EFFECTS:**

No further toxicological data known.

**SKIN EFFECTS:**

No further toxicological data known.

**ORAL EFFECTS:**

No further toxicological data known.

**INHALATION EFFECTS:**

No further toxicological data known.

**OTHER:**

No further toxicological data known.

Product Name.....: RIDGID Nu-Clear Thread Cutting Oil

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## **Section 12 – Ecological Information**

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### **ECOTOXICOLOGICAL INFORMATION:**

This product has not been evaluated for ecotoxicity. As with any industrial chemical, exposure to the environment should be prevented and minimized wherever possible.

### **ENVIRONMENTAL FATE:**

The degree of biodegradability and persistence of this product has not been determined.

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## **Section 13 – Disposal Consideration**

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### **WASTE DISPOSAL:**

Ensure that collection, transport, treatment and disposal of waste product and containers complies with all applicable laws and regulations. Note that use, mixture, processing or contamination of the product may cause the material to be classified as a hazardous waste. It is the responsibility of the product user or owner to determine at the time of disposal whether the product is regulated as a hazardous waste.

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## **Section 14 – Transportation Information**

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### **U.S. DOT HAZARDOUS MATERIAL INFORMATION:**

Not DOT regulated.



Product Name : RIDGID Nu-Clear Thread Cutting Oil

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## Section 15 – Regulatory Information

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### FEDERAL REGULATIONS:

#### SARA 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.

#### CLEAN WATER ACT:

This product contains mineral oil and is subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

#### CERCLA REPORTABLE QUANTITY:

Any components listed below have been assigned a reportable quantity (RQ) by the Federal EPA. Releases of the product into the environment that exceed the RQ for a particular component must be reported to the National Response Center at 1-800-424-8802.

None to report

#### TOXIC SUBSTANCE CONTROL ACT:

The components of this product are listed on the TSCA Inventory.

#### OZONE DEPLETING SUBSTANCES:

This product contains no ozone depleting substances as defined by the Clean Air Act.

#### HAZARDOUS AIR POLLUTANTS:

Any components listed below are defined by the Federal EPA as hazardous air pollutants:

None to report

Product Name : RIDGID Nu-Clear Thread Cutting Oil

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#### STATE REGULATIONS

This product contains mineral oil, and as used, may be regulated by state used oil regulations. Check with the appropriate state agency to determine whether such a regulation exists.

#### CANADA

WHMIS Classification: None

DSL:

The components of this product are listed on DSL Inventory.

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#### Section 16 – Other Information

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#### HMIS RATING:

Health	Flammability	Reactivity	PPE
1	1	0	X

Prepared by: . . . . . Ridge Tool Company

Issue Date: . . . . . January 5, 2006

Last Revision Date: . . . . . May, 2004

RIDGE TOOL BELIEVES THE STATEMENTS, TECHNICAL INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE RELIABLE BUT THEY ARE GIVEN WITHOUT WARRANTY OR GUARANTEE OF ANY KIND, EXPRESSED OR IMPLIED, AND WE ASSUME NO RESPONSIBILITY FOR ANY LOSS, DAMAGE OR EXPENSE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THEIR USE.

## 1. Identification

**Product identifier** NUTRA-RINSE

**Other means of identification**

SDS number 538N-76A

Product code HIL00219

**Recommended use** Concentrated 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** Skin corrosion/irritation Category 2  
Serious eye damage/eye irritation Category 2A

**Environmental hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**



**Signal word** Warning

**Hazard statement** Causes skin irritation. Causes serious eye irritation.

**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. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. If eye irritation persists: 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.

**Supplemental information** Not applicable.

## 3. Composition/information on ingredients

### Mixtures

Hazardous components		
Chemical name	CAS number	%
Ethylenediaminetetraacetic Acid	60-00-4	5 - < 10
Alcohols, C9-11, ethoxylated	68439-46-3	1 - < 3

<b>Hazardous components</b>		
<b>Chemical name</b>	<b>CAS number</b>	<b>%</b>
Isopropyl Alcohol	67-63-0	1 - < 3
SODIUM HYDROXIDE	1310-73-2	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

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.
<b>Eye contact</b>	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 and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire-fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	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. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	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 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.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	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
Isopropyl Alcohol (CAS 67-63-0)	PEL	980 mg/m3
		400 ppm
SODIUM HYDROXIDE (CAS 1310-73-2)	PEL	2 mg/m3

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Isopropyl Alcohol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
SODIUM HYDROXIDE (CAS 1310-73-2)	Ceiling	2 mg/m3

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Isopropyl Alcohol (CAS 67-63-0)	STEL	1225 mg/m3
	TWA	500 ppm 980 mg/m3 400 ppm
SODIUM HYDROXIDE (CAS 1310-73-2)	Ceiling	2 mg/m3

### 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.

### 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** Where splashing of concentrate is a concern, use protective glasses with side shield.

#### Skin protection

##### Hand protection

For prolonged or repeated skin contact use suitable protective gloves.

##### Other

No special protective equipment required.

#### Respiratory protection

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.

## 9. Physical and chemical properties

### Appearance

Clear, blue liquid

#### Physical state

Liquid.

#### Form

Liquid.

#### Color

Blue

### Odor

non-objectionable odor

### Odor threshold

Not available

### pH

6 - 7

### Melting point/freezing point

Not available

### Initial boiling point and boiling range

209 °F (98.33 °C)

### Flash point

> 200.0 °F (> 93.3 °C)

Evaporation rate	< 1 Ethyl ether = 1
Flammability (solid, gas)	Not available.
<b>Upper/lower flammability or explosive limits</b>	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	17.53 mm Hg
Vapor density	0.62 AIR=1
Relative density	1.051 at 77°F
<b>Solubility(ies)</b>	
Solubility (water)	100 % Complete
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
<b>Other information</b>	
Density	8.75 lb/gal
Percent volatile	87.5 - 89 %
VOC (Weight %)	1 %

## 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	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

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
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. Skin irritation. May cause redness and pain.
--	---

### Information on toxicological effects

#### Acute toxicity

Product	Species	Test Results
NUTRA-RINSE (CAS Mixture)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	9756.0977 ml/kg estimated
<i>Oral</i>		
LD50	Guinea pig	2728.6821 g/kg estimated
	Mouse	404.3368 mg/kg estimated
	Rabbit	503 g/kg estimated
	Rat	7219.5122 ml/kg estimated
		403.925 g/kg estimated
<i>Other</i>		
LD50	Mouse	1446.1852 mg/kg estimated

Product	Species	Test Results
	Rat	5080.4063 mg/kg estimated

\* Estimates for product may be based on additional component data not shown.

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
Not listed.	
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not available.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

<b>Ecotoxicity</b>	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.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	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

<b>Disposal instructions</b>	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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.

## 15. Regulatory information

<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.	
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>		
Not regulated.		
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>		
Ethylenediaminetetraacetic Acid (CAS 60-00-4)		Listed.

SODIUM HYDROXIDE (CAS 1310-73-2)

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** No

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**  
Not regulated.

**US state regulations**

**US. Massachusetts RTK - Substance List**

Ethylenediaminetetraacetic Acid (CAS 60-00-4)  
Isopropyl Alcohol (CAS 67-63-0)  
SODIUM HYDROXIDE (CAS 1310-73-2)

**US. New Jersey Worker and Community Right-to-Know Act**

Not regulated.

**US. Pennsylvania RTK - Hazardous Substances**

Ethylenediaminetetraacetic Acid (CAS 60-00-4)  
Isopropyl Alcohol (CAS 67-63-0)  
SODIUM HYDROXIDE (CAS 1310-73-2)

**US. Rhode Island RTK**

Ethylenediaminetetraacetic Acid (CAS 60-00-4)  
Isopropyl Alcohol (CAS 67-63-0)  
SODIUM HYDROXIDE (CAS 1310-73-2)

**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** 09-26-2014

**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.



**Spray Products Corporation**  
P.O. BOX 737  
Norristown, PA 19404  
Product Information: 610-277-1010

**Product Name: Nuts Off 075-516**

Revision Date: 2/2/07  
Supersedes Date: 1/1/08

## **MATERIAL SAFETY DATA SHEET**

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Product Type: **Lubricant/Penetrant**  
Product Name: **Spray Products Nuts Off**  
Part Number(s): **SP-075-516**

Emergency Contact: **Chemtrec**  
Phone (24 hours): **(800) 424-9300**

### **Section 1 - Identification of Product**

COMMON NAME (used on label)(Trade Name & Synonyms): **Spray Products Nuts Off Penetrating Oil**  
CAS. NUMBER: See Section 2  
CHEMICAL NAME: N/A  
CHEMICAL FAMILY: N/A  
FORMULA: N/A

#### **HMIS RATINGS**

	Minimal Hazard	0
	Slight Hazard	1
Health: 1	Moderate Hazard	2
Flammability: 3	Serious Hazard	3
Reactivity: 0	Severe Hazard	4
Personal Protection: B	Gloves, Safety Glasses	B

### **Section 2 - Hazardous Ingredients**

Principal Hazardous Component(s)

CHEMICAL AND COMMON NAME(S)	CAS. #	OSHA PEL	ACGIH TLV	VAPOR PRESSURE @ 25 DEG. C.	LEL	UEL	FLASH POINT DEG. F	APPROX WT %
Mineral Spirits	8052-41-3	100ppm	100ppm	2.0mmHg	0.7	6.0	105(TCC)	47
Heavy Naphthenic Oil	64742-52-5	5 mg/m3	5 mg/m3	<1mmHg	n/a	n/a	>300 (COC)	30 - 35
Hydrotreated Light Distillate*	64742-47-8	n/a	n/a	0.07mmHg	0.5	4.9	177 (PMCC)	15 - 20
Carbon Dioxide	124-38-9	5000ppm		1 atm.	None		None	<10

\*ExxonMobil recommends a TWA of 1200 mg/m3

### **Section 3 - Physical Data**

**BOILING POINT (Deg. F):** Concentrate Range: 315 - 550

**SPECIFIC GRAVITY (Water = 1):** Concentrate: 0.83

**VAPOR PRESSURE (mmHg):** See Section 2

**Spray Products Corporation**  
P.O. BOX 737  
Norristown, PA 19404  
Product Information: 610-277-1010

**Product Name: Nuts Off 075-516**

Revision Date: 2/2/07  
Supersedes Date: 1/1/08

**PERCENT VOLATILE ORGANIC COMPOUNDS:** <50%

**VAPOR DENSITY (Air = 1):** >1

**EVAPORATION RATE (BA = 1):** >1

**SOLUBILITY IN WATER:** Negligible

**REACTIVITY IN WATER:** None

**APPEARANCE AND ODOR:** CONCENTRATE: Amber liquid, petroleum odor at high concentrations;

**PROPELLANT:** Colorless, odorless gas; **FINISHED PACKAGE:** Pressurized containers.

#### Section 4 - Fire & Explosion Hazard Data

**FLASH POINT:** See Section 2

**FLAMMABLE LIMITS IN AIR - % BY VOLUME:** See Section 2

**EXTINGUISHER MEDIA:** Water fog, dry chemical, carbon dioxide

**AUTO-IGNITION TEMPERATURE:** Unknown

**SPECIAL FIRE FIGHTING PROCEDURES:** Water may be used to cool closed containers to prevent pressure build-up and possible bursting when exposed to high temperatures. Firemen should wear self-contained, positive pressure, respiratory equipment.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** FLAMMABLE. Contents under pressure. Do not use or store near heat or ignition sources. Containers may burst at temperatures above 130 deg. F.

#### Section 5 - Health Hazard Data

**THRESHOLD LIMIT VALUE:** See Section 2

#### **SIGNS AND SYMPTOMS OF EXPOSURE:**

##### **EYE CONTACT:**

Contact with liquid or mist may cause irritation. Vapors may irritate eyes;

##### **SKIN CONTACT:**

Prolonged contact may cause irritation, defatting of skin;

##### **INHALATION:**

May cause nose and throat irritation. May cause nervous system depression characterized by the following progressive steps: Headache, dizziness, nausea, staggering gait, confusion, and unconsciousness. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. **INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS OF THE CAN MAY BE HARMFUL OR FATAL;** Aspiration may cause rapid absorption through the lungs, which may result in systemic effects.

##### **INGESTION:**

**IMPORTANT NOTE:** REPEATED AND PROLONGED OVEREXPOSURE TO SOLVENTS MAY LEAD TO PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. EYE WATERING, HEADACHES, NAUSEA, DIZZINESS AND LOSS OF COORDINATION ARE SIGNS THAT SOLVENT LEVELS ARE TOO HIGH. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

**EMERGENCY AND FIRST AID PROCEDURES:**

**Spray Products Corporation**  
P.O. BOX 737  
Norristown, PA 19404  
Product Information: 610-277-1010

**Product Name: Nuts Off 075-516**

Revision Date: 2/2/07  
Supersedes Date: 1/1/08

**INHALATION:** Remove to fresh air. If not breathing, give mouth-to-mouth. If breathing is difficult, give oxygen. Do not give epinephrine or similar drugs. Call a physician.

**EYES:** Flush with water for at least 15 minutes. Get medical assistance if irritation persists.

**SKIN:** Wash off in flowing water or shower. Remove contaminated clothing and wash before reuse.

**INGESTION:** Do not induce vomiting. Call a physician immediately.

#### Section 6 - Reactivity Data

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Avoid any excessive heat, ignition sources, open flames, or other high temperatures which induce thermal decomposition.

**INCOMPATIBILITY (Materials to Avoid):** Strong oxidizing agents

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon Dioxide, Carbon Monoxide.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Not Applicable

#### Section 7 - Spill or Leak Procedures

##### **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**

**SMALL SPILLS:** Remove ignition sources. Mop up, wipe up, or soak up immediately. Use proper protective equipment.

**LARGE SPILLS:** Evacuate area. Remove ignition sources. Contain liquid; transfer to closed containers; keep out of water supplies.

**WASTE DISPOSAL METHODS:** Dispose in accordance with Federal, State, and Local regulations. Do not incinerate closed or empty containers.

#### Section 8 - Special Protection Information

**RESPIRATORY PROTECTION:** NIOSH or Bureau of Mines approved organic vapor-type respirator is required in absence of proper environmental control.

**VENTILATION:**

- LOCAL EXHAUST: To keep below TLV
- MECHANICAL (General): To keep below TLV
- SPECIAL: None
- OTHER: None

**PROTECTIVE GLOVES:** Solvent resistant gloves - impervious gloves

**EYE PROTECTION:** Safety glasses or goggles

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** None reasonably foreseeable.

**Spray Products Corporation**  
P.O. BOX 737  
Norristown, PA 19404  
Product Information: 610-277-1010

**Product Name: Nuts Off 075-516**

Revision Date: 2/2/07  
Supersedes Date: 1/1/08

### Section 9 – Special Precautions

**PRECAUTIONS TO BE TAKEN  
IN HANDLING AND STORAGE:**

Do not store above 120 Deg. F. Do not use or store near any open flames or ignition sources.

**OTHER PRECAUTIONS:**

FLAMMABLE. Do not use or store near open flames, heat, or any sources of ignition. Contents under pressure. Do not puncture or incinerate. Vapors are heavier than air and will collect in low areas.

### Section 10 - Regulatory Information

SUBJECT TO SECTION 313 OF SARA TITLE III: No.

ALL CHEMICAL COMPONENTS ARE LISTED IN THE TSCA INVENTORY.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: NATIONAL TOXICOLOGY PROGRAM: No

I.A.R.C. MONOGRAPHS: No

OSHA: No

OSHA PERMISSIBLE EXPOSURE LIMIT: See Section 2

AGCIH THRESHOLD LIMIT VALUE: See Section 2

OTHER EXPOSURE LIMITED USED: None

### Section 11 - Other Information

**TRANSPORTATION INFORMATION – DOMESTIC GROUND**

Shipping Name:	Consumer Commodity
Hazard Class:	ORM-D
UN Number:	N/A
Packing Group:	N/A
Hazard Label:	None
Carton Marking:	Consumer Commodity, ORM-D

### Disclaimer

SPRAY PRODUCTS CORPORATION believes that the information contained herein is accurate and reliable as of the date of this material safety data sheet, but no representation guarantee or warranty, express or implied, is made as to the accuracy, reliability, or completeness of the information. Persons receiving this information are encouraged to make their own determination as to the information's suitability and completeness for their particular application. NO INFORMATION CONTAINED HEREIN CONSTITUTES A PRODUCT WARRANTY OF ANY KIND, WHETHER EXPRESS OR IMPLIED; AND ALL IMPLIED WARRANTIES OF MERCHANT ABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED BY SPRAY PRODUCTS CORPORATION.

**Section: 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : OASIS 137 ORANGE FORCE

Other means of identification : Not applicable.

Recommended use : All Purpose Cleaner

Restrictions on use : Reserved for industrial and professional use.

Product dilution information : 3.13 % - 12.5 %

Company : Ecolab Co.  
5105 Tomken Road  
Mississauga, Ontario Canada L4W 2X5  
1-800-352-5326

Emergency telephone number : 1-800-328-0026 (US/Canada), 1-651-222-5352 (outside US)

Issuing date : 06/08/2015

**Section: 2. HAZARDS IDENTIFICATION**
**GHS Classification**
**Product AS SOLD**

Eye irritation : Category 2B

Skin sensitization : Category 1

**Product AT USE DILUTION**

Not a hazardous substance or mixture.

**GHS Label element**
**Product AS SOLD**

Hazard pictograms :



Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.  
Causes eye irritation.

Precautionary Statements : **Prevention:**  
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves.

**Response:**  
IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation or rash occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Wash contaminated clothing before reuse.

**Disposal:**  
Dispose of contents/ container to an approved waste disposal plant.

## SAFETY DATA SHEET

### OASIS 137 ORANGE FORCE

#### Product AT USE DILUTION

Precautionary Statements : **Prevention:**  
Wash hands thoroughly after handling.  
**Response:**  
Get medical advice/ attention if you feel unwell.  
**Storage:**  
Store in accordance with local regulations.

#### Product AS SOLD

Other hazards : None known.

### Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Product AS SOLD

Pure substance/mixture : Mixture

Chemical Name	CAS-No.	Concentration: (%)
sodium dodecylbenzene sulfonate	25155-30-0	5 - 10
Sodium poly(oxyethylene) dodecyl ether sulfate	68585-34-2	1 - 5
Organic sulfonic acid salt	27323-41-7	1 - 5
d-Limonene	5989-27-5	0.1 - 1

#### Product AT USE DILUTION

No hazardous ingredients

### Section: 4. FIRST AID MEASURES

#### Product AS SOLD

In case of eye contact : Rinse with plenty of water.

In case of skin contact : Wash off immediately with plenty of water for at least 15 minutes. Use a mild soap if available. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

Protection of first-aiders : If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to physician : Treat symptomatically.

Most important symptoms and effects, both acute and delayed : See Section 11 for more detailed information on health effects and symptoms.

#### Product AT USE DILUTION

In case of eye contact : Rinse with plenty of water.

In case of skin contact : Rinse with plenty of water.

If swallowed : Rinse mouth. Get medical attention if symptoms occur.

If inhaled : Get medical attention if symptoms occur.

## SAFETY DATA SHEET

### OASIS 137 ORANGE FORCE

#### Section: 5. FIREFIGHTING MEASURES

##### Product AS SOLD

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.
- Specific hazards during firefighting : Not flammable or combustible.
- Hazardous combustion products : Decomposition products may include the following materials:  
Carbon oxides  
nitrogen oxides (NOx)  
Sulphur oxides  
Oxides of phosphorus
- Special protective equipment for firefighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.
- Risk of explosion. : Not available.

#### Section: 6. ACCIDENTAL RELEASE MEASURES

##### Product AS SOLD

- Personal precautions, protective equipment and emergency procedures : Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect 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). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

##### Product AT USE DILUTION

- Personal precautions, protective equipment and emergency procedures : Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : No special environmental precautions required.
- Methods and materials for containment and cleaning up : Stop leak if safe to do so. Contain spillage, and then collect 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). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

#### Section: 7. HANDLING AND STORAGE

## SAFETY DATA SHEET

### OASIS 137 ORANGE FORCE

#### Product AS SOLD

Advice on safe handling : Do not get in eyes, on skin, or on clothing. Wash hands thoroughly after handling.

Conditions for safe storage : Keep out of reach of children. Store in suitable labeled containers.

Storage temperature : 0 °C to 50 °C

#### Product AT USE DILUTION

Advice on safe handling : Wash hands after handling. For personal protection see section 8.

Conditions for safe storage : Keep out of reach of children. Store in suitable labeled containers.

### Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Product AS SOLD

##### Components with workplace control parameters

d-Limonene	5989-27-5	TWA	20 ppm 111 mg/m3	CAD AB OEL
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Engineering measures : Effective exhaust ventilation system. Maintain air concentrations below occupational exposure standards.

#### Personal protective equipment

Eye protection : No special protective equipment required.

No special protective equipment required.

Hand protection : Wear the following personal protective equipment:  
Standard glove type.  
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : No special protective equipment required.

Respiratory protection : No personal respiratory protective equipment normally required.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Wash face, hands and any exposed skin thoroughly after handling.

#### Product AT USE DILUTION

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

#### Personal protective equipment

Eye protection : No special protective equipment required.

Hand protection : No special protective equipment required.

Skin protection : No special protective equipment required.

Respiratory protection : No personal respiratory protective equipment normally required.



## SAFETY DATA SHEET

### OASIS 137 ORANGE FORCE

#### Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

	Product AS SOLD	Product AT USE DILUTION
Appearance	: liquid	liquid
Colour	: clear, dark orange	light orange
Odour	: citrus	citrus
pH	: 7.2 - 9.0, 100 %	7.0 - 8.3
Flash point	: Not applicable.	
Odour Threshold	: no data available	
Melting point/freezing point	: no data available	
Initial boiling point and boiling range	: no data available	
Evaporation rate	: no data available	
Flammability (solid, gas)	: no data available	
Upper explosion limit	: no data available	
Lower explosion limit	: no data available	
Vapour pressure	: no data available	
Relative vapour density	: no data available	
Relative density	: 1.006 - 1.036	
Water solubility	: no data available	
Solubility in other solvents	: no data available	
Partition coefficient: n-octanol/water	: no data available	
Auto-ignition temperature	: no data available	
Thermal decomposition	: no data available	
Viscosity, kinematic	: no data available	
Explosive properties	: no data available	
Oxidizing properties	: no data available	
Molecular weight	: no data available	
VOC	: no data available	

#### Section: 10. STABILITY AND REACTIVITY

##### Product AS SOLD

Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reaction known under conditions of normal use.
Conditions to avoid	: None known.
Incompatible materials	: None known.
Hazardous decomposition products	: Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx)

## SAFETY DATA SHEET

### OASIS 137 ORANGE FORCE

Sulphur oxides  
Oxides of phosphorus

#### Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation, Eye contact, Skin contact

##### Potential Health Effects

###### Product AS SOLD

Eyes : Causes eye irritation.

Skin : May cause allergic skin reaction.

Ingestion : Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

###### Product AT USE DILUTION

Eyes : Health injuries are not known or expected under normal use.

Skin : Health injuries are not known or expected under normal use.

Ingestion : Health injuries are not known or expected under normal use.

Inhalation : Health injuries are not known or expected under normal use.

Chronic Exposure : Health injuries are not known or expected under normal use.

##### Experience with human exposure

###### Product AS SOLD

Eye contact : Redness, Irritation

Skin contact : Redness, Irritation, Allergic reactions

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

###### Product AT USE DILUTION

Eye contact : No symptoms known or expected.

Skin contact : No symptoms known or expected.

Ingestion : No symptoms known or expected.

Inhalation : No symptoms known or expected.

##### Toxicity

###### Product AS SOLD

Acute oral toxicity : Acute toxicity estimate : > 5,000 mg/kg

Acute inhalation toxicity : no data available

Acute dermal toxicity : no data available

## SAFETY DATA SHEET

### OASIS 137 ORANGE FORCE

Skin corrosion/irritation	: no data available
Serious eye damage/eye irritation	: Mild eye irritation
Respiratory or skin sensitization	: no data available
Carcinogenicity	: no data available
Reproductive effects	: no data available
Germ cell mutagenicity	: no data available
Teratogenicity	: no data available
STOT - single exposure	: no data available
STOT - repeated exposure	: no data available
Aspiration toxicity	: no data available

#### Components

Acute dermal toxicity	: Sodium poly(oxyethylene) dodecyl ether sulfate LD50 rat: > 2,000 mg/kg
	d-Limonene LD50 rabbit: > 5,000 mg/kg

### Section: 12. ECOLOGICAL INFORMATION

#### Product AS SOLD Ecotoxicity

Environmental Effects	: Harmful to aquatic life with long lasting effects.
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#### Product

Toxicity to fish	: no data available
Toxicity to daphnia and other aquatic invertebrates	: no data available
Toxicity to algae	: no data available

#### Components

Toxicity to fish	: sodium dodecylbenzene sulfonate 96 h LC50: 3.2 mg/l
	Sodium poly(oxyethylene) dodecyl ether sulfate 96 h LC50 Fish: 28 mg/l
	Organic sulfonic acid salt 96 h LC50: 2.5 mg/l

#### Persistence and degradability

no data available

#### Bioaccumulative potential

no data available

#### Mobility in soil

no data available

## SAFETY DATA SHEET

### OASIS 137 ORANGE FORCE

#### Other adverse effects

no data available

#### Section: 13. DISPOSAL CONSIDERATIONS

##### Product AS SOLD

- Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
- Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Dispose of in accordance with local, state, and federal regulations.

##### Product AT USE DILUTION

- Disposal methods : Diluted product can be flushed to sanitary sewer.
- Disposal considerations : Dispose of in accordance with local, state, and federal regulations.

#### Section: 14. TRANSPORT INFORMATION

##### Product AS SOLD

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

##### Land transport (TDG)

Not dangerous goods

##### Sea transport (IMDG/IMO)

Not dangerous goods

##### Product AT USE DILUTION

Not intended for transport.

#### Section: 15. REGULATORY INFORMATION

This product has been classified according to the hazard criteria of the HPR and the SDS contains all of the information required by the HPR.

**The components of this product are reported in the following inventories:**

##### United States TSCA Inventory :

On TSCA Inventory

##### Canadian Domestic Substances List (DSL) :

This product contains one or several components listed in the Canadian NDSL.

##### Australia. Industrial Chemical (Notification and Assessment) Act :

not determined

##### New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand :

not determined

## SAFETY DATA SHEET

### OASIS 137 ORANGE FORCE

**Japan. ENCS - Existing and New Chemical Substances Inventory :**  
not determined

**Japan. ISHL - Inventory of Chemical Substances (METI) :**  
not determined

**Korea. Korean Existing Chemicals Inventory (KECI) :**  
not determined

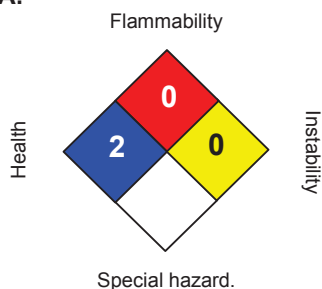
**Philippines Inventory of Chemicals and Chemical Substances (PICCS) :**  
not determined

**China Inventory of Existing Chemical Substances :**  
not determined

### Section: 16. OTHER INFORMATION

#### Product AS SOLD

##### NFPA:



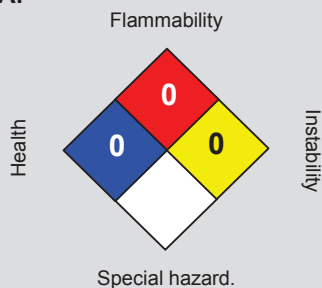
##### HMIS III:

HEALTH	2*
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

#### Product AT USE DILUTION

##### NFPA:



##### HMIS III:

HEALTH	0
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,  
2 = Moderate, 3 = High  
4 = Extreme, \* = Chronic

Issuing date : 06/08/2015  
version : 1.0  
Prepared by : Regulatory Affairs 1-800-352-5326

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

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

## **SAFETY DATA SHEET**

### **OASIS 137 ORANGE FORCE**

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.

# SAFETY DATA SHEET



OASIS 146 MULTI-QUAT SANITIZER

## Section 1. Chemical product and company identification

**Product name** : OASIS 146 MULTI-QUAT SANITIZER  
**Recommended use and restrictions** : Sanitizer.  
Use only for the purpose on the product label.

**Product dilution information** : Up to 4 oz/gal in water

**Supplier's information** : Ecolab Inc. Institutional Division  
370 N. Wabasha Street  
St. Paul, MN 55102  
1-800-352-5326

**Code** : 910787

**Date of issue** : 06 Aug 2013

**EPA Registration No.** : 1677-198

EMERGENCY HEALTH INFORMATION: 1-800-328-0026  
Outside United States and Canada CALL 1-651-222-5352 (in USA)

## Section 2. Hazards identification

**GHS Classification** : **Product AS SOLD**  
ACUTE TOXICITY: ORAL - Category 4  
SKIN CORROSION/IRRITATION - Category 1B  
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1

### GHS label elements

**Signal word** : Danger

**Symbol** :

**Hazard statements** : Harmful if swallowed.  
Causes severe skin burns and eye damage.

### Precautionary statements

**Prevention** : Wear protective gloves. Wear eye or face protection. Wear protective clothing. Wash hands thoroughly after handling.

**Response** : 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.

### **Product AT USE DILUTION**

SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2B

Warning

Causes eye irritation.

Wash hands thoroughly after handling.

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.

## Section 2. Hazards identification

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

**Storage** : No other specific measures identified.  
**Disposal** : See section 13 for waste disposal information.  
**Other hazards** : None known.

No other specific measures identified.  
 See section 13 for waste disposal information.  
 None known.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

**Product AS SOLD**

Hazardous ingredients	Concentration Range (%)	CAS number
Alkyl (C14, 50%; C12, 40%; C16, 10%)	3	68424-85-1
Dimethyl benzyl ammonium chloride		
Octyl decyl dimethyl ammonium chloride	2.25	32426-11-2
Didecyl dimethyl ammonium chloride	1.35	7173-51-5
Dioctyl dimethyl ammonium chloride	0.9	5538-94-3
ALCOHOL	1 - 5	64-17-5

### 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.

## Section 4. First aid measures

	Product AS SOLD	Product AT USE DILUTION
Eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation persists.
Skin contact	: Take off immediately all contaminated clothing. Rinse skin with water or shower. Get medical attention immediately. Wash clothing before reuse. Clean shoes thoroughly before reuse.	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 immediately.	No special measures required. Treat symptomatically.
Ingestion	: Get medical attention immediately. Rinse mouth. Do not induce vomiting.	Get medical attention if symptoms occur.
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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.	
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.	
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** : 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
- 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.
- 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

### Product AS SOLD

- Personal precautions** : Initiate company's spill response procedures immediately. Keep people out of area. Put on appropriate personal protective equipment (see section 8). Do not touch or walk through spilled material.
- Environmental precautions** : Avoid contact of spilled material and runoff with soil and surface waterways.
- Methods for cleaning up** : Follow company's spill procedures. Keep people away from spill. Put on appropriate personal protective equipment (see section 8). Absorb/neutralize liquid material. Use a tool to scoop up solid or absorbed material and put into appropriate labeled container. Use a tool to scoop up solid or absorbed material and place into appropriate labeled waste container. Use a water rinse for final clean-up.

### Product AT USE DILUTION

Use personal protective equipment as required.

Avoid contact of large amounts of spilled material and runoff with soil and surface waterways.

Use a water rinse for final clean-up.

## Section 7. Handling and storage

### Product AS SOLD

- Handling** : Do not ingest. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Use only with adequate ventilation. Wash thoroughly after handling.
- Storage** : Keep out of reach of children. Keep container tightly closed.
- Store between the following temperatures: 0 and 50°C

### Product AT USE DILUTION

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling.

Keep out of reach of children. Keep container tightly closed.

## Section 8. Exposure controls/personal protection

### Control parameters

Ingredient name	Exposure limits
ALCOHOL	<b>ACGIH TLV (United States, 3/2012).</b> STEL: 1000 ppm 15 minutes. <b>OSHA PEL (United States, 6/2010).</b> TWA: 1900 mg/m <sup>3</sup> 8 hours. TWA: 1000 ppm 8 hours. <b>NIOSH REL (United States, 6/2009).</b> TWA: 1000 ppm 10 hours. TWA: 1900 mg/m <sup>3</sup> 10 hours.

**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. Provide suitable facilities for quick drenching or flushing of the eyes and body in case of contact or splash hazard.

### Personal protection

**Eye protection** : Use chemical splash goggles. For continued or severe exposure wear a face shield over the goggles.

**Hand protection** : Use chemical-resistant, impervious gloves.

**Skin protection** : Use suitable protective equipment.

**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.

### Product AT USE DILUTION

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

No protective equipment is needed under normal use conditions.

No protective equipment is needed under normal use conditions.

No protective equipment is needed under normal use conditions.

A respirator is not needed under normal and intended conditions of product use.

## Section 9. Physical and chemical properties

**Product AS SOLD**

**Physical state** : Liquid.

**Color** : Red

**Odor** : disinfectant

**pH** : 7.7 (100%)

**Flash point** : > 100°C

**Explosion limits** : Not available.

**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.

### Product AT USE DILUTION

Liquid.

Red [Light]

disinfectant

8.64 [Conc. (% w/w): 100%]

> 100°C

## Section 9. Physical and chemical properties

<b>Relative density</b>	: 0.998 (Water = 1)
<b>Solubility</b>	: Easily soluble in the following materials: cold water and hot water.
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Odor threshold</b>	: Not available.
<b>Viscosity</b>	: Not available.

## Section 10. Stability and reactivity

### Product AS SOLD

<b>Stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Materials to avoid</b>	: Not available.
<b>Hazardous decomposition products</b>	: 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

<b>Eye contact</b>	: Adverse symptoms may include the following: pain watering redness
<b>Skin contact</b>	: Adverse symptoms may include the following: pain or irritation redness blistering may occur
<b>Inhalation</b>	: Adverse symptoms may include the following: coughing Respiratory tract irritation
<b>Ingestion</b>	: Adverse symptoms may include the following: stomach pains

#### Acute toxicity

<b>Eye contact</b>	: Causes serious eye damage.
<b>Skin contact</b>	: Causes severe burns.
<b>Inhalation</b>	: May cause respiratory irritation.
<b>Ingestion</b>	: Harmful if swallowed. May cause burns to mouth, throat and stomach.

#### Toxicity data

**Product/ingredient name**

### Product AT USE DILUTION

Adverse symptoms may include the following:  
irritation  
watering  
redness

No specific data.

No specific data.

No specific data.

Causes eye irritation.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

No known significant effects or critical hazards.

## Section 11. Toxicological information

quaternary ammonium compounds, benzyl- c12-c16-alkyldimethyl, chlorides	LD50 Dermal	Rabbit	3340 mg/kg
	LD50 Oral	Rat	344 mg/kg
1-decanaminium, n,n-dimethyl-n-octyl-, chloride	LC50 Inhalation	Rat	0.07 mg/l
	Dusts and mists		
ethanol	LD50 Dermal	Rabbit	2930 mg/kg
	LD50 Oral	Rat	238 mg/kg
	LC50 Inhalation	Rat	117 mg/l
	Vapor		
didecyltrimethylammonium chloride	LD50 Dermal	Rabbit	15800 mg/kg
	LD50 Oral	Rat	10470 mg/kg
	LC50 Inhalation	Rat	0.07 mg/l
	Dusts and mists		
	LD50 Dermal	Rabbit	2930 mg/kg
	LD50 Oral	Rat	1150 mg/kg

### Chronic toxicity

<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

## Section 12. Ecological information

### Product AS SOLD

**Ecotoxicity** : This material is toxic to aquatic life.

### Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
Not available.			

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : **Product AS SOLD**  
: 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.

### Product AT USE DILUTION

Diluted product can be flushed to sanitary sewer. Discard empty container in trash.

## 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** Not regulated.

### IMO/IMDG

**IMO/IMDG Classification** Not regulated.

For transport in bulk, see shipping documents for specific transportation 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.

EPA Registration No. : 1677-198

SARA 302/304/311/312 extremely hazardous substances: No listed substance

SARA 302/304 emergency planning and notification: No listed substance

<u>SARA 313</u>	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	: No listed substance		

California Prop. 65 : No listed substance

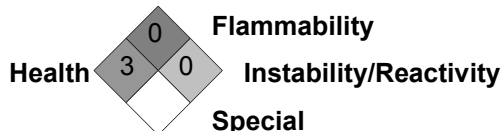
## Section 16. Other information

Product AS SOLD

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

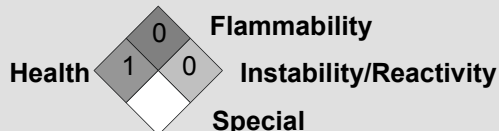
Health	*	3
Flammability		0
Physical hazards		0

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



Product AT USE DILUTION

Health		1
Flammability		0
Physical hazards		0



Date of issue : 06 Aug 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

5100 W. Henrietta Rd.  
West Henrietta, NY 14586  
TEL: (866) 260-0501

MSDS No. 9475704 9475706  
Effective Date: September 04, 2002

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	Octyl alcohol	<b>416-984-3000</b>  <b>NFPA</b>   <b>HAZARD RATING</b> LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4  <b>WHMIS</b> Health 1 Flammability 2 Reactivity 0
Chemical Synonyms	1-Octanol	
Formula	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>6</sub> CH <sub>2</sub> OH	
CAS No.	111-87-5	

## SECTION II DANGEROUS INGREDIENTS

Name	%	TLV Units
Octyl Alcohol	100%	N/A
<b>WARNING! COMBUSTIBLE.</b>		

## SECTION III PHYSICAL DATA

Melting Point (°C)	-17.2°C	Specific Gravity (H <sub>2</sub> O = 1)	0.827 @ 20/20°C
Boiling Point (°C)	195°C	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	0.14 @ 78°F	Evaporation Rate (Butyl alcohol =1)	< 0.01
Vapor Density (Air=1)	4.5		
Solubility in Water	0.04 g/100 mL. @ 20°C.		
Appearance & Odor	Liquid; no odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash point	Closed Cup: 82.2°C	Flammable Limits in Air % by Volume	Lower 0.9%	Upper 6.0%
Firefighting Procedures	Use dry chemical, CO <sub>2</sub> , 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

This product is combustible.

TDG Not controlled under TDG.

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

OX0005

Chemical Stability	Yes	X	If no, under what conditions?
	No		
Incompatible with Other products	Yes	X	Strong oxidizing materials, inorganic acids.
	No		
Hazardous Decomposition Products	These product are carbon oxides.		
Reactive under what conditions	No specific information is available.		

## SECTION VI TOXICOLOGICAL PROPERTIES

Route of Entry	Ingestion.
TLV	N/A
Toxicity for animals	Acute oral toxicity (LD50): > 5 g/kg (Rat).
Chronic effects on humans	Repeated or prolonged exposure to the substance can produce target organ damage. Target organs: Central nervous system, liver, kidneys.
Acute effects on humans	Harmful if swallowed. Vapor harmful. May cause eye and skin irritation.

## SECTION VII PREVENTIVE MEASURES

Waste Disposal	Discharge, treatment, or disposal may be subject to local laws. Consult your local or regional authorities.
Storage	Ground all equipment containing material. Keep in a cool, well ventilated place. Keep container tightly closed. Keep away from strong oxidizing agents. Keep away from heat, sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood.
Precautions	Avoid contact with skin and eyes. DO NOT inhale vapor or spray. DO NOT ingest. If ingested, seek medical advice immediately.
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.
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## SECTION IX PREPARATION OF THE MSDS

Rev. No.	5	Date	September 04, 2002	Approved	Michael Raszeja
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# Fiche Signalétique

5100 W. Henrietta Rd.  
West Henrietta, NY 14586  
TEL: (866) 260-0501

# MSDS 9475704 9475706  
Validé par: 04 septembre, 2002


## SECTION I Identification

Produit	Alcool d'octyl
Synonymes	Octanol -1
Formule	CH <sub>3</sub> (CH <sub>2</sub> ) <sub>6</sub> CH <sub>2</sub> OH
# CAS	111-87-5

## Telephone D'urgence

416-984-3000

NFPA



Niveau de risque

Minime	Légère	Modéré
0	1	2

WHMIS

Santé	1
Flammabilité	2
Reactivité	0

Sérieux	Extrême
3	4

## SECTION II Ingrédients Dangereux

Nom	%	TWA
Octanol	100%	Sans objet.
<b>AVERTISSEMENT! COMBUSTIBLE.</b>		

## SECTION III Caractéristiques Physiques

Point de fusion (°C)	-17,2°C	Gravité spécifique (Eau = 1)	0,827 @ 20/20°C
Point d'ébullition (°C)	195°C	Volatilité % par volume	100%
Tension de vapeur (mm Hg)	0,14 @ 78°F	Taux d'évaporation (Alcool de butyl =1)	< 0,01
Densité de la vapeur (Air=1)	4,5		
Solubilité	0,04 g/100 mL @ 20°C.		
Odeur et apparence	Liquide; inodore.		

## SECTION IV Risques D'incendie ou D'explosion

Point d'éclair	Creuset Fermé: 82,2°C	Limites d'inflammabilité % par volume	Seuil minimal 0,9%	Seuil maximal 6,0%
Moyens d'extinction	Utiliser des poudres chimiques sèches, du CO <sub>2</sub> , une mousse d'alcool ou de l'eau pulvérisée. En cas de feu, sapeur-pompier devra porter un masque adéquate ou un respirateur autonome.			

Inflammabilité et risques d'explosion	Le produit est combustible.
---------------------------------------	-----------------------------

TMD	Substance non réglementée par le TMD (Canada).
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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 a trait à l'exactitude ou à l'état complet de l'information contenue dans ce document. La détermination finale de la convenance de tout matériel 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

OX0005

Chimique Stabilité	oui	X	<u>Si non, dans quelles condition?</u>
	non		
Incompatibilité avec d'autres produits	oui	X	Les matières comburante forte, les acides inorganique.
	non		
Produits de decomposition dangereux	Ces produits sont des oxydes de carbone.		
Conditions de Réactivité	Aucune information spécifique n'est disponible.		

## SECTION VI Propriétés Toxicologiques

Voies d'absorption	Ingestion.
LMP	Sans objet.
Toxicité pour les animaux	Toxicité orale aiguë (DL50): > 5 g/kg (Rat).
Effets chroniques sur les humains	Une exposition répétée ou prolongée à la substance peut entraîner des troubles à certains organes cible. Les système nerveux central, le foie et les reins sont des organes de cible.
Effets aiguë sur les humains	Nocif en cas d'inhalation ou en cas d'ingestion. Vapeur nocif. Peut provoquer une irritation des yeux ou de la peau.

## SECTION VII Mesures Préventives

Élimination des résidus	Consulter vos autorités locales ou régionales.
Entreposage	Mettre les contenants de ce produit à la masse. Conserver le récipient bien fermé. Conserver dans un endroit frais et bien ventilé. Conserver à l'écart de matières combustibles. Conserver à l'écart de la chaleur, de toute source d'ignition. Les contenants vides peuvent causer un risque d'incendie, évaporer les résidus sous une hotte.
Précautions	Éviter tout contact avec la peau et les yeux. NE PAS inhaler les vapeur ou aérosols. NE PAS ingérer. Si ingéré, consulter immédiatement un médecin.
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, blouse 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: Vérifier si la victime porte des verres de contact et dans ce cas lui les enlever. Rincer les yeux immédiatement à l'eau courante pendant au moins 15 minutes en gardant les paupières ouvertes. Obtenir de l'aide médicale. Contact cutané: 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.
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## SECTION IX Renseignements sur la Préparation de la FS

# Rev.	5	Date	04 septembre, 2002	Vérfié par	Michael Raszeja
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MATERIAL SAFETY DATA SHEET (SUBSTITUTES FOR OSHA FORM 174): May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200.

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PRODUCT NUMBER: 318

IDENTITY: HITEMP/CBC/NORCAL/DAKOTA OB 6A Revision Date: 01/18/2007

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Section I

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Manufacturer's Name: DAKOTA PRODUCTS, INC.***	Telephone Numbers:
Address: P.O. BOX 1550	Emergency: 800/255-3924
SIOUX FALLS	Information: 605/368-2166
State: SD Zip Code: 57108	

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HMIS CODES: REACTIVITY: 1 FLAMMABILITY: 2 HEALTH: 1 PERSONAL PROTECT: A

Section II: HAZARDOUS INGREDIENTS/IDENTITY INFORMATION (All of the ingredients contained in this product are listed on the TSCA inventory.)

=====

Name	Cas No.	OSHA PEL	ACGIH TLV	OTHER LIM
%				
ACETONE	67-64-1	1000 PPM	750 PPM	N/A
PROPANE/N-BUTANE	68476-86-8	1000 PPM	600 PPM	N/A
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### Section III: PHYSICAL/CHEMICAL CHARACTERISTICS

=====			
===			
Boiling Point:	165	Specific Gravity (water=1)	
0.96			
Vapor Pressure(mm Hg)	44	Melting Point:	N/A
Vapor Density(AIR=1)	1	Evaporation Rate:	>1
Solubility in Water:	100%	(Butyl Acetate=1)	
Appearance and Odor:	CLEAR SPRAY, NEW CAR ODOR		

### Section IV: FIRE AND EXPLOSION HAZARD DATA

=====			
===			
Flash Point(Method Used):	<200F TCC	Flammable Limits:	LEL:N/A UEL: N/A
Extinguishing Media:	STANDARD CHEMICAL FIRE EXTINGUISHER		
Special Fire Fighting Procedures:	NONE		

Unusual Fire and Explosion Hazards: CONTENTS UNDER PRESSURE. EXPOSURE TO TEMPERATURES ABOVE 120 F MAY CAUSE BURSTING. CONTAINS FLAMMABLE

PROPELLANT.

Section V: REACTIVITY DATA

PRODUCT NUMBER: 318

=====

Stability: Unstable:                      Conditions to avoid:  
                    Stable:    X            TEMPERATURES ABOVE 120 DEG F.  
Incompatability (Materials to Avoid): STRONG OXIDIZERS, ALKALIES, ACIDS

Hazardous Decomposition or Byproducts: NONE KNOWN

Hazardous Polymerization:                      May Occur:                      Will Not Occur: X  
Conditions to Avoid: NONE

Section VI:    HEALTH HAZARD DATA

=====

Routes of Entry:                      Inhalation: YES                      Skin: YES  
Ingestion: YES  
Health Hazards(Acute and Chronic):  
INHALATION: MAY CAUSE DIZZINESS IF OVEREXPOSED. EYES: MAY CAUSE SLIGHT  
IRRITATION/BURNING. SKIN: MAY CAUSE LOCALIZED DEFATTING OF SKIN.  
INGESTION:  
MAY CAUSE NAUSEA.  
Carcinogenicity: NTP:NO                      IARC Monographs:NO                      OSHA Reg:NO  
Signs and Symptoms of Exposure: SEE HEALTH HAZARDS ABOVE

Medical Conditions Generally Aggravated by Exposure: NONE KNOWN

Emergency and First Aid Procedures: INHALATION: REMOVE TO FRESH AIR. SEE  
PHYSICIAN IF DIFFICULTY IN BREATHING PERSISTS. EYES: FLUSH WITH WATER FOR  
15 MINUTES. CONSULT PHYSICIAN IF IRRITATION PERSISTS. SKIN: WASH WITH  
SOAP  
AND WATER. INGESTION: DRINK SEVERAL GLASSES OF WATER. CONSULT PHYSICIAN.

Section VII:    PRECAUTIONS FOR SAFE HANDLING AND USE

=====  
=====  
Steps to be Taken in Case Material is Released or Spilled: MOP OR WIPE UP  
SPILL. DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL GUIDELINES.

Waste Disposal Method: WRAP CONTAINER AND PLACE IN TRASH COLLECTION. DO  
NOT PUNCTURE OR INCINERATE CONTAINER.

Precautions to be Taken in Handling and Storing: STORE IN A COOL DRY  
AREA. KEEP AWAY FROM HEAT, FLAME OR SPARKS.

Other Precautions: EXPOSURE TO TEMPERATURES >120 F MAY CAUSE BURSTING.

#### Section VIII: CONTROL MEASURES

=====  
=====  
Respiratory Protection: N/A  
Ventilation: Local Exhaust: ADEQUATE  
Mechanical: N/A Special: N/A  
Other: N/A  
Protective Gloves: N/A  
Eye Protection: SAFETY GLASSES ARE RECOMMENDED WHEN USING CHEMICAL  
PRODUCTS  
Other Protective Clothing or Equipment:  
N/A  
Work/Hygienic Practices:  
WASH HANDS AFTER USE

# 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*)  
**ODOR SORB**

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 CAPITAL SOAP PRODUCTS	Emergency Telephone Number 973 333 6100
Address ( <i>Number, Street, City, State, and ZIP Code</i> ) 33 Branch Street	Telephone Number for Information 973 333 6100
Paterson, New Jersey 07524	Date Prepared November 2008
<b>ODOR SORB</b>	Signature of Preparer ( <i>optional</i> )

### Section II - Hazard Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	%( <i>optional</i> )
ATTAPULGITE CLAY	CAS # 8031 18 3			
PINE SAWDUST	None Assigned			
PINE OIL	CAS # 8002 09 3			
H.M.I.S. RATING: HEALTH 0 FLAMMIBILITY 1 REACTIVITY 0				
<i>THIS PRODUCT CONTAINS NO HAZARDOUS INGREDIENTS AS DEFINED BY OSHA</i>				

### Section III - Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H <sub>2</sub> O = 1)	.42
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water	NOT SOLUBLE IN WATER		
Appearance and Odor	OFF WHITE OR BEIGE – PINE SCENTED		

### Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used) 325° f/OPEN CUP	Flammable Limits	LEL	UEL
Extinguishing Media WATER OR DRY CHEMICAL			
Special Fire Fighting NONE REQUIRED			
Unusual Fire and Explosion Hazards NONE ESTABLISHED			

(Reproduce locally)

OSHA 174, Sept. 1985

### Section V - Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	STABLE & NON-REACTIVE
Incompatibility ( <i>Materials to Avoid</i> )		NONE	
Hazardous Decomposition or Byproducts		NONE	
Hazardous Polymerization	May Occur		Conditions to Avoid NONE
	Will Not Occur	X	

## Section VI - Health Hazard Data

Route(s) of Entry:	Inhalation? None Known	Skin?	Ingestion?
Health Hazards ( <i>Acute and Chronic</i> ) Prolonged or repeated exposure can cause drying, defatting and dermatitis of skin			
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?
Signs and Symptoms of Exposure      NONE			
Medical Conditions			
Generally Aggravated by Exposure	Harmful if swallowed. May cause nausea, vomiting		
Emergency and First Aid Procedures      INDUCE VOMITING - CONSULT A PHYSICIAN			

## Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled	MATERIALS REQUIRE NO SPECIAL PROCEDURES
Waste Disposal Method	SUITABLE METHODS OF GOOD HOUSEKEEPING MEETING APPLICABLE LOCAL REGULATIONS
Precautions to Be taken in Handling and Storing	NONE REQUIRED
Other Precautions - NONE	

## Section VIII - Control Measures

Respiratory Protection ( <i>Specify Type</i> )		NONE REQUIRED
Ventilation	Local Exhaust	Special
	Mechanical ( <i>General</i> )	Other
Protective Gloves- Not Required		Eye Protection -Not Required
Other Protective Clothing or Equipment Not Required		
Work/Hygienic Practices		WASH HANDS AFTER USE

### DISCLAIMER OR EXPRESSED AND IMPLIED WARRANTIES

The data in this Material Safety Date Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information set forth herein is based on technical data that Capital Soap Products believes to be reliable as of the date hereof. 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. Nothing herein is to be taken as license to operate under or a recommendation to infringe any patents.

Odorless Paste Flux SFG  
MATERIAL SAFETY DATA SHEET  
S O S PRODUCTS COMPANY INC  
P. O. Box 47  
East Greenville, Pa. 18041  
Phone (215)-679-6262 (215)-679-6263

PAGE 1

SECTION I - GENERAL INFORMATION

Product Code: SFG Revision Date: April 20, 2007  
Identification: ODORLESS PASTE SOLDER FLUX (LEAD FREE)

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT:	%	PEL PPM	TLV PPM	TLV MG/M3	LEL	CAS. NO
ZINC CHLORIDE	--	1.0/M3	FUMES	1.00	---	7646-85-7
AMMONIUM CHLORIDE	--	---	FUMES	10.00	---	12125-02-9

Carcinogenicity: This product 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.

SECTION III - PHYSICAL CHARACTERISTICS

Boiling Point: N/A Specific Gravity: .95  
Vapor Pressure: N/A Melting Point: 120-140o F  
Vapor Density: N/A Evaporation Rate: N/A  
Solubility in Water: SLIGHT  
Odor and Appearance: ODORLESS AMBER PASTE

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: 580o F (MIN) COC LEL: N/A  
Flammable Limits: N/A UEL: N/A  
Extinguishing Media: CARBON DIOXIDE, WATER FOG, DRY CHEMICAL

Special Fire Fighting Procedures:

DO NOT USE DIRECT STREAM OF WATER. PRODUCT WILL FLOAT & CAN BE RE-IGNITED ON SURFACE OF WATER.

Unusual Fire and Explosion Hazards:

KEEP AWAY FROM EXTREME HEAT & OPEN FLAME.

SECTION V - REACTIVITY DATA

This product is STABLE.

Conditions to avoid: CONTACT WITH CONCENTRATED ALKALIES

Incompatibility: ZINC CHLORIDE IS INCOMPATIBLE WITH SULFIDE SALTS & CYANIDE.

Hazardous Decomposition: WILL NOT OCCUR EXCEPT AT EXTREME TEMPERATURES.

Hazardous Polymerization WILL NOT OCCUR.

## Odorless Paste Flux SFG

### SECTION VI - HEALTH HAZARD DATA

Routes of Entry:      Inhalation?    NO  
                         Skin?                YES - PRIMARY  
                         Ingestion?     YES - PRIMARY

#### Health Hazards (Acute and Chronic):

INDIVIDUALS WITH PRE-EXISTING LUNG DISEASES MAY HAVE INCREASED  
SUSCEPTIBILITY TO THE TOXICITY OF PROLONGED EXPOSURE TO ZINC CHLORIDE.

Carcinogenicity:        NTP?                                NO  
                             IARC Monographs?               NO  
                             OSHA Regulated?                NO

#### Signs and Symptoms of Exposure:

SKIN: BURNS, SKIN IRRITATION & RASH. EYES: IRRITATION, TEARING OR BLURRING  
OF VISION.

INGESTION: SEVERE DAMAGE TO INTERNAL ORGANS IF SWALLOWED IN LARGE QUANTITY.

#### Medical Conditions Generally Aggravated by Exposure:

FOR ZINC CHLORIDE CONTACT, THERE ARE INCONCLUSIVE OR UNVERIFIED REPORTS  
OF HUMAN SENSITIZATION.

#### Emergency and First Aid Procedures:

SKIN: WASH WITH SOAP & WATER THOROUGHLY; CONSULT PHYSICIAN IF BURN OR RASH  
APPEARS.

EYES: FLUSH 15 MINUTES WITH WATER; CALL PHYSICIAN.

INGESTION: DO NOT INDUCE VOMITING. IF CONSCIOUS, DILUTE WITH MILK OR WATER AND  
CALL PHYSICIAN IMMEDIATELY.

### SECTION VII - HANDLING PRECAUTIONS

#### Steps to be Taken if Material is Released or Spilled:

FLUSH WITH LARGE AMOUNTS OF WATER & PICK UP WITH ABSORBING MATERIALS.

#### Waste Disposal Method:

COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS FOR LARGE QUANTITIES.

#### Precautions to be Taken in Handling and Storage:

WEAR RUBBER GLOVES & GOGGLES FOR HANDLING LARGE AMOUNTS.

Other Precautions: NONE REQUIRED FOR NORMAL USE.

### SECTION VIII - CONTROL MEASURES

Respiratory Protection: NONE REQUIRED FOR NORMAL USE.

Ventilation Required: MECHANICAL EXHAUST FAN

Protective Gloves: WEAR RUBBER GLOVES

Eye Protection: WEAR SAFETY GOGGLES

Other Protective Equipment: NONE REQUIRED FOR NORMAL USE.

Odorless Paste Flux SFG

Work/Hygienic Practices: WASH THOROUGHLY WITH SOAP & WATER AFTER USING.

The above information pertains to the product as it is currently formulated and is based upon the information available at this time. Additions of reducers or other additives to this product may substantially alter the composition and subsequent hazards of the product. Since conditions of use are outside of our control, we make no warranties, either expressed or implied, and assume no liability in connection with any use of this information.





# Material Safety Data Sheet

Martin/F. Weber Company  
[<<Close MSDS>>](#)

Date Prepared:

October 9, 2004

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For Health Emergencies, CALL A POISON CONTROL CENTER

For Transportation Emergencies ONLY: Call Chem-Tel:  
USA, Canada, Puerto Rico, US Virgin Islands: Call 800-255-3924  
Outside North America: Call Collect 813-248-0585

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## SECTION 1 - PRODUCT & COMPANY IDENTIFICATION

1.1 PRODUCT NAME	Odorless Turpenoid® - Turpentine Substitute
1.2 ITEM NUMBERS AND SIZES	1681 - 118ml, 1682 - 236ml, 1683 - 473ml, 1684 - 946ml, 1685 - 3.79l, 1689 - Display Assortment
1.3 COMPANY IDENTIFICATION	Martin/F. Weber Company 2727 Southampton Road Philadelphia, PA 19154-1293 USA Phone: 215-677-5600 Fax: 215-677-3336 email: <a href="mailto:info@weberart.com">info@weberart.com</a>

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## SECTION 2 - COMPOSITION INFORMATION

COMPONENT	CAS #	MAX. AMOUNT (% Weight)
Aliphatic Hydrocarbon	8052-41-3	100%

## SECTION 3 - HAZARDS IDENTIFICATION

### 3.1 EMERGENCY OVERVIEW

**Appearance** Clear Liquid

**Physical State** Liquid

**Odor** Light to negligible petroleum solvent

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

Skin - may cause mild irritation. Prolonged or repeated contact may dry the skin. Symptoms include redness, burning, drying, cracking of the skin and skin burns. This material may pass into the body through the skin. It is

unlikely that this would result in harmful effects during safe handling and use.

## Hazards of Product

Swallowing - Swallowing large amounts may be harmful. This material can also get into the lungs during swallowing or vomiting. The results in lung inflammation and other lung injury.

Inhalation - Breathing of vapor or mist is possible. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits. (See section 8.)

### 3.2 POTENTIAL HEALTH EFFECTS

Effects of Single Acute Overexposure: Nausea, headache, confusion, instability, weakness, fatigue, vomiting diarrhea, irritation of eyes and chest.

Chronic, Prolonged or Repeated Overexposure: Nausea, headache, confusion, instability, weakness, fatigue, vomiting diarrhea, irritation of eyes and chest.

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

### 3.3 POTENTIAL ENVIRONMENTAL EFFECTS

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## SECTION 4 - FIRST AID PROCEDURES

- |                        |   |
|------------------------|---|
| 4.1 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.  |
| 4.2 EYE CONTACT        | Move from exposure. Wash eyes liberally with water for 10 minutes or more. If symptoms persist or there is any visual difficulty, seek prompt medical attention.  |
| 4.3 SKIN CONTACT       | Remove contaminated clothing, Wash exposed area with soap and water. Apply hand cream to affected areas to minimize drying of skin. If symptoms persist, seek prompt medical attention. Launder contaminated clothing before reuse.   |
| 4.4 SWALLOWING         | Call Physician or Poison Control Center immediately. Do Not induce vomiting unless so advised by a physician, medical facility or poison control center. (Aspiration Hazard.) If individual is drowsy or unconscious, do not give anything by mouth. If possible, do not leave individual unattended. |
| 4.5 NOTES TO PHYSICIAN | This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (see section 3 - Swallowing,) when deciding whether to induce vomiting.  |
- 

## SECTION 5 - FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

<b>Identification Number</b>	UN 1263
<b>Flash Point - Closed Cup</b>	110° F (43.° C) - 130° F (54.4° C)
<b>Flash Point - Open Cup</b>	
<b>Auto-Ignition Temperature</b>	No data
<b>Flammable Limits in Air</b>	Lower Explosion Limit (LEL) 0.7%, Upper Explosion Limit (UEL) 5.0%
5.2 EXTINGUISHING MEDIA	Regular Foam, Carbon Dioxide , Dry Chemical
5.3 EXTINGUISHING MEDIA TO AVOID	Water
5.4 SPECIAL FIRE FIGHTING PROCEDURES	Not Applicable
5.5 SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS	Wear a self contained breathing apparatus with a full face piece 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.
5.6 UNUSUAL FIRE AND EXPLOSION HAZARDS	Not Applicable
5.7 HAZARDOUS COMBUSTION PRODUCTS	May form: Carbon Dioxide, Carbon Monoxide, various hydrocarbons.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

Steps to be Taken if Material is Released or Spilled	Eliminate all sources of ignition, such as flares, flames, (including pilot lights,) and electrical sparks. Clean up small spills with rags or paper towels. Place into air-tight metal container for disposal.
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## SECTION 7 - HANDLING AND STORAGE

7.1 GENERAL HANDLING	Avoid contact with skin. Use exhaust fan to remove vapors and assure adequate cross ventilation. Do not use near heat, sparks or flame.
7.2 STORAGE	Keep containers closed when not in use. Store containers in a dry well-ventilated area. Keep from heat, sparks or flame. KEEP OUT OF THE REACH OF CHILDREN.

## SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 EXPOSURE LIMITS	OSHA PEL 500ppm TWA, OSHA VPEL 100ppm TWA, ACGIH TLV - 100ppm.
8.2 PERSONAL PROTECTION	Rubber or vinyl gloves are useful to minimize skin contact. Use safety glasses or goggles to protect eyes from splashes.
<b>Respiratory Protection:</b>	Not required if adequate cross ventilation is maintained.
<b>Ventilation:</b>	Use a local exhaust fan along with fresh air source to avoid vapor buildup
<b>Eye Protection:</b>	Wear goggles or chemical splash glasses, to avoid splashed material in eyes .

<b>Protective Gloves:</b>	Wear resistant (Rubber or vinyl) gloves to minimize skin contact.
<b>Other Protective Equipment:</b>	Suitable to existing work environment .

8.3 ENGINEERING CONTROLS                      Not Applicable

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Clear colorless liquid
<b>pH</b>	No data
<b>Solubility in Water (by Weight)</b>	Negligible <5%
<b>Odor</b>	Light to negligible petroleum solvent
<b>Flash Point - Closed Cup</b>	110° F (43° C) - 130° F (54.4° C)
<b>Flash Point - Open Cup</b>	
<b>Percent Volatiles</b>	100% - VOC = 758g/l
<b>Boiling Point (760mm Hg)</b>	340 - 400° F (171° - 204° C) @ 760mm Hg
<b>Freezing Point</b>	Not Applicable
<b>Specific Gravity (H<sub>2</sub>O=1)</b>	0.758 @16°C
<b>Vapor Pressure at 20°C</b>	2mm Hg @68°F (16°C)
<b>Vapor Density (air = 1)</b>	4.9
<b>Evaporation Rate (n-Butyl Acetate = 1)</b>	0.11
<b>Melting Point</b>	Not Applicable

## SECTION 10 - STABILITY AND REACTIVITY

10.1 Stability / Instability

**Conditions to Avoid:**

**Incompatible Materials:**                      Avoid contact with: excessive heat, strong oxidizing agents

10.2 Hazardous Polymerization                      Will not undergo hazardous polymerization.

10.3 Inhibitors / Stabilizers

## SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: LD 50 and LC 50 Data

Petroleum Distillates (CAS# 8052-41-3)

Oral LD (rat): >5000mg/kg

Dermal LD (rabbit): >3000mg/kg

Inhalation LC (rat, 4 hour): >5500mg/m<sup>3</sup>

CHRONIC TOXICITY: No Data

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## SECTION 12 - ECOLOGICAL INFORMATION

**12.1 Environmental Fate** No Data

**12.2 Ecotoxicity** No Data

**12.3 Further Information** No Data

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## SECTION 13 - DISPOSAL CONSIDERATIONS

**13.1 Waste Disposal Method:** Dispose of in accordance with all applicable local, state and federal regulations.

**13.2 Disposal Considerations:**

---

## SECTION 14 - TRANSPORTATION INFORMATION

**U.S. D.O.T.** Ground Transportation: ORM-D Consumer Commodity  
Ocean Transportation: Paint Related Material, 3.3, UN 1263, PG III, Limited Quantity

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## SECTION 15 - REGULATORY INFORMATION

15.1 US Federal / National

Canada:

Class A - Compressed Gas - Does Not Meet Criteria

Class B - Flammable & Combustible Material - B3 Flammable & Combustible Material - Combustible Liquid

Class C - Oxidizing Material - Does Not Meet Criteria

Class D - Poisonous & Infectious - Division 1 - Does Not Meet Criteria

Class D - Poisonous & Infectious - Division 2 - Does Not Meet Criteria

Class E - Corrosive Material - Does Not Meet Criteria

Class F- Dangerously Reactive Material - - Does Not Meet Criteria

15.2 State / Local

---

## SECTION 16 - OTHER INFORMATION

The information presented here is current as of the date of this Material Safety Data Sheet and is believed to be accurate but is not warranted to be, whether originating with the company or not. Since use of this information and the product are not under the control of Martin/F. Weber Company, it is the user's obligation to determine conditions of safe use, in advance of use, and to carefully read the product label and follow all instructions for safe use of the product.

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# MATERIAL SAFETY DATA SHEET: OFF THE WALL

## Section I - General Information

(0000000-0000000- - 0309)

### Date of Issue:

8/4/2006 12:00:00 AM

### Chemical Name & Synonyms:

N/A

### Chemical Family:

ALKALINE SOLVENT EMULSION

### Manufacturer Name:

MANTEK, DIVISION OF NCH CORP.

### Manufacturer Address:

BOX 152170  
IRVING, TEXAS 75015

### Prepared By:

R Mohochi/Chemist

### Supercedes:

3/8/2002 12:00:00 AM

### Trade Name & Synonyms:

OFF THE WALL

Formula is a mixture: [√]

### Product Code Number:

0309

### Emergency Phone Number:

800-424-9300

## Section II - Hazardous Ingredients

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

### Chemical Name (Ingredients)

POTASSIUM HYDROXIDE  
TERPENE HYDROCARBONS  
MONOETHANOLAMINE (MEA)  
ETHYLENE GLYCOL MONOBUTYL ETHER (EGBE)  
NAPHTHALENE  
PETROLEUM HYDROCARBONS  
DIMETHYL GLUTARATE  
DIETHANOLAMINE  
PROPYLENE GLYCOL MONOMETHYL ETHYL ACETATE (PGMA)  
\$ CEILING LIMIT  
\$\$ IRR/COMB/TOX  
\* STODDARD SOLVENT VALUE  
# TURPENTINE VALUES  
\*\* OIL MIST  
## IRR/COMB/CARC

### Hazard

CORROSIVE  
IRR/COMB  
CORROSIVE  
\$\$  
#  
IRR/COMB  
IRRITANT  
IRRITANT  
IRR/COMB

### TLV

2 MG/M3 \$1  
20 PPM #1  
3 PPM 1  
20 PPM 1  
10 PPM 1  
5 MG/M3\*\*1  
N/E 1  
2 MG/M3 1  
N/E 1

### PEL

2 MG/M3 2  
100 PPM #2  
3 PPM 2  
50 PPM 2  
10 PPM 2  
5 MG/M3\*\*2  
N/E 2  
N/E 2  
N/E 2

### STEL

2 MG/M3 \$1  
N/E  
6 PPM 1  
N/E  
15 PPM 1  
10MG/M3\*\*1  
N/E  
N/E  
N/E

### CAS #

1310-58-3  
68956-56-9  
141-43-5  
111-76-2  
91-20-3  
64742-94-5  
1119-40-0  
111-42-2  
108-65-6

## Section III - Physical Data

Boiling Point (°F):330°  
Vapor Pressure (mm Hg):0.87  
Vapor Density (Air=1):4.4  
pH @ 100% :9.4 @10%  
% Volatile by Volume:81  
H<sub>2</sub>O Solubility:EMULSIFIABLE

Specific Gravity (H<sub>2</sub>O=1):0.95  
Color:YELLOW TO AMBER  
Odor:ETHER-LIKE  
Clarity:TRANSPARENT  
Evaporation Rate (BuAc=1):0.08  
Viscosity:NON-VISCOUS

## Section IV - Fire and Explosion Hazard

Flash Point: 112°F  
Flammable Limits: PRODUCT MIXTURE  
LEL: 0.8%

Method Used: SETAFASH  
UEL: 75%  
Aerosol Level (NFPA 30B): N/A

### Extinguishing Media:

[√] Foam [√] Alcohol Foam [√] CO2  
[√] Dry Chemical [√] Water Spray [ ] Other

### NFPA 704 Hazard Rating:

4-Extreme Health: 3  
3-High Flammability: 2  
2-Moderate Instability: 0  
1-Slight Special:  
0-Insignificant

### 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:

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT SOURCES OF IGNITION AND FLASHBACK. USE CARE AS SPILLS MAY BE SLIPPERY. 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. PROLONGED CONTACT WITH REACTIVE METALS, SUCH AS ALUMINUM, COPPER, BRASS, BRONZE, CHROMIUM, MAGNESIUM, TIN, ZINC, AND ALLOYS, CAN CAUSE THE FORMATION OF FLAMMABLE HYDROGEN GAS WHICH CAN FORM AN EXPLOSIVE MIXTURE WITH AIR.

## 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: CAUSES SEVERE EYE IRRITATION SEEN AS STINGING, TEARING, REDNESS, SWELLING, EXCESS BLINKING, AND A BURNING SENSATION. PROLONGED CONTACT MAY CAUSE TRANSIENT CORNEAL INJURY AND IRREVERSIBLE DAMAGE TO EYE. SKIN CONTACT: CAUSES SEVERE IRRITATION SEEN AS ITCHING, REDNESS, AND BURNING SENSATION. PROLONGED OR REPEATED CONTACT MAY CAUSE DEFATTING, DRYING OF SKIN, TISSUE DESTRUCTION AND SCARRING. PRODUCT MAY BE ABSORBED THROUGH THE SKIN IN HARMFUL AMOUNTS WITH SYMPTOMS SEEN AS CENTRAL NERVOUS SYSTEM DEPRESSION, BLOOD ABNORMALITIES, KIDNEY AND LIVER DAMAGE, AND EVEN DEATH. MAY CAUSE ALLERGIC SKIN REACTION SEEN AS DELAYED SKIN RASH WHICH MAY BE FOLLOWED BY BLISTERING, SCALING, AND OTHER SKIN EFFECTS. INHALATION: CAUSES RESPIRATORY IRRITATION SEEN AS COUGHING, CHOKING, WHEEZING, 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: INGESTION OF LARGE AMOUNTS MAY CAUSE CNS EFFECTS SIMILAR TO INHALATION, METABOLIC ACIDOSIS, SUBSEQUENT SECONDARY EFFECTS SUCH AS HEMOLYSIS, BLOOD ABNORMALITIES, LIVER AND KIDNEY EFFECTS, AND COMA. 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.

#### Chronic: (Long Term Exposure)

CHRONIC SKIN CONTACT MAY CAUSE SKIN SENSITIZATION IN SOME INDIVIDUALS AND BENIGN SKIN TUMORS. UPON REPEATED OR PROLONGED CONTACT, THIS PRODUCT MAY BE ABSORBED IN TOXIC AMOUNTS CAUSING LIVER ABNORMALITIES WHICH MAY BE INDICATED BY LOSS OF APPETITE, JAUNDICE (YELLOWISH SKIN AND EYE COLOR), FATIGUE, BLEEDING OR EASY BRUISING, AND SOMETIMES PAIN AND SWELLING IN THE UPPER RIGHT ABDOMEN; BLOOD ABNORMALITIES, KIDNEY, LUNG, SPLEEN AND TESTES DAMAGE, WEIGHT LOSS, AND ANOREXIA. PROLONGED AND REPEATED INHALATION OF VAPORS MAY CAUSE THE PRESENCE OF BLOOD IN THE URINE, HEARING LOSS, IRREGULAR HEART RYTHMS, AND CARDIAC ARREST.

INGESTION MAY BE HARMFUL WITH SYMPTOMS SIMILAR TO INTOXICATION, THE SEVERITY OF WHICH DEPENDS ON THE AMOUNT INGESTED. OVEREXPOSURE TO NAPHTHALENE MAY CAUSE CATARACT FORMATION, CORNEAL ULCERATIONS, ABNORMALITIES, AND HEMOLYSIS IN HUMANS DEFICIENT IN GLUCOSE-6-PHOSPHATE DEHYDROGENASE. 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 SENSITIVITY TO SUNLIGHT (PHOTOSENSITIVITY) MAY OCCUR. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA, AND DERMATITIS; PRE-EXISTING KIDNEYS, LIVER, LUNGS, SPLEEN, BLOOD, AND TESTES DISEASES. TARGET ORGANS: LIVER, KIDNEYS, LUNGS, CARDIOVASCULAR SYSTEM, BLOOD, BLOOD-FOAMING ORGANS, HEART, SPLEEN, TESTES, OPTIC NERVES, AND CENTRAL NERVOUS SYSTEM. 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:**  
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:**  
IMMEDIATELY REMOVE CONTAMINATED CLOTHING AND SHOES. FLUSH AFFECTED AREAS WITH LARGE AMOUNTS OF WATER FOR 20 TO 30 MINUTES. GET IMMEDIATE MEDICAL ATTENTION. DISCARD CLOTHING AND SHOES.

**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 UNCES 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. POMEPIZOLE MAY ALSO BE APPROPRIATE. 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 ENDOTRACHEAL TUBE WILL PREVENT ASPIRATION.

Section VI - Toxicity Information

Product Contains Chemicals Listed as Carcinogen or Potential Carcinogen By:

☒ IARC      ☒ NTP      ☐ OSHA      ☐ ACGIH      ☒ Other

VOC CONTENT: 77.8% BY WEIGHT; 81% BY VOLUME; 738.7 G/L

POTASSIUM HYDROXIDE  
ORL-RAT LD50: 273 MG/KG 4.  
SKN-RBT SDT: 50 MG/24H SEVERE 4.  
EYE-RBT RINSED WITH WATER: 1 MG/24H MODERATE 4.  
MICE PAINTED WITH A 3 TO 6% AQUEOUS SOLUTION FOR 46 WEEKS DEVELOPED SKIN TUMORS. THIS STUDY WAS CONDUCTED IN 1925 AND THE ADEQUACY OF THE TEST AND ITS DESIGN ARE UNKNOWN 3.

TERPENE HYDROCARBONS  
ORL-RAT LD50: 2300-5100 MG/KG 3.  
SKN-RBT LD50: >5000 MG/KG 3.  
SKN-RBT SDT: 500 MG/24H MODERATE - SEVERE IRRITANT 3.  
EYE-RBT: SEVERE IRRITANT WITH SUPERFICIAL CORNEA AND IRRITIC EFFECTS. 3.

A MAXIMIZATION SKIN PATCH TEST WITH 10% IN PETROLEUM RESULTED IN THREE SENSITIZATION REACTIONS FROM 25 SUBJECTS TESTED. SENSITIZATION IS SUSPECTED TO BE CAUSED BY OXIDATION PRODUCTS OF THE TEST SAMPLE. RETESTING UNDER DUPLICATE CONDITIONS WITH A SAMPLE PROTECTED FROM OXIDATION RESULTED IN NO SENSITIZATION CHANGES. 3.

MONOETHANOLAMINE (MEA)  
ORL-RAT LD50: 1720 MG/KG 4.  
SKN-RBT LD50: 1000 MG/KG 4.  
SKN-RBT (OPEN): 505 MG MODERATE 4.  
EYE-RBT SDT: 250 UG SEVERE 4.  
IHL-MUS LC50: >2420 MG/M3/2H 4.  
ORL-RAT TDLo: 115 G/KG/90D-C: CHANGES IN LIVER AND BLADDER WEIGHTS 4.  
ORL-RAT TDLo: 500 MG/KG; FEMALE 6-15 DAYS AFTER CONCEPTION; FETAL DEATH AND MUSCULOSKELETAL SYSTEM ABNORMALITIES 4.

ETHYLENE GLYCOL MONOBUTYL ETHER (EGBE)  
SKN-RBT (OPEN): 500 MG MILD 4.  
EYE-RBT SDT: 100 MG SEVERE 4.  
ORL-RAT LD50: 470 MG/KG 4.  
SKN-RBT LD50: 220 MG/KG 4.  
IHL-RAT LC50: 450 PPM/4H 4.  
IHL-RAT TCLO: 100 PPM/6H (6-18D PREG): TER 4.

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. 5.

INHALATION EXPOSURE TO ETHYLENE GLYCOL MONOBUTYL ETHER 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. 6.

NAPHTHALENE  
EYE-RBT SDT: 100 MG MILD 4.  
SKN-RBT OPEN IRRITATION TEST: 495 MG MILD 4.  
SKN-RBT LD50: >20 G/KG 4.  
ORL-RAT LD50: 490 MG/KG 4.  
IHL-RAT LC50: >340 MG/M3/1H 4.

NAPHTHALENE CAUSED RED BLOOD CELL, KIDNEY, AND EYE DAMAGE. EYE DAMAGE WAS DEMONSTRATED BY CATARACT FORMATION AND RETINAL INJURY. INHALATION HAS ALSO CAUSED CATARACTS IN ANIMALS. IN A STUDY CONDUCTED BY THE NTP, MICE EXPOSED TO EITHER 10 OR 30 PPM OF NAPHTHALENE BY INHALATION DAILY OR TWO YEARS HAD INCREASED INCIDENCES OF METAPLASIA (ABNORMAL TISSUE CHANGES) IN THE NOSE AND HYPERPLASIA (EXCESSIVE PROLIFERATION OF NORMAL CELLS) IN THE LUNGS, AS WELL AS CHRONIC INFLAMMATION OF BOTH THE NOSE AND LUNGS. IN ADDITION, THE INCIDENCE OF BENIGN LUNG TUMORS WAS SIGNIFICANTLY INCREASED IN THE HIGH DOSE FEMALE GROUP, BUT NOT IN THE MALE GROUPS. THE SIGNIFICANCE OF THIS EFFECT TO HUMANS HAS NOT BEEN ESTABLISHED. 3.

NCI CARCINOGENESIS STUDIES: IHL-RAT CLEAR EVIDENCE; IHL-MSE EQUIVOCAL EVIDENCE  
NTP CARCINOGENESIS STUDIES: IHL-MSE SOME EVIDENCE  
IARC GROUP 2B: POSSIBLY CARCINOGENIC TO HUMANS

PETROLEUM HYDROCARBONS  
SKN-RBT LD50: >2 ML/KG 4.



# Material Safety Data Sheet: Off The Wall

ORL-RAT LDLo: 5 ML/KG 4.  
IHL-RAT LC50: >590 MG/M3/4H 4.

HYDROCARBON MISTS DERIVED FROM PETROLEUM DISTILLATES 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.

DIMETHYL GLUTARATE  
SKN-RBT: NON IRRITATING 3.  
EYE-RBT: MODERATELY IRRITATING 3.

DIETHANOLAMINE  
ORL-RAT LD50: 620 UL/KG 4.  
SKN-RBT LD50: 7640 UL/KG 4.  
SKN-HMN: NON-SENSITIZING 3.  
SKN-RBT SDT: 500 MG/24H MILD 4.  
EYE-RBT SDT: 5500 MG SEVERE 4.  
IHL-RAT MIST/VAPOR STUDY AT 170°C FOR 8 HRS, MORTALITY: 0/6, IRRITATION 3.

INGESTION OF DIETHANOLAMINE PRODUCED NERVOUS SYSTEM INJURY IN DOGS AND RATS. HEART AND SALIVARY GLAND LESIONS HAVE ALSO BEEN OBSERVED IN MICE TREATED CUTANEOUSLY AND IN DRINKING WATER. RATS GIVEN HIGH DOSES DEVELOPED ANEMIA AND TESTICULAR LESIONS. IN A 90-DAY DIETARY STUDY WITH RATS, THE RATS THAT RECEIVED 4.0, 2.0, 1.0, AND 0.5% OF DIETHANOLAMINE DIED WITHIN 4 TO 30 DAYS. THE MAJOR SIGNS WERE CLOUDY SWELLING AND DEGENERATION OF THE KIDNEY TUBULES AND EARLY FATTY DEGENERATION OF THE LIVER. 3.

IN THEIR PRELIMINARY REPORT, THE NTP HAS CONCLUDED THAT THERE IS NO EVIDENCE OF CANCER IN MALE AND FEMALE RATS AND CLEAR EVIDENCE OF LIVER TUMORS AND SOME EVIDENCE OF KIDNEY TUMORS IN MALE MICE AND CLEAR EVIDENCE OF LIVER TUMORS IN FEMALE MICE DERMALLY EXPOSED FOR THEIR LIFETIME. 3.

PROPYLENE GLYCOL MONOMETHYL ETHYL ACETATE (PGMA)  
ORL-RAT LD50: 8532 MG/KG 4.  
SKN-RBT LD50: >5 GM/KG 4.  
IHL-RAT LC50: >5000 PPM/1 HOUR BASED ON SIMILAR COMPUND 3.

## Section VII - Reactivity Data

Stability	Hazardous Polymerization
<div>[√] Stable<div>[ ] Unstable</div></div> <div>Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS, AND OPEN FLAMES; DO NOT DISTILL TO DRYNESS AS EXPLOSIVES PEROXIDES MAY BE FORMED.</div>	<div>[√] Will not occur<div>[ ] May occur</div></div> <div>Conditions to Avoid: N/A.</div>

**Incompatibility (Materials to Avoid):**  
PROLONGED CONTACT WITH REACTIVE METALS, SUCH AS ALUMINUM, COPPER, BRASS, BRONZE, CHROMIUM, MAGNESIUM, TIN, ZINC, AND ALLOYS, CAN CAUSE THE FORMATION OF FLAMMABLE HYDROGEN GAS WHICH CAN FORM AN EXPLOSIVE MIXTURE WITH AIR. STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; ACIDS, ACROLEIN, ACRYLONITRILE, ALDEHYDES, VITON, NEOPRENE, NITRILE, OR NATURAL RUBBER, HALOGENATED HYDROCARBONS, CHLORINE DIOXIDE, LEATHER, MALEIC ANHYDRIDE, NITROETHANE, NITROPARAFFINS, 2-NITROPHENOL, NITROPROPANE, ORGANIC HALOGEN AND NITRO COMPOUNDS, ORGANIC ANHYDRIDES, HALIDES, OXALATES, LACTONES, KETONES, FORMATES,EPOXIDES, VINYL CHLORIDE, VINYL ACETATE, PHOSPHORUS, POTASSIUM PERSULFATE, TETRAHYDROFURAN, AND WOOL. TRICHLOROETHYLENE WILL REACT TO FORM DICHLOROACETYLENE WHICH IS SPONTANEOUSLY FLAMMABLE; UNDER CERTAIN CONDITIONS, MAY REACT WITH NITRITES OR OTHER NITROSATING AGENTS TO FORM CARCINOGENIC NITROSAMINES.

**Hazardous Decomposition Products:**  
OXIDES OF CARBON, POTASSIUM, AND NITROGEN, AMMONIA, AMINES, ALDEHYDES, ORGANIC ACIDS, AND ACRID SMOKE.

## Section VIII - Spill Or Leak Procedures

**Steps to be Taken if Material is Released or Spilled:**  
WEAR APPROPRIATE PROTECTIVE CLOTHING. ELIMINATE ALL SOURCES OF IGNITION AND VENTILATE THE AREA. USE ONLY NON-SPARKING EQUIPMENT. USE CARE AS SPILLS MAY BE SLIPPERY. SHUT OFF SOURCE OF LEAK. DIKE AND CONTAIN SPILL. ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL INTO A PROPERLY LABELED CONTAINER FOR DISPOSAL. PREVENT PRODUCT FROM CONTAMINATING SOIL OR FROM ENTERING SEWAGE AND DRAINAGE SYSTEMS AND BODIES OF WATER. FLUSH AREA WITH WATER.

**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:**  
LOCAL VENTILATION IS RECOMMENDED TO CONTROL EXPOSURE FROM OPERATIONS THAT CAN GENERATE 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 SHOULD BE WORN. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR HAND PROTECTION, 29 CFR 1910.138.

**Eye Protection:**  
CHEMICAL GOGGLES SHOULD BE WORN. ENSURE COMPLIANCE WITH OSHA'S PERSONAL PROTECTIVE EQUIPMENT (PPE) STANDARD FOR EYE AND FACE PROTECTION, 29 CFR 1910.133.

**Other Protection:**  
WEAR PROTECTIVE CLOTHING WHEN HANDLING. A SAFETY SHOWER AND AN EYEWASH STATION SHOULD BE AVAILABLE. REMOVE SOAKED CLOTHING AND SHOES. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

## Section X - Storage and Handling Information

Storage Temperature	Storage Conditions
Max: 120°F <div>Min: 35°F</div>	<div>[√] Indoors<div>[ ] Outdoors<div>[ ] Heated<div>[ ] Refrigerated</div></div></div></div>

**Precautions to be Taken in Handling and Storing:**  
ALWAYS STORE MATERIAL IN ITS ORIGINAL CONTAINER. KEEP THE CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. USE WITH CAUTION AROUND HEAT, SPARKS, PILOT LIGHTS, STATIC ELECTRICITY, AND OPEN FLAME. EMPTY CONTAINERS MAY CONTAIN PRODUCT RESIDUES WHICH MAY EXHIBIT THE HAZARDS OF THE PRODUCT. TO AVOID POSSIBLE EXPLOSION

# MATERIAL SAFETY DATA SHEET: OFF THE WALL

DO NOT PRESSURIZE, CUT, WELD, SOLDER, DRILL, GRIND, OR EXPOSE EMPTY CONTAINERS TO HEAT, HOT SURFACES, SPARKS, OR OPEN FLAMES. GROUND AND BOND CONTAINER WHEN HANDLING NEAR FLAMMABLE VAPORS AND ALL SOURCES OF IGNITION.

**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
GLYCOL ETHERS	N/A	40
DIETHANOLAMINE	111-42-2	5
NAPHTHALENE	91-20-3	5

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, 2006.
  2. OSHA PEL.
  3. VENDOR'S MSDS.
  4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFODisc, 2006.
  5. DISSOLVING THE MYTHS ABOUT EGBE AND HEALTH, CMA, GLYCOL ETHER PANEL, 1989.
  6. CHEMICAL MANUFACTURERS ASSOCIATION, NOVEMBER 9, 1998.
- 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, TOX:TOXIC, IHL:INHALATION, COMB:COMBUSTIBLE, CORR:CORROSIVE, CARC:CARCINOGENIC, 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, HMN:HUMAN, IARC:INTERNATIONAL AGENCY FOR THE RESEARCH ON CANCER, NFPA:NATIONAL FIRE PROTECTION ASSOCIATION, ORL:ORAL, 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, PNOC:PARTICULATES NOT OTHERWISE CLASSIFIED, PNOR:PARTICULATES NOT OTHERWISE REGULATED, PNOS:PARTICLES (INSOLUBLE) NOT OTHERWISE SPECIFIED, SDT:STANDARD DRAIZE TEST

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.

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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## 1. PRODUCT IDENTIFICATION

MSDS Number: 1003000  
Identity: Granular Absorbent  
Issued: July 5, 2011  
Chemical Name Fullers Earth and/or bentonite or amorphous opaline silica

## 2. COMPOSITION

Component	CAS Number	Amount
Silica Hydrated (Amorphous Opaline Silica)	7631-86-9	90-100%
Fullers Earth	8031-18-3	90-100%
Bentonite	1302-78-9	90-100%
Quartz (respirable <1%)	14808-60-7	<10% bulk

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

This product is a non-combustible, chemically inert mineral. This mineral sample contains naturally-occurring crystalline silica as quartz. Prolonged overexposure to respirable crystalline silica may cause lung disease (silicosis). IARC, in Monograph 68, has concluded that crystalline silica inhaled in the form of quartz from occupational sources is carcinogenic to humans (Group 1); however, carcinogenicity was not detected in all industrial circumstances studied. The company is not aware of any scientific or medical data available indicating that exposure to dust from this product under conditions of normal use will cause silicosis or cancer. Adverse effects would not be expected from normal use of this product.

### HEALTH HAZARDS

**INGESTION:** No adverse effects expected with unused material.

**INHALATION:** Inhalation of excessive concentrations of dust may cause irritation of mucous membranes and upper respiratory tract.

**EYE:** Contact may cause mechanical irritation and possible injury.

**SKIN:** No adverse effects expected.

**SENSITIZATION:** No adverse effects expected.

**CHRONIC/CARCINOGENICITY:**

Inhalation of excessive concentrations of any dust, including this material, may lead to lung injury. This product contains crystalline silica. Excessive inhalation of respirable crystalline silica may cause silicosis, a progressive, disabling and fatal disease of the lung. Symptoms may include cough, shortness of breath, wheezing and reduced pulmonary function. The International Agency for Research on Cancer (IARC), in Monograph 68 has concluded that crystalline silica inhaled in the form of quartz or cristobalite, from occupational sources is carcinogenic to humans (Group 1). However, in making the overall evaluation, the Working Group 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. The National Toxicology Program (NTP) classifies crystalline silica as a known carcinogen. The company is not aware of any scientific or medical data available indicating that exposure to dust from this product under conditions of normal use will cause silicosis or cancer. Adverse effects would not be expected from normal use of this product.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

None currently known.

**4. FIRST AID MEASURES**

**EYE:** Immediately flush eyes with cool running water, lifting upper and lower lids. If irritation persists or for foreign body in the eye, get immediate medical attention.

**SKIN:** None needed for normal use.

**INGESTION:** If used material is ingested, get medical attention due to possibility of chemical contamination. If large amount of unused material is swallowed, get immediate medical attention.

**INHALATION:** Remove to fresh air.

**5. FIREFIGHTING MEASURES**

**FLASH POINT:** This product is not combustible.

**FLAMMABLE LIMITS** Not applicable

**EXTINGUISHING MEDIA:**  
Use media that is appropriate for surrounding fire.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:**  
None

**SPECIAL FIREFIGHTING INSTRUCTIONS**  
None required.

**HAZARDOUS COMBUSTION PRODUCTS:**  
None

## 6. ACCIDENTAL RELEASE MEASURES

Sweep up and collect for re-use or disposal

## 7. HANDLING AND STORAGE

**HANDLING:** Avoid breathing dust. If clothing becomes dusty, launder before re-use.

**STORAGE:** Store in a dry area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

Component	Exposure Limit
Silica Hydrated (Amorphous Opaline Silica)	PEL - 80 mg/m <sup>3</sup> / % SiO <sub>2</sub>
Fullers Earth	PEL - 15 mg/m <sup>3</sup> TWA (total dust) PEL - 5 mg/m <sup>3</sup> TWA (respirable fraction)
Bentonite	PEL - 15 mg/m <sup>3</sup> TWA (total dust) PEL - 5 mg/m <sup>3</sup> TWA (respirable fraction)
Quartz (respirable <1%)	PEL - 10 mg/m <sup>3</sup> /%SiO <sub>2</sub> +2 TWA TLV - 0.025 mg/m <sup>3</sup> TWA
<i>PEL- OSHA Permissible Exposure Limit. TLV- American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value. TWA- 8 hour Weighted Average. STEL-Short Term Exposure Limit.</i>	

### ENGINEERING CONTROLS:

For operations where the exposure limit may be exceeded, local exhaust ventilation is recommended.

### RESPIRATORY PROTECTION:

For operations where the exposure limit may be exceeded, a NIOSH/MSHA approved high efficiency particulate respirator is recommended.

**SKIN PROTECTION:** None required for normal use.

**EYE PROTECTION:** Safety glasses or goggles recommended.

**OTHER:** None required for normal use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE AND ODOR:

Gray to tan (or red) granules, no odor

**PHYSICAL STATE:** Solid

**BOILING POINT:** Not applicable

**VAPOR PRESSURE:** Not applicable

**VAPOR DENSITY:** Not applicable

### SOLUBILITY IN WATER:

Insoluble

**SPECIFIC GRAVITY:** 2.2

**SPECIFIC GRAVITY:**

**pH:** Not applicable

**MELTING POINT:** Not applicable

**OCTANOL/WATER COEFFICIENT:**  
Not available

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**INCOMPATIBILITY:** Physical contact between this material and turpentine, hydrofluoric acid, vegetable oil or other unsaturated organic compounds (such as fish oil) may generate heat and/or fire. Do not use this material with these compounds.

**HAZARDOUS DECOMPOSITION PRODUCTS:**  
None

**HAZARDOUS POLYMERIZATION:**  
Will not occur.

**11. TOXICOLOGICAL INFORMATION**

No data available.

**12. ECOLOGICAL INFORMATION**

No data available.

**13. DISPOSAL CONSIDERATIONS**

Dispose in accordance with local, state and federal environmental regulations. Unused material is suitable for disposal in sanitary landfill. Used material may be subject to regulation, depending on the nature of the material absorbed. Check with appropriate regulatory authority for used material containing hazardous waste.

**14. TRANSPORT INFORMATION**

**PROPER SHIPPING NAME:**  
Not regulated

**UN NUMBER:** Not applicable

**HAZARD CLASS/PACKING GROUP:**  
Not applicable

**LABELS REQUIRED:** None

# Material Safety Data Sheet

Granular Absorbent (#1003000)

(312)321-1515, Information (800)424-9300, Emergency

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## 15. REGULATORY INFORMATION

CERCLA/SUPERFUND None

**SARA HAZARD CATEGORY (311/312):**

Chronic Health

**SARA 313:** None

**TSCA:** All of the components of this product are listed on the EPA TSCA Inventory or exempt from notification requirements.

**EINECS:** All of the components of this product are listed on the EINECS Inventory or exempt from notification requirements

**EEC R&S Phrases:** Xn Harmful, R48/20 Harmful: Danger of serious damage to health by prolonged exposure by inhalation; S22 Do not breath dust; S38 In case of insufficient ventilation, wear suitable respiratory equipment.

**JAPAN MITI:** All of the components of this product are existing chemical substances as defined in the Chemical Substances Control Law.

**AICS:** All of the components of this product are listed on the AICS Inventory or exempt from notification requirements

**CANADIAN DSL:** All of the components of this product are listed on the Canadian Domestic Substance List or exempt from notification requirements.

**CA PROPOSITION 65:** This product contains respirable crystalline silica which is known to the State of California to cause cancer.

## 16. OTHER INFORMATION

**NFPA RATING:** Health=1 Fire=0 Reactivity=0

**HMIS RATING:** Health=1 \* Fire=0 Reactivity=0

The information in this data sheet is believed to be accurate. However, each purchaser should make its own test to determine the suitability of the product for its purposes. OIL-DRI CORPORATION OF AMERICA MAKES NO WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCT and assumes no responsibility for any risk or liability arising from the use of the information or the product. Statements about the product should not be construed as recommendations to use the product in infringement of any patent.



## APPENDIX. ASSOCIATED PRODUCTS

This MSDS applies to the following products. Products are listed alphabetically across then down.

Absorbs It	All Purpose 18/40
All Purpose 18/40 2426#	Associates Premium
Calcine 5/18 Red	Concentrate
Concept Absorbent	DOC Private
Dryden Generic	Exclusiva
Flor Dri GA Generic	GA A.P. Private Label
Ga Generic	Grey Calcined 5/30
Ground Clay 4/20 GW	Ground Clay 6/30 GB
Industrial Quick Sorb	Instant Dri Blue
Instant Dri Red	Japanese Floor Abs.
OD Premium Absorb	OD Premium Absorbent
O-D Sams Premium Poly	Off Shore Generic
Oil Dri 12/24 LVM	Oil Dri Allpurpose
Oil Dri Allpurpose 33 1/3	Oil Dri Industrial
Oil Dri Industrial Absorbent	Oil Dri Premium Poly Abs
Oil Dri Regular Absorbent Plain	Oil Dri U.S. Special
Oil Zorb	Oil Zorb Premium Abs
Oil-Dri Automotive Premium 4/10	Oil-Dri Premium Poly Abs
Pvl Heavy Duty Generic	Quick Sorb Pail
SND Standard GB	Super Clean A.P. 18/40
White Absorbent	White Absorbent-Pvl

## 1. PRODUCT IDENTIFICATION

MSDS Number: 1003000

Identity: **Georgia All Purpose Granular Absorbent**

Issued: September 24, 2009

Chemical Name Fullers Earth (attapulgite type) or bentonite (montmorillonite type) or amorphous opaline silica

## 2. COMPOSITION

Component	CAS Number	Amount
Silica Hydrated (Amorphous Opaline Silica)	7631-86-9	90-100%
Fullers Earth	8031-18-3	80-90%
Bentonite (Montmorillonite type)	1302-78-9	90-93%
Quartz	14808-60-7	0-20%

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

This product is a non-combustible, chemically inert mineral. This mineral sample contains a small amount of naturally-occurring crystalline silica as quartz. Prolonged overexposure to respirable crystalline silica may cause lung disease (silicosis). IARC, in Monograph 68, has concluded that crystalline silica inhaled in the form of quartz from occupational sources is carcinogenic to humans (Group 1); however, carcinogenicity was not detected in all industrial circumstances studied. Because applications and exposure data indicate that exposure to respirable quartz in this product with normal use is well below the OSHA Permissible Exposure Limit (PEL) and ACGIH Threshold Limit Value (TLV); and because the company is not aware of any scientific or medical data available indicating that exposure to dust from this product under conditions of normal use will cause silicosis or cancer; adverse effects would not be expected from normal use of this product.

### HEALTH HAZARDS

**INGESTION:** No adverse effects expected with unused material.

**INHALATION:** Inhalation of excessive concentrations of dust may cause irritation of mucous membranes and upper respiratory tract.

**EYE:** Contact may cause mechanical irritation and possible injury.

**SKIN:** No adverse effects expected.

**SENSITIZATION:** No adverse effects expected.

### CHRONIC/CARCINOGENICITY:

Inhalation of excessive concentrations of any dust, including this material, may lead to lung injury. This product contains crystalline silica. Excessive inhalation of respirable crystalline silica may cause silicosis, a progressive, disabling and fatal disease of the lung. Symptoms may include cough, shortness of breath, wheezing and reduced pulmonary function. The International Agency for Research on Cancer (IARC), in Monograph 68 has concluded that crystalline silica inhaled in the form of quartz or cristobalite, from occupational sources is carcinogenic to humans (Group 1).

However, in making the overall evaluation, the Working Group 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. The National Toxicology Program (NTP) classifies crystalline silica as a known carcinogen. Because applications and exposure data indicate that exposure to respirable quartz in this product with normal use is well below the OSHA Permissible Exposure Limit (PEL) and ACGIH Threshold Limit Value (TLV); and because the company is not aware of any scientific or medical data available indicating that exposure to dust from this product under conditions of normal use will cause silicosis or cancer; adverse effects would not be expected from normal use of this product.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:**

None currently known.

**4. FIRST AID MEASURES**

**EYE:** Immediately flush eyes with cool running water, lifting upper and lower lids. If irritation persists or for foreign body in the eye, get immediate medical attention.

**SKIN:** None needed for normal use.

**INGESTION:** If used material is ingested, get medical attention due to possibility of chemical contamination. If large amount of unused material is swallowed, get immediate medical attention.

**INHALATION:** Remove to fresh air.

**5. FIREFIGHTING MEASURES**

**FLASH POINT:** This product is not combustible.

**FLAMMABLE LIMITS** Not applicable

**EXTINGUISHING MEDIA:**  
Use media that is appropriate for surrounding fire.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:**  
None

**SPECIAL FIREFIGHTING INSTRUCTIONS**  
None required.

**HAZARDOUS COMBUSTION PRODUCTS:**  
None

## 6. ACCIDENTAL RELEASE MEASURES

Sweep up and collect for re-use or disposal

## 7. HANDLING AND STORAGE

**HANDLING:** Avoid breathing dust. If clothing becomes dusty, launder before re-use.

**STORAGE:** Store in a dry area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### EXPOSURE GUIDELINES:

Component	Exposure Limit
Silica Hydrated (Amorphous Opaline Silica)	PEL - 80 mg/m <sup>3</sup> / % SiO <sub>2</sub>
Fullers Earth	PEL - 15 mg/m <sup>3</sup> TWA (total dust) PEL - 5 mg/m <sup>3</sup> TWA (respirable fraction)
Bentonite (Montmorillonite type)	PEL - 15 mg/m <sup>3</sup> TWA (total dust) PEL - 5 mg/m <sup>3</sup> TWA (respirable fraction)
Quartz	PEL - 10 mg/m <sup>3</sup> /%SiO <sub>2</sub> +2 TWA TLV - 0.025 mg/m <sup>3</sup> TWA

*PEL- OSHA Permissible Exposure Limit. TLV- American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value. TWA- 8 hour Weighted Average. STEL-Short Term Exposure Limit.*

### ENGINEERING CONTROLS:

For operations where the exposure limit may be exceeded, local exhaust ventilation is recommended.

### RESPIRATORY PROTECTION:

For operations where the exposure limit may be exceeded, a NIOSH/MSHA approved high efficiency particulate respirator is recommended.

**SKIN PROTECTION:** None required for normal use.

**EYE PROTECTION:** Safety glasses or goggles recommended.

**OTHER:** None required for normal use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE AND ODOR:

Gray to tan (or red) granules, no odor

**PHYSICAL STATE:** Solid

**BOILING POINT:** Not applicable

**VAPOR PRESSURE:** Not applicable

**VAPOR DENSITY:** Not applicable

**SOLUBILITY IN WATER:**

Insoluble

**SPECIFIC GRAVITY:** 2.2

**pH:** Not applicable

**MELTING POINT:** Not applicable

**OCTANOL/WATER COEFFICIENT:**  
Not available

## 10. STABILITY AND REACTIVITY

**STABILITY:** Stable

**INCOMPATIBILITY:** Physical contact between this material and turpentine, hydrofluoric acid, vegetable oil or other unsaturated organic compounds (such as fish oil) may generate heat and/or fire. Do not use this material with these compounds.

### HAZARDOUS DECOMPOSITION PRODUCTS

None

**HAZARDOUS POLYMERIZATION:**  
Will not occur.

## 11. TOXICOLOGICAL INFORMATION

No data available.

## 12. ECOLOGICAL INFORMATION

No data available.

## 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental regulations. Unused material is suitable for disposal in sanitary landfill. Used material may be subject to regulation, depending on the nature of the material absorbed. Check with appropriate regulatory authority for used material containing hazardous waste.

## 14. TRANSPORT INFORMATION

### PROPER SHIPPING NAME:

Not regulated

**UN NUMBER:** Not applicable

**HAZARD CLASS/PACKING GROUP:**  
Not applicable

**LABELS REQUIRED:** None

## 15. REGULATORY INFORMATION

CERCLA/SUPERFUND None

**SARA HAZARD CATEGORY (311/312):**

Chronic Health

**SARA 313:** None

**TSCA:** All of the components of this product are listed on the EPA TSCA Inventory or exempt from notification requirements.

**EINECS:** All of the components of this product are listed on the EINECS Inventory or exempt from notification requirements

**EEC R&S Phrases:** Xn Harmful, R48/20 Harmful: Danger of serious damage to health by prolonged exposure by inhalation; S22 Do not breath dust; S38 In case of insufficient ventilation, wear suitable respiratory equipment.

**JAPAN MITI:** All of the components of this product are existing chemical substances as defined in the Chemical Substances Control Law.

**AICS:** All of the components of this product are listed on the AICS Inventory or exempt from notification requirements

**CANADIAN DSL:** All of the components of this product are listed on the Canadian Domestic Substance List or exempt from notification requirements.

**CA PROPOSITION 65:** This product contains respirable crystalline silica which is known to the State of California to cause cancer.

## 16. OTHER INFORMATION

**NFPA RATING:** Health=1 Fire=0 Reactivity=0

**HMIS RATING:** Health=1 \* Fire=0 Reactivity=0

The information in this data sheet is believed to be accurate. However, each purchaser should make its own test to determine the suitability of the product for its purposes. OIL-DRI CORPORATION OF AMERICA MAKES NO WARRANTY, EXPRESSED OR IMPLIED, WITH RESPECT TO THE PRODUCT and assumes no responsibility for any risk or liability arising from the use of the information or the product. Statements about the product should not be construed as recommendations to use the product in infringement of any patent.

## APPENDIX. ASSOCIATED PRODUCTS

This MSDS applies to the following products. Products are listed alphabetically across then down.

Absorbs It	All Purpose 18/40
All Purpose 18/40 2426#	Associates Premium
Calcine 5/18 Red	Concentrate
Concept Absorbent	DOC Private
Dryden Generic	Exclusiva
Flor Dri GA Generic	GA A.P. Private Label
Ga Generic	Grey Calcined 5/30
Ground Clay 4/20 GW	Ground Clay 6/30 GB
Industrial Quick Sorb	Instant Dri Blue
Instant Dri Red	Japanese Floor Abs.
OD Premium Absorb	OD Premium Absorbent
O-D Sams Premium Poly	Off Shore Generic
Oil Dri 12/24 LVM	Oil Dri Allpurpose
Oil Dri Allpurpose 33 1/3	Oil Dri Industrial
Oil Dri Industrial Absorbent	Oil Dri Premium Poly Abs
Oil Dri Regular Absorbent Plain	Oil Dri U.S. Special
Oil Zorb	Oil Zorb Premium Abs
Oil-Dri Automotive Premium 4/10	Oil-Dri Premium Poly Abs
Pvl Heavy Duty Generic	Quick Sorb Pail
SND Standard GB	Super Clean A.P. 18/40
White Absorbent	White Absorbent-Pvl

# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 562.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Oleic 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, 2B). Causes skin and eye irritation (H315+H320).

### SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Oleic acid	112-80-1	$C_{18}H_{34}O_2$	282.52	
Synonyms: Red oil, cis-9-Octadenoic acid				

### SECTION 4 — FIRST AID MEASURES

Get medical advice or attention (P313).

**If inhaled:** Call a POISON CENTER or physician if you feel unwell.

**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 liquid.

Flash point: 189 °C Autoignition Temperature: 363 °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. Contain the spill with sand or 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**

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Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids. Darkens on exposure to air. Keep container tightly closed. Store in a Flinn Chem-Saf<sup>TM</sup> bag. For best storage, keep in a laboratory freezer at -20 °C.

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Clear, oily liquid. Wax-like odor.	Boiling point: 286 °C
Soluble: Most organic solvents and alcohol. Insoluble in water.	Melting point: 13.4 °C
	Refractive index: 1.4582
	Specific gravity: 0.89

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**SECTION 10 — STABILITY AND REACTIVITY**

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Darkens on exposure to air.  
Shelf life: Fair. See Section 7 for further information.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: Skin and eye irritation.	ORL-RAT LD <sub>50</sub> : 25 g/kg
Chronic effects: N.A.	IHL-RAT LC <sub>50</sub> : N.A.
Target organs: Skin and eyes.	SKN-RBT LD <sub>50</sub> : N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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Data not yet available.

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.  
Flinn Suggested Disposal Method #24a is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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TSCA-listed, EINECS-listed (204-007-1).

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**SECTION 16 — OTHER INFORMATION**

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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

**MATERIAL SAFETY DATA SHEET:ONE BURST****DATE OF ISSUE:** 04/10/2003**SUPERCEDES:** 03/25/2003**SECTION I - GENERAL INFORMATION****Chemical Name & Synonyms:**

N/A

**Trade Name & Synonyms:**

ONE BURST

**Chemical Family:**

ALIPHATIC HYDROCARBON

**Formula Mixture:** X**Manufacturer's Name:**

CERTIFIED LABS, DIV. OF NCH CORP.

**Address:**

BOX 152170

IRVING, TEXAS 75015

**Prepared By:**

C Williamson/Chemist

**Product Code Number**

1541

**Emergency Phone Number**

800-424-9300

**SECTION II - HAZARDOUS INGREDIENTS**

THE HAZARDS PRESENTED BELOW ARE THOSE OF THE INDIVIDUAL COMPONENTS

<b><u>Chemical Name (Ingredients)</u></b>	<b><u>Hazard</u></b>	<b><u>TLV</u></b>	<b><u>PEL</u></b>	<b><u>STEL</u></b>	<b><u>CAS #</u></b>
SYNTHETIC ISOPARAFFINIC HYDROCARBON	IRR/COMB	5 MG/M3\$ 1	5 MG/M3\$ 2	10 MG/M3\$1	64742-47-8
D-LIMONENE	IRR/COMB	N/E 1	N/E 2	N/E	5989-27-5
ETHYL N-BUTYRATE	COM/IRR	N/E 1	N/E 2	N/E	105-54-4
TRIPROPYLENE GLYCOL MONOMETHYL ETHER	IRRITANT	N/E 1	N/E 2	N/E	25498-49-1
\$ OIL MIST VALUES					

**SECTION III - PHYSICAL DATA**

<b>Boiling Point (f):</b>	424-484°	<b>Specific Gravity (H20=1):</b>	0.79
<b>Vapor Pressure (MM HG):</b>	1.11	<b>Color:</b>	YELLOW-AMBER
<b>Vapor Density (Air=1):</b>	4.9	<b>Odor:</b>	ORANGE VANILLA
<b>PH @ 100% :</b>	N/A	<b>Clarity</b>	TRANSPARENT
<b>% Volatile by Volume:</b>	100	<b>Evaporation Rate (BU A/C=1):</b>	0.08
<b>H2O Solubility:</b>	NEGLIGIBLE	<b>Viscosity:</b>	NON-VISCOUS

**SECTION IV - FIRE AND EXPLOSION HAZARD**

<b>Flash Point:</b>	<b>Flammable Limits:</b>	<b>LEL:</b>	<b>UEL:</b>
147°F / SETAFLASH	D-LIMONENE	0.7%	6.1%

**Extinguishing Media:**

Foam:X    Alcohol Foam:    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:**

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL TO DISTANT SOURCES OF IGNITION AND FLASHBACK. PRODUCT MAY PRODUCE A FLOATING FIRE HAZARD AS LIQUID FLOATS ON WATER. 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.

**NFPA Hazard Rating: (0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)**

Health:2

Flammability:2

Instability:0

Special:

**SECTION V - HEALTH HAZARD DATA**

**Threshold Limit Value:**

5 MG/M3 AS OIL MIST 1.

**Effects of Overexposure:****-Acute(Short Term Exposure)**

EYE CONTACT: CAUSES IRRITATION SEEN AS TEARING AND REDNESS. SKIN CONTACT: CAUSES IRRITATION SEEN AS ITCHING AND REDNESS. MAY CAUSE ALLERGIC SKIN REACTION SEEN AS DELAYED SKIN RASH WHICH MAY BE FOLLOWED BY BLISTERING, SCALING AND OTHER SKIN EFFECTS. INHALATION: MAY CAUSE ALLERGIC RESPIRATORY REACTION. 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. 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.

**-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 SENSITIVITY TO SUNLIGHT (PHOTOSENSITIVITY) MAY OCCUR. MAY CAUSE SKIN AND RESPIRATORY SENSITIZATION IN SOME INDIVIDUALS. MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE ARE PRE-EXISTING RESPIRATORY AND SKIN CONDITIONS SUCH AS ASTHMA, EMPHYSEMA AND DERMATITIS AND PRE-EXISTING KIDNEY, URETHRA, BLADDER AND BLOOD DISORDERS. TARGET ORGANS: BLOOD-FORMING ORGANS, CENTRAL NERVOUS SYSTEM, LUNGS, LIVER, KIDNEYS AND BLADDER.

**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 ENDOTRACHEAL TUBE WILL PREVENT ASPIRATION.

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**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: 0% BY WEIGHT; 0% BY VOLUME; 0 G/L****SYNTHETIC ISOPARAFFINIC HYDROCARBON****IHL-RAT LC50: >290 PPM 3.****ORL-RAT LD50: >10 G/KG 3.**

SKN-RBT LD50: >3 G/KG 3.  
SKN SENSITIZER: NO 3.  
SKN IRRITATION: SLIGHT 3.  
EYE IRRITATION: SLIGHT 3.

THIS HYDROCARBON WAS ADMINISTERED ORALLY 5 DAYS/WEEK TO MALE AND FEMALE RATS AT 100, 500 OR 1000 MG/KG FOR 13 WEEKS. AN ADDITIONAL GROUP WAS DOSED WITH 100 MG/KG FOR 13 WEEKS FOLLOWED BY A 4-WEEK RECOVERY PERIOD. NO MORTALITIES OR CLINICAL EFFECTS WERE OBSERVED. LIVER AND KIDNEY WEIGHTS FOR THE 500 AND 1000 MG/KG EXPOSURE GROUPS WERE SIGNIFICANTLY INCREASED. AFTER THE 4-WEEK RECOVERY PERIOD, THERE WERE NO DIFFERENCES IN ORGAN WEIGHTS. 3.

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.

#### D-LIMONENE

ORL-RAT LD50: 4400 MG/KG 4.  
SKN-RBT LD50: >5 G/KG 4.  
SKN-RBT: SEVERELY IRRITATING 3.  
EYE-RBT: SEVERELY IRRITATING 3.

REPEATED DAILY ORAL DOSES OF LARGE AMOUNTS TO LABORATORY ANIMALS CAUSED LIVER DAMAGE. 3.

#### ETHYL N-BUTYRATE

SKN-RBT SDT: 500 MG/24H MODERATE 4.  
SKN-RBT LD50: >2 G/KG 4.  
ORL-RAT LD50: 13 G/KG 4.

#### TRIPROPYLENE GLYCOL MONOMETHYL ETHER

ORL-RAT LD50: 3200 MG/KG 4.

---

### SECTION VII - REACTIVITY DATA

#### Stability:

Stable:X

Unstable:

Conditions to Avoid: AVOID HEAT, HOT SURFACES, SPARKS AND OPEN FLAMES. CITRUS OILS DETERIORATE WITH EXPOSURE TO AIR, LIGHT AND HEAT. PRODUCT MAY FORM REACTIVE PEROXIDES ON EXPOSURE TO OXYGEN.

#### Incompatibility (Materials to Avoid):

STRONG OXIDIZING AGENTS SUCH AS CHLORINE BLEACH AND CONCENTRATED HYDROGEN PEROXIDE; ACIDS, CLAYS, ALUMINUM CHLORIDE, HALOGENS, IODINE PENTAFLUORIDE, VINYL CHLORIDE, SOME PLASTICS AND RUBBER.

#### Hazardous Decomposition Products:

OXIDES OF CARBON AND VARIOUS HYDROCARBONS.

#### Hazardous Polymerization:

May Occur:

Will Not Occur:X

Conditions to Avoid: N/A

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### SECTION VIII - SPILL OR LEAK PROCEDURES

#### Steps to be Taken if Material is Released or Spilled:

ELIMINATE ALL SOURCES OF IGNITION. VENTILATE THE AREA. USE CARE AS SPILLS MAY BE SLIPPERY. DUE TO THE NATURE OF THE PACKAGING, A LARGE SPILL IS UNLIKELY. FOR A SMALL SPILL, ABSORB WITH AN INERT MATERIAL AND TRANSFER ALL MATERIAL 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

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**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 VAPORS OR MISTS. LOCAL VENTILATION IS PREFERRED, BECAUSE IT PREVENTS CONTAMINANT DISPERSION INTO WORK AREAS BY CONTROLLING IT AT ITS SOURCE.

**Respiratory Protection:**

NONE UNDER NORMAL CONDITIONS OF USE. 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 SHOULD BE WORN. 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:**

REMOVE OIL SOAKED CLOTHING AND SHOES. WASH CLOTHING AND CLEAN SHOES BEFORE REUSE.

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**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. 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. SOME POROUS MATERIALS SUCH AS RAGS, PAPER, ETC. WHEN WETTED WITH THIS PRODUCT MAY UNDERGO SPONTANEOUS COMBUSTION.

**Other Precautions:**

KEEP OUT OF REACH OF CHILDREN. READ THE ENTIRE LABEL BEFORE USING THE PRODUCT. FOLLOW THE LABEL DIRECTIONS.

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**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& 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

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**SECTION XII - REFERENCES**

1. THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS AND BIOLOGICAL EXPOSURE INDICES, ACGIH, 2002. 2. OSHA PEL. 3. VENDOR'S MSDS. 4. REGISTRY OF TOXIC EFFECTS OF CHEMICAL SUBSTANCES, CCINFOWeb, 2003. 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:ASPHYXIAN, PNOS:PARTICULATES (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.

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."

5-20-1999 8:17AM

FROM SAVOIR-FAIRE 14153323113

12 AVR. 1997 12:51

COLART SCE INTERNATIONAL

N2564

P.6/9

CST/1  
1750198page 1/2  
08/12/92
 00 803-0019  
 - 0029  
 - 0039  
 - 0049

## MATERIAL SAFETY DATA SHEET

LEFRANC & BOURGEOIS	:	SPECIFIC RISKS :	
Colart Distribution,	:		
3 avenue Laënnec	:	Toxic ( )	Oxidizing ( )
F-72018 LE MANS CEDEX	:	Corrosive ( )	Highly flammable ( )
France	:	Harmful ( )	Flammable ( )
Tel : (33) 43 83 83 20	:	Irritant ( )	

## 1. PRODUCT INFORMATION

- 1.1 Trade name : Color & Co, Tempera Paste (tubes)  
 Gold Silver
- 1.2 Manufacturer : Colart INTERNATIONAL S.A. - 5 rue Panhard - F-72018 LE MANS CEDEX - FRANCE
- 1.3 Area of use (for further information, see technical leaflet).  
 Children Painting

## 2. CHEMICAL NATURE OF THE PRODUCT

Preparation : hazardous ingredients (Substances listed in the annexes of the E.E.C. Substances, Solvents and Paints Directives including the latest additions and amendments thereto. Such substances are present in concentrations equal to or exceeding the thresholds mentioned in the regulations) :

007-001-00-5 : anhydrous ammonia 0.2 %

## 3. PHYSICAL PROPERTIES

- 3.1 Physical state at 20°C : paste
- 3.2 Characteristic temperatures :
- 3.3 Solubility :
- 3.4 pH value :
- 3.5 Vapour pressure :
- 3.6 Density : 1179 kg/m<sup>3</sup>
- 3.7 Other data :

## 4. STORAGE AND HANDLING

- 4.1 Protective measures, storage and handling :  
 Storage areas must be kept tidy and should be cleaned frequently. Regularly washed work clothes must be provided for the personnel. Good industrial and personal hygiene should be observed. Food and drink must not be allowed in the storage area. All containers must be kept tightly closed. It is essential to consult the appropriate local authorities in case of storage of large quantities.
- 4.2 Storage or packing receptacles :  
 a) recommended : Product is best kept in its original container.  
 b) To be avoided :
- 4.3 Hazardous reactions :
- 4.4 Hazardous decomposition products :
- 4.5 Personal protective equipment : mask ( ) gloves ( ) goggles ( )
- 4.6 Special protective measures :  
 If product is to be spray applied, do not breathe vapours/spray.  
 In case of insufficient ventilation, aerosols must be extracted at source; respirators or masks should be provided if extraction equipment is inadequate.
- 4.7 Measures in case of leak or spillage :  
 Spillage can be soaked up with an inert absorbent (sand, earth or sawdust) and tools which do not cause sparks. Clean up with detergents (do not use solvents).
- 4.8 Other recommendations :

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FROM SAVOIR-FAIRE 14153323113

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10.AVR.1997 12:51 COLART SCE INTERNATIONAL N2564 P.7/9  
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175C198 Color & Co, Tempora Pasta Gold and Silver 08/12/92

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5. FIRE AND EXPLOSION

- 5.1 Flashpoint : n.a  
5.2 Auto-inflammation temperature :  
5.3 Particular fire or explosion hazards :  
5.4 Extinguishing media :  
Recommended : water ( ) foam (X) To be avoided :  
carbon dioxide (X) powder (X)  
5.5 Special protective firefighting equipment :  
When firefighting, wear autonomous breathing equipment when entering smoke filled premises.  
5.6 Other recommendations :

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6. TOXICOLOGICAL INFORMATION

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7. FIRST AID

In case of contact with skin or with soiled clothing, wash with soap and water. - Rinse with copious amounts of water.

In case of contact with eyes, rinse with copious amounts of water (10 to 15 minutes) and seek medical attention.

If the patient feels unwell, give him or her air. Keep the patient warm.

In case of ingestion seek medical attention.

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8. WASTE DISPOSAL

Do not empty into drains. Destruction of products or containers should be performed according to local regulations. Incineration should be carried out only at an approved site. Do not incinerate closed containers.

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9. SPECIFIC INFORMATION

All colours comply with EN 71 (Toy Safety Standard)

- This sheet completes but does not replace the technical leaflet. The information it contains is based on our knowledge of the product concerned at the date of issue (08/12/92). It is provided in good faith. Users should also bear in mind that risks may arise when a product is put to uses other than those for which it is destined.



5-20-1999 8:18AM

FROM SAVOIR-FAIRE 14153323113

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10.AVR.1997 12:50

COLART SCE INTERNATIONAL

N0564

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SECRET / 10.AVR.1997 12:50 COLART SCE INTERNATIONAL N0564 P. 4/9  
 COPIATE MATERIAL SAFETY DATA SHEET page : 1/2  
 08/12/92

LEFRANC & BOURGEOIS	:	SPECIFIC RISKS :	
Colart Distribution,	:		
3 avenue Laënnec	:	Toxic ( )	Oxydizing ( )
P-72018 LE MANS CEDEX	:	Corrosive ( )	Highly flammable ( )
France	:	Harmful ( )	Flammable ( )
Tel : (33) 43 83 83 20	:	Irritant ( )	

## 1. PRODUCT INFORMATION

- 1.1 Trade name : Color & Co, Tempera Paste (tubes)  
 1.2 Manufacturer : Colart INTERNATIONAL S.A. - 5 rue Panhard - F-72018 LE MANS CEDEX - FRANCE  
 1.3 Area of use (for further information, see technical leaflet) : Children Painting

This sheet applies to all colours from range.

Turquoise	Lemon Yellow	Crimson	Burnt Umber
Brilliant Blue	Brilliant Yellow	Cerise	Burnt Sienna
Cyan	Pearlescent Yellow	Vermillion	Leaf Green
Pearlescent Blue	Brilliant Orange	Pearlescent Red	Brilliant Green
Black	Yellow Ochre	Brilliant Red	Pearlescent Green
White	Purple	Pale Yellow	Emerald Green

## 2. CHEMICAL NATURE OF THE PRODUCT

Preparation : hazardous ingredients (Substances listed in the annexes of the R.E.C. Substances, Solvents and Paints Directives including the latest additions and amendments thereto. Such substances are present in concentrations equal to or exceeding the thresholds mentioned in the regulations) :

## 3. PHYSICAL PROPERTIES

- 3.1 Physical state at 20°C : pasta  
 3.2 Characteristic temperatures :  
 3.3 Solubility :  
 3.4 pH value :  
 3.5 Vapour pressure :  
 3.6 Density : 1130 to 1420 kg/m<sup>3</sup>  
 3.7 Other data :

## 4. STORAGE AND HANDLING

- 4.1 Protective measures, storage and handling :  
 Storage areas must be kept tidy and should be cleaned frequently. Regularly washed work clothes must be provided for the personnel. Good industrial and personal hygiene should be observed. Food and drink must not be allowed in the storage area. All containers must be kept tightly closed. It is essential to consult the appropriate local authorities in case of storage of large quantities.  
 4.2 Storage or packing receptacles :  
 a) recommended : Product is best kept in its original container.  
 b) To be avoided :  
 4.3 Hazardous reactions :  
 4.4 Hazardous decomposition products :  
 4.5 Personal protective equipment : mask ( ) gloves ( ) goggles ( )  
 4.6 Special protective measures :  
 If product is to be spray applied, do not breathe vapours/spray.  
 In case of insufficient ventilation, aerosols must be extracted at source; respirators or masks should be provided if extraction equipment is inadequate.  
 4.7 Measures in case of leak or spillage :  
 Spillage can be soaked up with an inert absorbent (sand, earth or sawdust) and tools which do not cause sparks. Clean up with detergents (do not use solvents).  
 4.8 Other recommendations :

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FROM SAVOIR-FAIRE 14153323113

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MATERIAL SAFETY DATA SHEET page : 2/2  
Color & Co, Tempara Peste 08/12/92

**5. FIRE AND EXPLOSION**

5.1 Flashpoint : n.a

5.2 Auto-inflammation temperature :

5.3 Particular fire or explosion hazards :

5.4 Extinguishing media :

Recommended :	water	( )	foam	(X)	To be avoided :
	carbon dioxide	(X)	powder	(X)	

5.5 Special protective firefighting equipment :

When firefighting, wear autonomous breathing equipment when entering smoke filled premises.

5.6 Other recommendations :

**6. TOXICOLOGICAL INFORMATION****7. FIRST AID**

In case of contact with skin or with soiled clothing, wash with soap and water. - Rinse with copious amounts of water.

In case of contact with eyes, rinse with copious amounts of water (10 to 15 minutes) and seek medical attention.

If the patient feels unwell, give him or her air. Keep the patient warm.

In case of ingestion seek medical attention.

**8. WASTE DISPOSAL**

Do not empty into drains. Destruction of products or containers should be performed according to local regulations.  
Incineration should be carried out only at an approved site. Do not incinerate closed containers.

**9. SPECIFIC INFORMATION**

All colours comply with EN 71 (Toy Safety Standard)

- This sheet completes but does not replace the technical leaflet. The information it contains is based on our knowledge of the product concerned at the date of issue (08/12/92). It is provided in good faith. Users should also bear in mind that risks may arise when a product is put to uses other than those for which it is destined.

4-8

5-20-1999 8:19AM

FROM SAVOIR-FAIRE 14153323113

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## MATERIAL SAFETY DATA SHEET

LEFRANC & BOURGEOIS	:	SPECIFIC RISKS		:
Colart Distribution,	:			:
3 avenue Laënnec	:	Toxic	( )	Oxydizing
F-72018 LE MANS CEDEX	:	Corrosive	( )	Highly flammable
France	:	Harmful	( )	Flammable
Tel : (33) 43 83 83 20	:	Irritant	( )	

## 1. PRODUCT INFORMATION

- 1.1 Trade name : Color & Co Towpers Paint Discs  
 1.2 Manufacturer : Colart INTERNATIONAL S.A. - 5 rue Panhard - F-72018 LE MANS CEDEX - FRANCE  
 1.3 Area of use : Children Painting

This sheet applies to all colours in the range.

White	Brilliant Yellow	Deep Red
Ultramarine	Orange	Burnt Sienna
Light Blue	Black	Leaf Green
Deep Yellow	Carmine	Brilliant Green
Violet		

## 2. CHEMICAL NATURE OF THE PRODUCT

Preparation : Substances presenting a health hazard within the meaning of the Dangerous Substances Directive  
 67/548/EEC: none

## 3. PHYSICAL PROPERTIES

- 3.1 Physical state at 20°C : solid  
 3.2 Characteristic temperatures :  
 3.3 Solubility :  
 3.4 pH value :  
 3.5 Vapour pressure :  
 3.6 Density : 1040 to 1090 kg/m<sup>3</sup>  
 3.7 Other data :

## 4. STORAGE AND HANDLING

- 4.1 Protective measures, storage and handling :  
 Storage areas must be kept tidy and should be cleaned frequently. Regularly washed work clothes must be provided for the personnel. Good industrial and personal hygiene should be observed. Food and drink must not be allowed in the storage area. All containers must be kept tightly closed. It is essential to consult the appropriate local authorities in case of storage of large quantities.
- 4.2 Storage or packing receptacles :  
 a) recommended : Product is best kept in its original container.  
 b) To be avoided :
- 4.3 Hazardous reactions :  
 4.4 Hazardous decomposition products :  
 4.5 Personal protective equipment : mask ( ) gloves ( ) goggles ( )  
 4.6 Special protective measures :  
 If product is to be spray applied, do not breathe vapours/spray.  
 In case of insufficient ventilation, aerosols must be extracted at source; respirators or masks should be provided if extraction equipment is inadequate.
- 4.7 Measures in case of leak or spillage :  
 Spillage can be soaked up with an inert absorbent (sand, earth or sawdust) and tools which do not cause sparks. Clean up with detergents (do not use solvents).
- 4.8 Other recommendations :

5-20-1999 8:19AM

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CROSSLE**MATERIAL SAFETY DATA SHEET**

page : 2/2

Color &amp; Co Tempera Paint Discs

03/12/92

**5. FIRE AND EXPLOSION**

5.1 Flashpoint : n.a

5.2 Auto-inflammation temperature :

5.3 Particular fire or explosion hazards :

5.4 Extinguishing media :

Recommended :	water	( )	foam	(X)	To be avoided :
	carbon dioxide	(X)	powder	(X)	

5.5 Special protective firefighting equipment :

When firefighting, wear autonomous breathing equipment when entering smoke filled premises.

5.6 Other recommendations :

**6. TOXICOLOGICAL INFORMATION****7. FIRST AID**

In case of contact with skin or with soiled clothing, wash with soap and water. - Rinse with copious amounts of water.

In case of contact with eyes, rinse with copious amounts of water (10 to 15 minutes) and seek medical attention.

If the patient feels unwell, give him or her air. Keep the patient warm.

In case of ingestion seek medical attention.

**8. WASTE DISPOSAL**

Do not empty into drains. Destruction of products or containers should be performed according to local regulations.

Incineration should be carried out only at an approved site. Do not incinerate closed containers.

**9. SPECIFIC INFORMATION**

All colours comply with EN 71/3 (Toy Safety Standard)

- This sheet completes but does not replace the technical leaflet. The information it contains is based on our knowledge of the product concerned at the date of issue (03/12/92). It is provided in good faith. Users should also bear in mind that risks may arise when a product is put to uses other than those for which it is destined.

5-20-1999 8:20AM

FROM SAVOIR-FAIRE 14153323113

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10.AVR.1997 12:51

COLART SCE INTERNATIONAL

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**MATERIAL SAFETY DATA SHEET**

LEFRANC & BOURGEOIS	:	SPECIFIC RISKS :			
Colart Distribution,	:				
3 avenue Laënnec	:	Toxic	( )	Oxydizing	( )
F-72018 LE MANS CEDEX	:	Corrosive	( )	Highly flammable	( )
France	:	Harmful	( )	Flammable	( )
Tel : (33) 43 83 83 20	:	Irritant	( )		

**1. PRODUCT INFORMATION**

- 1.1 Trade name : Color & Co, Tempara Pasta Fluos(tubes)  
 Fluor Yellow Fluor Blue Fluor Pink Fluor Green
- 1.2 Manufacturer Colart INTERNATIONAL S.A. - 5 rue Penhard - F-72018 LE MANS CEDEX - FRANCE
- 1.3 Area of use (for further information, see technical leaflet).  
 Children Painting

**2. CHEMICAL NATURE OF THE PRODUCT**

Preparation : hazardous ingredients (Substances listed in the annexes of the E.E.C. Substances, Solvents and Paints Directives including the latest additions and amendments thereto. Such substances are present in concentrations equal to or exceeding the thresholds mentioned in the regulations) :

hydroxyethylcellulose 0.2 %

**3. PHYSICAL PROPERTIES**

- 3.1 Physical state at 20°C : paste
- 3.2 Characteristic temperatures :
- 3.3 Solubility :
- 3.4 pH value :
- 3.5 Vapour pressure :
- 3.6 Density : 1025 to 1090 kg/m<sup>3</sup>
- 3.7 Other data :

**4. STORAGE AND HANDLING**

- 4.1 Protective measures, storage and handling :  
 Storage areas must be kept tidy and should be cleaned frequently. Regularly washed work clothes must be provided for the personnel. Good industrial and personal hygiene should be observed. Food and drink must not be allowed in the storage area. All containers must be kept tightly closed. It is essential to consult the appropriate local authorities in case of storage of large quantities.
- 4.2 Storage or packing receptacles :  
 a) recommended : Product is best kept in its original container.  
 b) To be avoided :
- 4.3 Hazardous reactions :
- 4.4 Hazardous decomposition products :
- 4.5 Personal protective equipment : mask ( ) gloves ( ) goggles ( )
- 4.6 Special protective measures :  
 If product is to be spray applied, do not breathe vapours/spray.  
 In case of insufficient ventilation, aerosols must be extracted at source; respirators or masks should be provided if extraction equipment is inadequate.
- 4.7 Measures in case of leak or spillage :  
 Spillage can be soaked up with an inert absorbent (sand, earth or sawdust) and tools which do not cause sparks. Clean up with detergents (do not use solvents).
- 4.8 Other recommendations :

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FROM SAVOIR-FAIRE 14153323113

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Color & Co, Neopars Paste Fluos 08/12/92

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5. FIRE AND EXPLOSION

- 5.1 Flashpoint : n.a.  
5.2 Auto-inflammation temperature :  
5.3 Particular fire or explosion hazards :  
5.4 Extinguishing media :  
Recommended : water ( ) foam (X) To be avoided :  
carbon dioxide (X) powder (X)  
5.5 Special protective firefighting equipment :  
When firefighting, wear autonomous breathing equipment when entering smoke filled premises.  
5.6 Other recommendations :

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6. TOXICOLOGICAL INFORMATION

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7. FIRST AID

In case of contact with skin or with soiled clothing, wash with soap and water. - Rinse with copious amounts of water.  
In case of contact with eyes, rinse with copious amounts of water (10 to 15 minutes) and seek medical attention.  
If the patient feels unwell, give him or her air. Keep the patient warm.  
In case of ingestion seek medical attention.

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8. WASTE DISPOSAL

Do not empty into drains. Destruction of products or containers should be performed according to local regulations.  
Incineration should be carried out only at an approved site. Do not incinerate closed containers.

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9. SPECIFIC INFORMATION

All colours comply with EN 71 (Toy Safety Standard)

- This sheet completes but does not replace the technical leaflet. The information it contains is based on our knowledge of the product concerned at the date of issue (08/12/92). It is provided in good faith. Users should also bear in mind that risks may arise when a product is put to uses other than those for which it is destined.

# Safety Data Sheet: FLOURISH, OG

Supersedes Date 10/27/2010

Issuing Date 03/05/2014

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** FLOURISH, OG  
**Recommended use** Fertilizer  
**Information on Manufacturer**  
MANTEK, DIVISION OF NCH CORP.  
BOX 152170  
IRVING, TEXAS 75015

**Product Code** 0503  
**Chemical nature** Aqueous solution  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300  
**Telephone inquiry**  
972-579-2477

## 2. HAZARD IDENTIFICATION

**Color** Light green

**Physical State** Liquid

**Odor** Ammoniacal

### GHS

#### Classification

##### Physical Hazards

None

##### Health Hazard

None

##### Other hazards

None

### Labeling

#### Signal Word

Not classified

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Diammonium phosphate	7783-28-0	10-30
Monoammonium phosphate	7722-76-1	10-30
Potassium chloride	7447-40-7	3-7
Ammonium phosphate	10361-65-6	1-5
Potassium EDTA	7379-27-3	1-5

## 4. FIRST AID MEASURES

### General advice

Avoid contact with skin, eyes and clothing. Avoid breathing mist.

### Eye Contact

Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if irritation develops and persists.

### Skin Contact

Wash off with soap and plenty of water. Get medical attention if irritation develops and persists.

### 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

**Flammability Limits in Air %** Not applicable.

**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

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** 1

**Flammability** 1

**Instability** 0

**HMIS**

**Health** 1

**Flammability** 1

**Instability** 0

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	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).
<b>Methods for Cleaning Up</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)
<b>Neutralizing Agent</b>	Not applicable.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin, eyes and clothing. Avoid breathing mist.			
<b>Storage</b>	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.			
<b>Storage Temperature</b>	<b>Minimum</b>	35 °F / 2 °C	<b>Maximum</b>	120 °F / 49 °C
<b>Storage Conditions</b>	<b>Indoor</b>	X	<b>Outdoor</b>	X
			<b>Heated</b>	<b>Refrigerated</b>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Diammonium phosphate	No data available	No data available	No data available
Monoammonium phosphate	No data available	No data available	No data available
Potassium chloride	No data available	No data available	No data available
Ammonium phosphate	No data available	No data available	No data available
Potassium EDTA	No data available	No data available	No data available

<b>Engineering Measures</b>	Ensure adequate ventilation, especially in confined areas.
<b>Personal Protective Equipment</b>	
<b>Eye/Face Protection</b>	Safety glasses with side-shields.
<b>Skin Protection</b>	For prolonged or repeated contact, use protective gloves with appropriate chemical resistance.
<b>Respiratory Protection</b>	In case of inadequate ventilation wear respiratory protection.
<b>General Hygiene Considerations</b>	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

<b>Physical State</b>	Liquid	<b>Viscosity</b>	Non viscous
<b>Color</b>	Light green	<b>Odor</b>	Ammoniacal
<b>Odor Threshold</b>	Not applicable	<b>Appearance</b>	Transparent
<b>pH</b>	7.4	<b>Specific Gravity</b>	1.4
<b>Evaporation Rate</b>	0.36 (Butyl acetate=1)	<b>Percent Volatile (Volume)</b>	69.1
<b>VOC Content (%)</b>	0	<b>VOC Content (g/L)</b>	0
<b>Vapor Pressure</b>	11.1 mmHg @ 70°F	<b>Vapor Density</b>	0.7 (Air = 1.0)
<b>Solubility</b>	Completely soluble	<b>n-Octanol/Water Partition</b>	No data available
<b>Melting Point/Range</b>	No data available	<b>Decomposition Temperature</b>	No data available
<b>Boiling Point/Range</b>	212 °F / 100 °C	<b>Flammability (solid, gas)</b>	No data available
<b>Flash Point</b>	> 201 °F / > 94 °C	<b>Method</b>	Seta closed cup
<b>Autoignition Temperature</b>	No information available.		
<b>Flammability Limits in Air %</b>	Not applicable.	<b>Upper</b>	No data available
		<b>Lower</b>	No data available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable. Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	None known
<b>Incompatible Products</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products</b>	Carbon oxides, Nitrogen oxides (NOx), Oxides of phosphorus, Phosphorus compounds, Ammonia.
<b>Possibility of Hazardous Reactions</b>	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):

<b>Oral LD50</b>	No information available
<b>Dermal LD50</b>	No information available
<b>Inhalation LC50</b>	
<b>Gas</b>	No information available
<b>Mist</b>	No information available
<b>Vapor</b>	No information available

**Principle Route of Exposure** Skin contact, Eye contact, Inhalation.

**Primary Routes of Entry** None known

**Acute Effects**

<b>Eyes</b>	May cause eye irritation.
<b>Skin</b>	May cause skin irritation.
<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Chronic Toxicity** None known.

**Target Organ Effects** None known

**Aggravated Medical Conditions** Respiratory disorders, Skin disorders.

Component Information

**Acute Toxicity**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Diammonium phosphate	= 6500 mg/kg ( Rat )	> 7950 mg/kg ( Rabbit )	no data available	no data available	no data available
Monoammonium phosphate	= 5750 mg/kg ( Rat )	> 7940 mg/kg ( Rabbit )	no data available	no data available	no data available
Potassium chloride	= 2600 mg/kg ( Rat )	no data available	no data available	no data available	no data available
Ammonium phosphate	no data available	no data available	no data available	no data available	no data available
Potassium EDTA	no data available	no data available	no data available	no data available	no data available

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Diammonium phosphate	no data available	no data available	no data available	no data available	no data available
Monoammonium phosphate	no data available	no data available	no data available	no data available	no data available
Potassium chloride	no data available	no data available	no data available	no data available	no data available
Ammonium phosphate	no data available	no data available	no data available	no data available	no data available
Potassium EDTA	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
Diammonium phosphate	not applicable	not applicable	not applicable	not applicable	not applicable
Monoammonium phosphate	not applicable	not applicable	not applicable	not applicable	not applicable
Potassium chloride	not applicable	not applicable	not applicable	not applicable	not applicable
Ammonium phosphate	not applicable	not applicable	not applicable	not applicable	not applicable
Potassium EDTA	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
Diammonium phosphate	no data available	LC50 = 26.5 mg/L Oncorhynchus mykiss 96 h LC50 24.8 - 29.4 mg/L Oncorhynchus mykiss 96 h LC50 = 3.3 mg/L Pimephales promelas 96 h LC50 = 33 mg/L Pimephales promelas 96 h	no data available	no data available	N/A
Monoammonium phosphate	no data available	no data available	no data available	no data available	N/A
Potassium chloride	EC50 = 2500 mg/L Desmodesmus subspicatus 72 h	LC50 = 1060 mg/L Lepomis macrochirus 96 h LC50 750 - 1020 mg/L Pimephales promelas 96 h	no data available	EC50= 825 mg/L 48 h EC50= 83 mg/L 48 h	N/A
Ammonium phosphate	no data available	no data available	no data available	no data available	N/A
Potassium EDTA	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

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

## 14. TRANSPORT INFORMATION

<b>DOT</b>	Not regulated
<b>TDG</b>	Not regulated
<b>ICAO</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated

## 15. REGULATORY INFORMATION

## Inventories

<b>TSCA</b>	Complies
<b>DSL</b>	Does not Comply

## 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 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Diammonium phosphate	7783-28-0	10-30	1.0
Monoammonium phosphate	7722-76-1	10-30	1.0

## 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
Diammonium phosphate	Not applicable	Not applicable
Monoammonium phosphate	Not applicable	Not applicable
Potassium chloride	Not applicable	Not applicable
Ammonium phosphate	Not applicable	Not applicable
Potassium EDTA	Not applicable	Not applicable

## 16. OTHER INFORMATION

<b>Prepared By</b>	Rachael Mohochi
<b>Supersedes Date</b>	10/27/2010
<b>Issuing Date</b>	03/05/2014
<b>Reason for Revision</b>	No information available.
<b>Glossary</b>	No information available.
<b>List of References.</b>	No information available.

**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. 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.

# Safety Data Sheet: OPTI-KILL, OG

Supersedes Date 02/05/2009

Issuing Date 07/16/2013

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** OPTI-KILL, OG  
**Recommended use** Herbicide  
**Information on Manufacturer**  
MANTEK, DIVISION OF NCH CORP.  
BOX 152170  
IRVING, TEXAS 75015

**Product Code** 0855  
**Chemical nature** Solvent mixture  
**Emergency Telephone Number**  
CHEMTREC® 800-424-9300  
**Telephone inquiry**  
972-579-2477

## 2. HAZARD IDENTIFICATION

**Color** Yellow - Amber

**Physical State** Liquid

**Odor** solvent

### GHS

#### Classification

##### Physical Hazards

Flammable liquids

Category 4

##### Health Hazard

Aspiration Toxicity

Category 1

Acute Inhalation Toxicity - Vapors

Category 4

Skin Corrosion/Irritation

Category 3

Serious Eye Damage/Eye Irritation

Category 2A

Skin Sensitization

Category 1

Carcinogenicity

Category 2

Specific target organ systemic toxicity (single exposure)

Category 3

Specific target organ systemic toxicity (repeated exposure)

Category 2

##### Other hazards

None

### Labeling

#### Signal Word

**DANGER**



#### Hazard Statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H318 - Causes serious eye damage

H332 - Harmful if inhaled

H336 - May cause drowsiness or dizziness

H304 - May be fatal if swallowed and enters airways

H373 - May cause damage to organs through prolonged or repeated exposure

H351 - Suspected of causing cancer

#### Precautionary Statements

P202 - Do not handle until all safety precautions have been read and understood

P280 - Wear protective gloves, protective clothing and eye protection.

P210 - Keep away from heat, sparks, open flames or hot surfaces.

P270 - Do not eat, drink or smoke when using this product

P260 - Do not breathe mist or vapor

P271 - Use in a well-ventilated area.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace

P302+ P352 - IF ON SKIN: Wash with plenty of soap and water

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.

P310 - Immediately call a physician

P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

P312 - Call a physician if unwell.

P301+ P312 - IF SWALLOWED: Call a physician if unwell

P331 - DO NOT induce vomiting

P403 + P235 - Store in a well-ventilated place. Keep cool

P233 - Keep container tightly closed

P501 - Dispose of contents and container in accordance with applicable regulations.

7 % of the mixture consists of ingredient(s) of unknown toxicity

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Naphtha (petroleum), heavy aromatic	64742-94-5	60-100
Naphthalene	91-20-3	5-10
Hexylene glycol	107-41-5	3-7
Bromacil	314-40-9	1-5
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	152143-22-1	1-5
Pseudocumene	95-63-6	1-5
Cumene	98-82-8	1-5
1,3,5-Trimethylbenzene	108-67-8	1-5
Benzenesulfonic acid, dodecyl-, branched, calcium salt	70528-83-5	1-5

## 4. FIRST AID MEASURES

<b>General advice</b>	Do not get in eyes, on skin or on clothing. Avoid breathing vapors or mists.
<b>Eye Contact</b>	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.
<b>Skin Contact</b>	Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.
<b>Inhalation</b>	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
<b>Ingestion</b>	If swallowed, call a poison control center or doctor immediately. Give small amounts of water to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center.
<b>Notes to physician</b>	Aspiration hazard if swallowed - can enter lungs and cause damage. May be fatal if swallowed and enters airways. May cause sensitization of susceptible persons.

## 5. FIRE-FIGHTING MEASURES

<b>Flash Point</b>	150 °F / 66 °C	<b>Method</b>	Seta closed cup
<b>Flammability Limits in Air % Mixture.</b>		<b>Upper</b>	11.7
<b>Suitable Extinguishing Media</b>		<b>Lower</b>	1.8
Dry chemical. Carbon dioxide (CO2). Water spray. Foam. Alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.			
<b>Specific hazards arising from the chemical</b>			
Combustible Liquid. Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions.			
<b>Protective Equipment and Precautions for Firefighters</b>			
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.			
<b>NFPA</b>	<b>Health 2</b>	<b>Flammability 2</b>	<b>Instability 0</b>
<b>HMIS</b>	<b>Health 2</b>	<b>Flammability 2</b>	<b>Instability 0</b>

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
<b>Methods for Containment</b>	Do not flush into surface water or sanitary sewer system.
	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).
<b>Methods for Cleaning Up</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)
<b>Neutralizing Agent</b>	Not applicable.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Keep away from open flames, hot surfaces and sources of ignition. Do not get in eyes, on skin or on clothing. Avoid breathing vapors or mists.
<b>Storage</b>	Keep away from heat and sources of ignition. Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place.
<b>Storage Temperature</b>	<b>Minimum</b> 35 °F / 2 °C
<b>Storage Conditions</b>	<b>Indoor</b> X <b>Outdoor</b> X <b>Maximum Heated</b> 120 °F / 49 °C <b>Refrigerated</b>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH
Naphtha (petroleum), heavy aromatic	No data available	No data available	No data available
Naphthalene	TWA: 10 ppm Skin STEL: 15 ppm	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>	IDLH: 250 ppm STEL 15 ppm STEL 75 mg/m <sup>3</sup> TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>
Hexylene glycol	Ceiling: 25 ppm	No data available	Ceiling: 25 ppm Ceiling: 125 mg/m <sup>3</sup>
Bromacil	TWA: 10 mg/m <sup>3</sup>	No data available	TWA: 1 ppm TWA: 10 mg/m <sup>3</sup>
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	No data available	No data available	No data available
Pseudocumene	No data available	No data available	TWA: 25 ppm TWA: 125 mg/m <sup>3</sup>
Cumene	TWA: 50 ppm	TWA: 50 ppm TWA: 245 mg/m <sup>3</sup> Skin	IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m <sup>3</sup>
1,3,5-Trimethylbenzene	No data available	No data available	TWA: 25 ppm TWA: 125 mg/m <sup>3</sup>
Benzenesulfonic acid, dodecyl-, branched, calcium salt	No data available	No data available	No data available

**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.

**Skin Protection**

Wear protective gloves/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**

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**

<b>Physical State</b>	Liquid	<b>Viscosity</b>	Non viscous
<b>Color</b>	Yellow - Amber	<b>Odor</b>	solvent
<b>Odor Threshold</b>	Not applicable	<b>Appearance</b>	Transparent
<b>pH</b>	Not applicable	<b>Specific Gravity</b>	0.923
<b>Evaporation Rate</b>	0.05 (Butyl acetate=1)	<b>Percent Volatile (Volume)</b>	96.5
<b>VOC Content (%)</b>	93.2	<b>VOC Photoreactive (Y/N)</b>	Yes
<b>VOC Max Use Dilution (wt%)</b>	9.32	<b>VOC Content (g/L)</b>	860
<b>Vapor Pressure</b>	0.54 mmHg @ 70°F	<b>Vapor Density</b>	4.7 (Air = 1.0)
<b>Solubility</b>	Partly miscible	<b>n-Octanol/Water Partition</b>	No data available
<b>Melting Point/Range</b>	No data available	<b>Decomposition Temperature</b>	No data available
<b>Boiling Point/Range</b>	360 °F / 182 °C	<b>Flammability (solid, gas)</b>	No data available
<b>Flash Point</b>	150 °F / 66 °C	<b>Method</b>	Seta closed cup
<b>Autoignition Temperature</b>	No information available.		
<b>Flammability Limits in Air %</b>	Mixture.	<b>Upper 11.7 Lower 1.8</b>	

**10. STABILITY AND REACTIVITY**

<b>Chemical Stability</b>	Stable. Hazardous polymerization does not occur.
<b>Conditions to Avoid</b>	Keep away from open flames, hot surfaces, and sources of ignition
<b>Incompatible Products</b>	Strong oxidizing agents, Strong acids, Amines.
<b>Hazardous Decomposition Products</b>	None under normal use
<b>Possibility of Hazardous Reactions</b>	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):

<b>Oral LD50</b>	No information available
<b>Dermal LD50</b>	No information available
<b>Inhalation LC50</b>	
<b>Gas</b>	No information available
<b>Mist</b>	No information available
<b>Vapor</b>	No information available

**Principle Route of Exposure** Skin contact, Eye contact, Inhalation.

**Primary Routes of Entry** Inhalation, Skin Absorption.

**Acute Effects****Eyes**

Corrosive to the eyes and may cause severe damage including blindness.

**Skin  
Inhalation**

Causes skin irritation. May cause allergic skin reaction.

May cause irritation of respiratory tract. 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 gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Aspiration hazard. May be fatal if swallowed and enters airways.

**Chronic Toxicity**

May cause skin sensitization in some individuals. Liver and kidney injuries may occur. Contains a known or suspected carcinogen.

**Target Organ Effects**

Blood, Central nervous system, Kidney, Liver, Respiratory system, Thyroid, Immune system, Heart, Ears, Skin, Eyes.

**Aggravated Medical Conditions**

Blood disorders, Neurological disorders, Kidney disorders, Liver disorders, Respiratory disorders, Skin disorders, Heart disease.

## Component Information

**Acute Toxicity**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Naphtha (petroleum), heavy aromatic	> 5000 mg/kg ( Rat )	> 2 mL/kg ( Rabbit )	> 590 mg/m <sup>3</sup> ( Rat ) 4 h	no data available	no data available
Naphthalene	no data available	> 20 g/kg ( Rabbit )	> 340 mg/m <sup>3</sup> ( Rat ) 1 h	no data available	no data available
Hexylene glycol	= 3692 mg/kg ( Rat )	no data available	> 310 mg/m <sup>3</sup> ( Rat ) 1 h	no data available	no data available
Bromacil	no data available	no data available	no data available	no data available	no data available
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	no data available	no data available	no data available	no data available	no data available
Pseudocumene	= 3400 mg/kg ( Rat )	> 3160 mg/kg ( Rabbit )	= 18 g/m <sup>3</sup> ( Rat ) 4 h	no data available	no data available
Cumene	= 1400 mg/kg ( Rat )	= 12300 µL/kg ( Rabbit )	no data available	no data available	no data available
1,3,5-Trimethylbenzene	no data available	no data available	= 24 g/m <sup>3</sup> ( Rat ) 4 h	no data available	no data available
Benzenesulfonic acid, dodecyl-, branched, calcium salt	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
Naphtha (petroleum), heavy aromatic	no data available	no data available	no data available	no data available	CNS
Naphthalene	no data available	Skin sensitization	no data available	no data available	eyes, blood, liver, kidneys, skin, CNS, immune system
Hexylene glycol	no data available	Skin sensitization	no data available	no data available	eyes, CNS, respiratory system, skin, immune system
Bromacil	no data available	no data available	no data available	no data available	eyes, respiratory system, skin, thyroid
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	no data available	no data available	no data available	no data available	no data available
Pseudocumene	no data available	no data available	no data available	no data available	eyes, CNS, respiratory system, skin, blood, ears, heart
Cumene	no data available	no data available	no data available	no data available	eyes, CNS, respiratory system, skin
1,3,5-Trimethylbenzene	no data available	no data available	no data available	no data available	eyes, CNS, respiratory system, skin, blood, ears, heart
Benzenesulfonic acid, dodecyl-, branched, calcium salt	no data available	no data available	no data available	no data available	no data available

**Carcinogenicity**

Component	ACGIH	IARC	NTP	OSHA	Other
Naphtha (petroleum), heavy aromatic	not applicable	not applicable	not applicable	not applicable	not applicable
Naphthalene	not applicable	not applicable	not applicable	not applicable	not applicable
Hexylene glycol	not applicable	not applicable	not applicable	not applicable	not applicable
Bromacil	A3	not applicable	not applicable	not applicable	not applicable
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	not applicable	not applicable	not applicable	not applicable	not applicable
Pseudocumene	not applicable	not applicable	not applicable	not applicable	not applicable
Cumene	not applicable	Group 2B	not applicable	X	not applicable

1,3,5-Trimethylbenzene	not applicable	not applicable	not applicable	not applicable	not applicable
Benzenesulfonic acid, dodecyl-, branched, calcium salt	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
Naphtha (petroleum), heavy aromatic	EC50 = 2.5 mg/L Skeletonema costatum 72 h	LC50 = 19 mg/L Pimephales promelas 96 h LC50 = 2.34 mg/L Oncorhynchus mykiss 96 h LC50 = 1740 mg/L Lepomis macrochirus 96 h LC50 = 45 mg/L Pimephales promelas 96 h LC50 = 41 mg/L Pimephales promelas 96 h	no data available	EC50= 0.95 mg/L 48 h	2.9 - 6.1
Naphthalene	EC50 = 0.4 mg/L Skeletonema costatum 72 h	LC50 5.74 - 6.44 mg/L Pimephales promelas 96 h LC50 = 1.6 mg/L Oncorhynchus mykiss 96 h LC50 0.91 - 2.82 mg/L Oncorhynchus mykiss 96 h LC50 = 1.99 mg/L Pimephales promelas 96 h LC50 = 31.0265 mg/L Lepomis macrochirus 96 h	EC50 = 0.93 mg/L 30 min EC50 > 20 mg/L 18 h	LC50= 2.16 mg/L 48 h EC50= 1.96 mg/L 48 h EC50 1.09 - 3.4 mg/L 48 h	3.3
Hexylene glycol	no data available	LC50 10500 - 11000 mg/L Pimephales promelas 96 h LC50 = 10000 mg/L Lepomis macrochirus 96 h LC50 = 8690 mg/L Pimephales promelas 96 h LC50 = 10700 mg/L Pimephales promelas 96 h	EC50 = 3038 mg/L 5 min	EC50 2700 - 3700 mg/L 48 h	<0.14
Bromacil	no data available	LC50 180 - 192 mg/L Pimephales promelas 96 h LC50 = 32 mg/L Lepomis macrochirus 96 h LC50 30 - 40 mg/L Oncorhynchus mykiss 96 h	EC50 = 6.65 mg/L 5 min	no data available	2.11
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	no data available	no data available	no data available	no data available	N/A
Pseudocumene	no data available	LC50 7.19 - 8.28 mg/L Pimephales promelas 96 h	no data available	EC50= 6.14 mg/L 48 h	3.63
Cumene	EC50 = 2.6 mg/L Pseudokirchneriella subcapitata 72 h	LC50 6.04 - 6.61 mg/L Pimephales promelas 96 h LC50 = 4.8 mg/L Oncorhynchus mykiss 96 h LC50 = 2.7 mg/L Oncorhynchus mykiss 96 h LC50 = 5.1 mg/L Poecilia reticulata 96 h	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	EC50= 0.6 mg/L 48 h EC50 7.9 - 14.1 mg/L 48 h	3.55
1,3,5-Trimethylbenzene	no data available	LC50 = 3.48 mg/L Pimephales promelas 96 h	no data available	EC50= 50 mg/L 24 h	N/A
Benzenesulfonic acid, dodecyl-, branched, calcium salt	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

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency.

Container Disposal

Empty containers should be taken for local recycling, recovery, or waste disposal. Do not re-use empty containers.

## 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 40 of the Code of Federal Regulations, Part 372

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Naphthalene	91-20-3	5-10	0.1
Bromacil	314-40-9	1-5	1.0
Pseudocumene	95-63-6	1-5	1.0
Cumene	98-82-8	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	Yes	No	No

## CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Naphtha (petroleum), heavy aromatic	Not applicable	Not applicable
Naphthalene	100 lb	Not applicable
Hexylene glycol	Not applicable	Not applicable
Bromacil	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	Not applicable	Not applicable
Pseudocumene	Not applicable	Not applicable
Cumene	5000 lb	Not applicable
1,3,5-Trimethylbenzene	Not applicable	Not applicable
Benzenesulfonic acid, dodecyl-, branched, calcium salt	Not applicable	Not applicable

## 16. OTHER INFORMATION

Prepared By	Rachael Mohochi
Supersedes Date	02/05/2009
Issuing Date	07/16/2013
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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. 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.



# Material Safety Data Sheet: WEED-A-CIDE, OG

Supersedes Date 02/19/2003

Issuing Date 03/26/2010

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** WEED-A-CIDE, OG  
**Recommended Use** herbicide  
**Information on Manufacturer**  
 MANTEK, DIVISION OF NCH CORP.  
 BOX 152170  
 IRVING, TEXAS 75015

**Product Code** 0324  
**Chemical Nature** Aqueous solution  
**Emergency Telephone Number**  
 CHEMTREC ® 800-424-9300

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

CAUTION

Severe skin irritation  
 Causes eye burns  
 Causes respiratory tract irritation  
 Harmful if swallowed

**Color** Brown

**Physical State** Liquid

**Odor** Phenolic

**Potential Health Effects**

**Principle Route of Exposure**

Skin contact, Eye contact, Inhalation.

**Primary Routes of Entry**

Skin Absorption

**Acute Effects**

**Eyes**

Corrosive. Causes burns, corneal damage, and possible blindness.

**Skin**

Causes skin irritation. May be absorbed through the skin in harmful amounts.

**Inhalation**

May cause irritation of respiratory tract.

**Ingestion**

Irritating to mouth, throat, and stomach. Can burn mouth, throat, and stomach.

**Chronic Toxicity**

Liver and kidney injuries may occur

**Target Organ Effects**

Eyes, Skin, Respiratory system, Liver, Kidney, Gastrointestinal tract.

**Aggravated Medical Conditions**

Respiratory disorders, Skin disorders, Liver disorders, Kidney disorders.

**Potential Environmental Effects**

See Section 12 for additional Ecological information.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Dimethylamine (2,4-dichlorophenoxy)acetate	2008-39-1
Dimethylamine dicamba	2300-66-5
(2R)-2-(4-chloro-2-methylphenoxy)propanoic acid compound with N-methylmethanamine (1:1)	66423-09-4

## 4. FIRST AID MEASURES

**General Advice**

Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or mists.

**Eye Contact**

Flush eye with water for 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.

**Inhalation**

Call a physician or poison control center immediately.

Move to fresh air. If breathing has stopped, apply artificial respiration. Call a physician or poison control centre immediately.

**Ingestion**

Call a physician or Poison Control Centre immediately. Give small amounts of water to drink. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

**Notes to Physician**

Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Flash Point** >212°F/>100°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**

Water spray. Carbon dioxide (CO2). Foam. Dry chemical. Alcohol-resistant foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media**

None known.

**Specific hazards arising from the chemical**

Material can create slippery conditions. Contact with metals liberates 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

<b>Personal Precautions</b>	Wear protective gloves/clothing. Prevent further leakage or spillage if safe to do so. Use personal protective equipment. Material can create slippery conditions.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	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).
<b>Methods for Cleaning Up</b>	Pick up and transfer to properly labeled containers.
<b>Neutralizing Agent</b>	None known.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Do not get in eyes, on skin, or on clothing. Avoid breathing vapors or mists.			
<b>Storage</b>	Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Do not freeze.			
<b>Storage Temperature</b>	<b>Minimum</b>	35°F/2°C	<b>Maximum</b>	120°F/49°C
<b>Storage Conditions</b>	<b>Indoor</b>	X	<b>Outdoor</b>	<b>Heated</b> <b>Refrigerated</b>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

## Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Dimethylamine (2,4-dichlorophenoxy)acetate	No data available	No data available	No data available
Dimethylamine dicamba	No data available	No data available	No data available
(2R)-2-(4-chloro-2-methylphenoxy)propanoic acid compound with N-methylmethanamine (1:1)	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 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

<b>Physical State</b>	Liquid	<b>Viscosity</b>	Non viscous
<b>Color</b>	Brown	<b>Odor</b>	Phenolic
<b>Appearance</b>	Opaque	<b>pH</b>	8
<b>Specific Gravity</b>	1.028	<b>Evaporation Rate</b>	0.68
<b>Percent Volatile (Volume)</b>	92	<b>VOC Content (%)</b>	0.8
<b>VOC Content (g/l)</b>	< 9	<b>Vapor Pressure</b>	17.8 mmHg @ 70 °F
<b>Vapor Density</b>	0.7	<b>Solubility</b>	Completely soluble
<b>Boiling Point/Range</b>	212°F/100°C		

## 10. STABILITY AND REACTIVITY

## Chemical Stability

Stable. Hazardous polymerization does not occur.

## Conditions to Avoid

Heat, flames, and sparks

## Incompatible Products

Oxidizing agents, Acids.

## Hazardous Decomposition Products

Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Nitriles, Nitrosamines.

## 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
Dimethylamine (2,4-dichlorophenoxy) acetate	625 mg/kg ( Rat )	2115 mg/kg ( Rabbit )	no data available	no data available	no data available
Dimethylamine dicamba	2629 mg/kg ( Rat )	2 g/kg ( Rabbit )	no data available	no data available	no data available
(2R)-2-(4-chloro-2-methylphenoxy) propanoic acid compound with N-methylmethanamine (1:1)	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
Dimethylamine (2,4-dichlorophenoxy) acetate	no data available	no data available	no data available	no data available	no data available
Dimethylamine dicamba	no data available	no data available	no data available	no data available	no data available
(2R)-2-(4-chloro-2-methylphenoxy) propanoic acid compound with N-methylmethanamine (1:1)	no data available	no data available	no data available	no data available	no data available

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
Dimethylamine (2,4-dichlorophenoxy) acetate	not applicable	not applicable	not applicable	not applicable	not applicable
Dimethylamine dicamba	not applicable	not applicable	not applicable	not applicable	not applicable
(2R)-2-(4-chloro-2-methylphenoxy) propanoic acid compound with N-methylmethanamine (1:1)	not applicable	not applicable	not applicable	not applicable	not applicable

**12. ECOLOGICAL INFORMATION****Product Information**

Toxic to aquatic organisms.

**Component Information**

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Dimethylamine (2,4-dichlorophenoxy) acetate	no data available	no data available	no data available	no data available	N/A
Dimethylamine dicamba	no data available	no data available	no data available	no data available	N/A
(2R)-2-(4-chloro-2-methylphenoxy) propanoic acid compound with N-methylmethanamine (1:1)	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 as hazardous waste in compliance with local and national regulations.

**Container Disposal**

Do not re-use empty containers.

**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**

Does not Comply

**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 Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Dimethylamine dicamba	2300-66-5	0.1-1	1.0 % de minimis concentration

**SARA 311/312 Hazardous Categorization**

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

Component	Hazardous Substances RQs	CERCLA EHS RQs
Dimethylamine (2,4-dichlorophenoxy)acetate	100 lb	Not applicable
Dimethylamine dicamba	Not applicable	Not applicable
(2R)-2-(4-chloro-2-methylphenoxy)propanoic acid compound with N-methylmethanamine (1:1)	Not applicable	Not applicable

## Canada

This product may not be commercially placed on the market in Canada

## WHMIS Hazard Class

Not applicable

## 16. OTHER INFORMATION

Prepared By Dan Hollas  
Supersedes Date 02/19/2003  
Issuing Date 03/26/2010  
Reason for Revision No information available.  
Glossary No information available.  
List of References. No information available.

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. 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.

## 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 WITH 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

Date stamp: 23-Jun-2008

MSDS Ref. No.: 019761009

Revision Number: 0

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** ORTHO® Home Defense® MAX® Wasp & Hornet Killer (Aerosol)

**Description:** Insecticide

**Company**

The Scotts Company LLC  
14111 Scottslawn Road  
Marysville, OH 43041

**24-HOUR EMERGENCY TELEPHONE NUMBERS:**

CHEMTREC (U.S.): 1-800-424-9300  
CHEMTREC (International): 1-703-527-3887  
Non-Emergency Calls: 1-937-644-0011

**EPA Registration No.:** 1021-1775-239

**Formula No.:** S11988

**Product Number(s):** 019761009

## 2. HAZARDS IDENTIFICATION

**Labelling**

**Signal word:**

CAUTION

**Precautionary Statements**

Harmful if absorbed through the skin or inhaled. Avoid breathing vapors. Avoid contact with eyes, skin, and clothing. Keep out of reach of children.

**Potential health effects**

**Eye contact:**

Contact with eyes may cause irritation.

**Skin contact:**

Irritation not expected.

**Ingestion:**

Ingestion may cause irritation to mucous membranes.

**Inhalation:**

May irritate respiratory tract tissues.

**Aggravated Medical Conditions:**

Inhalation may aggravate asthma.

**Principle routes of exposure:**

Skin, Eyes, Inhalation

**Target organ effects:**

Irritation.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No	Weight %
Tetramethrin	7696-12-0	0.2
Sumithrin (Phenothrin)	26002-80-2	0.2
Other Ingredients	No CAS#	99.6

**Comments:** Contains petroleum distillates.

## 4. 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 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person

**Inhalation:**

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

**Notes to physician:**

Aspiration may cause pulmonary oedema and pneumonitis.

## 5. FIRE-FIGHTING MEASURES

Revision date:

Page 1 of 4



**5. FIRE-FIGHTING MEASURES**

Flammable properties:	N.F.P.A. (Code 30B) Level I Aerosol.
Suitable extinguishing media:	Carbon dioxide (CO2). Dry chemical. Foam.
Explosion potential:	Closed containers may rupture violently under fire conditions.
Hazardous combustion products:	Toxic fumes may be produced.
Specific hazards:	No information available.
Fire fighting procedures:	Select appropriate method to surround and extinguish fire.
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.

**6. ACCIDENTAL RELEASE MEASURES**

Personal precautions:	Wear personal protective equipment
Environmental precautions:	Prevent product from entering drains
Methods for containment:	Control spill with dykes and absorb with inert absorbant material
Methods for cleaning up:	Detergent and water.

**7. HANDLING AND STORAGE**

**Handling:** Avoid container breakage. Avoid inhalation or contact with skin, eyes, or clothing. Do not use around electrical equipment due to possible electrical shock hazard.

**Storage:** Store in a cool, dry area away from incompatible materials and heat sources. Do not store at temperatures above 130 F.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Components	ACGIH:	OSHA:
Tetramethrin	Not Listed	Not Listed
Sumithrin (Phenothrin)	Not Listed	Not Listed

**Engineering controls** Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

**Personal Protective Equipment**

<b>Eye/face protection</b>	Safety glasses with side shields or goggles.
<b>Skin and body protection:</b>	Wear suitable protective clothing if contact is anticipated during manufacturing. Chemical resistant gloves.
<b>Respiratory protection:</b>	If airborne levels are high or product does not remain intact, use a combination of engineering controls (e.g. ventilation) and personal protection, e.g., NIOSH/MSHA approved respirator for dusts, mists, and fumes.

**General hygiene considerations:** Wash hands and face before breaks and immediately after handling the product. Remove and wash contaminated clothing before re-use.

**Re-entry Interval:** When dry.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Aerosol (liquified gases and liquid)	<b>Flash point:</b>	Does not flash
<b>Solubility:</b>	Soluble		

**10. STABILITY AND REACTIVITY**

<b>Chemically Stable:</b>	Yes
<b>Conditions to avoid:</b>	Keep away from heat and ignition sources.
<b>Materials to avoid:</b>	Strong oxidising agents.
<b>Hazardous decomposition products:</b>	Toxic fumes and gases may be generated.
<b>Possibility of hazardous reactions:</b>	Poses little or no immediate hazard.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

**LD50/oral:** No information available

**Eye effects:** Contact with eyes may cause irritation

**Skin effects:** May cause skin irritation in susceptible persons  
**Sensitization:** No information available

**Chronic toxicity**

**Carcinogenic effects:** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Components	NTP:	IARC:	OSHA:
Tetramethrin	Not listed	Not listed	Not listed
Sumithrin (Phenothrin)	Not listed	Not listed	Not listed

**Ingestion:** Ingestion may cause irritation to mucous membranes.  
**Inhalation:** Possible irritation of the respiratory tract.  
**Target organ effects:** Irritation.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects:** No data is available on the product itself. May be toxic to aquatic organisms.  
**Persistence and degradability:** Inherently biodegradable.  
**Bioaccumulative potential:** No information available.  
**Mobility:** Water contaminating.  
**Aquatic toxicity:** Toxicity to fish.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods:** If partially filled, call the local solid waste agency for disposal instructions. Do not puncture or incinerate container. Do not place product down any indoor or outdoor drain.  
**Contaminated packaging:** If empty, place in trash or offer for recycling if available.

**14. TRANSPORT INFORMATION**

The description shown may not apply to all situations. Consult 49 CFR, or appropriate dangerous goods regulations for additional description requirements (e.g. technical name) and mode-specific or quantity-specific shipping requirements.

**DOT (Land)** Consumer Commodity, ORM-D  
**DOT (AIR)** UN1950, Aerosols, non-flammable, (each not exceeding 1 L capacity), 2.2  
**DOT (Vessel)** Consumer Commodity, ORM-D

**15. REGULATORY INFORMATION**

Components	CAS-No	CERCLA/SARA 313	CERCLA/SARA 302
Tetramethrin	7696-12-0	Not Listed	Not Listed
Sumithrin (Phenothrin)	26002-80-2	Not Listed	Not Listed

**General Information** Contact local authorities for disposal of large quantities of product

**16. OTHER INFORMATION**

**NFPA:** Health: 1 Flammability: 4 Reactivity: 1  
**HMIS:** Health: 1 Flammability: 4 Reactivity: 1

**Hazard Rating:** 0=Least; 1=Slight; 2=Moderate; 3=High; 4=Severe

**EPA FIFRA Comment:** Use of this product is regulated by the U.S. Environmental Protection Agency (EPA) through the approved product label. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**General comment:** This document contains health, safety, and environmental information useful to emergency response agencies, health care providers, manufacturers, and workers/employees. It does not replace the precautionary language, use directions, or the storage and disposal information found on the product label.

**Additional Information:** This information contained herein is, to the best of Scott's knowledge and belief, accurate and reliable as of the date of preparation of this document. However, no warranty or guarantee, express or implied, is made as to the accuracy or reliability, and Scotts shall not be liable for any loss or damage arising out of the use thereof. No authorization is given or implied to use any patented invention without a license. In addition, Scotts shall not be liable 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

Date stamp: 13-Jun-2006

MSDS Ref. No.: 054201010

Revision Number: 0

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product name:** TotalKill™ (BRAND) Wasp & Hornet Killer Aerosol  
**Description:** Insecticide

**Company**  
The Scotts Company  
14111 Scottslawn Road  
Marysville, OH 43041

### 24-HOUR EMERGENCY TELEPHONE NUMBERS:

CHEMTREC (U.S.): 1-800-424-9300  
CHEMTREC (International): 1-703-527-3887  
Non-Emergency Calls: 1-937-644-0011

**EPA Registration No.:** 1021-1775-239

**Formula No.:** S11988

## 2. HAZARDS IDENTIFICATION

### Labelling

**Signal word:**

CAUTION

### Precautionary Statement

Harmful if absorbed through the skin or inhaled. Avoid breathing vapors. Avoid contact with eyes, skin, and clothing. Keep out of reach of children.

### Potential health effects

**Eye contact:**

Contact with eyes may cause irritation.

**Skin contact:**

Irritation not expected.

**Ingestion:**

Ingestion may cause irritation to mucous membranes.

**Inhalation:**

May irritate respiratory tract tissues.

**Aggravated Medical Conditions:**

Inhalation may aggravate asthma.

**Principle routes of exposure:**

Skin, Eyes, Inhalation

**Target organ effects:**

Irritation.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No	Weight %
Tetramethrin	7696-12-0	0.2
Sumithrin (Phenothrin)	26002-80-2	0.2
Other Ingredients	No CAS#	99.6

**Comments:** Contains petroleum distillates.

## 4. FIRST AID MEASURES

**Eye contact:**

Hold eye open and rins 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 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 a poison control center or doctor. Do not give anything by mouth to an unconscious person

**Inhalation:**

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

**Notes to physician:**

Aspiration may cause pulmonary oedema and pneumonitis.

## 5. FIRE-FIGHTING MEASURES

**Flammable properties:**

N.F.P.A. (Code 30B) Level I Aerosol.

**Suitable extinguishing media:**

carbon dioxide (CO2), dry chemical, foam.

**Revision date:**

Page 1 of 4

**5. FIRE-FIGHTING MEASURES**

<b>Explosion potential:</b>	Closed containers may rupture violently under fire conditions.
<b>Hazardous combustion products:</b>	Toxic fumes may be produced.
<b>Specific hazards:</b>	No information available.
<b>Fire fighting procedures:</b>	Select appropriate method to surround and extinguish fire.
<b>Special protective equipment for firefighters:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal precautions:</b>	Wear personal protective equipment
<b>Environmental precautions:</b>	Prevent product from entering drains
<b>Methods for containment:</b>	Control spill with dykes and absorb with inert absorbant material
<b>Methods for cleaning up:</b>	Detergent and water.

**7. HANDLING AND STORAGE**

**Handling:** Avoid container breakage. Avoid inhalation or contact with skin, eyes, or clothing. Do not use around electrical equipment due to possible electrical shock hazard.

**Storage:** Store in a cool, dry area away from incompatible materials and heat sources. Do not store at temperatures above 130 F.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Components	ACGIH:	OSHA:
Tetramethrin	Not Listed	Not Listed
Sumithrin (Phenothrin)	Not Listed	Not Listed

**Engineering controls** Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

**Personal Protective Equipment**

<b>Eye/face protection:</b>	Safety glasses with side shields or goggles.
<b>Skin and body protection:</b>	Wear suitable protective clothing if contact is anticipated during manufacturing. Chemical resistant gloves.
<b>Respiratory protection:</b>	If airborne levels are high or product does not remain intact, use a combination of engineering controls (e.g. ventilation) and personal protection, e.g., NIOSH/MSHA approved respirator for dusts, mists, and fumes.

**General hygiene considerations:** Wash hands and face before breaks and immediately after handling the product.. Remove and wash contaminated clothing before re-use.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State:</b>	Aerosol (liquified gases and liquid)	<b>Solubility:</b>	Soluble
<b>Flash point:</b>	Does not flash		

**10. STABILITY AND REACTIVITY**

<b>Chemically Stable:</b>	Yes
<b>Conditions to avoid:</b>	Keep away from heat and ignition sources.
<b>Materials to avoid:</b>	Oxidising agents (strong).
<b>Hazardous decomposition products:</b>	Toxic fumes and gases may be generated.
<b>Possibility of hazardous reactions:</b>	Poses little or no immediate hazard.

**11. TOXICOLOGICAL INFORMATION****Acute toxicity**

<b>LD50/oral:</b>	No information available
<b>Eye effects:</b>	Contact with eyes may cause irritation
<b>Skin effects:</b>	May cause skin irritation in susceptible persons
<b>Sensitization:</b>	No information available

**Chronic toxicity**

**Carcinogenic effects:** The table below indicates whether each agency has listed any ingredient as a carcinogen.

Components	NTP:	IARC:	OSHA:
Tetramethrin	Not listed	Not listed	Not listed
Sumithrin (Phenothrin)	Not listed	Not listed	Not listed

**Ingestion:** Ingestion may cause irritation to mucous membranes.  
**Inhalation:** Possible irritation of the respiratory tract.  
**Target organ effects:** Irritation.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity effects:** No data is available on the product itself. May be toxic to aquatic organisms.  
**Persistence and degradability:** Inherently biodegradable.  
**Bioaccumulative potential:** No information available.  
**Mobility:** Water contaminating.  
**Aquatic toxicity:** Toxicity to fish.

**13. DISPOSAL CONSIDERATIONS**

**Waste Disposal Methods:** If partially filled, call the local solid waste agency or 1-800-CLEANUP for disposal instructions. Do not puncture or incinerate container. Do not place product down any indoor or outdoor drain.  
**Contaminated packaging:** If empty, place in trash or offer for recycling if available.

**14. TRANSPORT INFORMATION**

The description shown may not apply to all situations. Consult 49 CFR, or appropriate dangerous goods regulations for additional description requirements (e.g. technical name) and mode-specific or quantity-specific shipping requirements.

**DOT**

**Proper shipping name:** Consumer Commodity, ORM-D

**15. REGULATORY INFORMATION**

Components	CAS-No	CERCLA/SARA 313	CERCLA/SARA 302
Tetramethrin	7696-12-0	Not Listed	Not Listed
Sumithrin (Phenothrin)	26002-80-2	Not Listed	Not Listed

**General Information** Contact local authorities for disposal of large quantities of product

**16. OTHER INFORMATION**

**NFPA:** Health: 1 Flammability: 4 Reactivity: 1

**HMIS:** Health: 1 Flammability: 4 Reactivity: 1

**Hazard Rating:** 0=Least; 1=Slight; 2=Moderate; 3=High; 4=Severe

**EPA FIFRA Comment:** Use of this product is regulated by the U.S. Environmental Protection Agency (EPA) through the approved product label. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**General comment:** This document contains health, safety, and environmental information useful to emergency response agencies, health care providers, manufacturers, and workers/employees. It does not replace the precautionary language, use directions, or the storage and disposal information found on the product label.

**Additional Information:** This information contained herein is, to the best of Scott's knowledge and belief, accurate and reliable as of the date of preparation of this document. However, no warranty or guarantee, express or implied, is made as to the accuracy or reliability, and Scotts shall not be liable for any loss or damage arising out of the use thereof. No authorization is given or implied to use any patented invention without a license. In addition, Scotts shall not be liable 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.



# FLINN SCIENTIFIC, INC.

## Safety Data Sheet (SDS)

SDS #: 571.00

Revision Date: March 21, 2014

### SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### Oxalic Acid Dihydrate

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 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 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
Oxalic acid dihydrate	6153-56-6	H <sub>2</sub> C <sub>2</sub> O <sub>4</sub> ·2H <sub>2</sub> O	126.07	
Synonym: Ethandionic 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

Combustible 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-1

R-0

### SECTION 6 — ACCIDENTAL RELEASE MEASURES

Wear complete PPE. 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**

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Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids.  
Store in a cool dry place.

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**SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION**

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Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264).  
Exposure guidelines: (as oxalic acid) PEL/TLV 1 mg/m<sup>3</sup> (OSHA, ACGIH), STEL 2 mg/m<sup>3</sup> (ACGIH)

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**SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES**

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Colorless to white crystalline solid. Odorless.

Melting point: 101.5 °C, sublimes @ 157 °C

Soluble: Water and many common organic solvents.

Specific gravity: 1.653

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**SECTION 10 — STABILITY AND REACTIVITY**

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Avoid contact with bases, acid chlorides, alkali metals, corrodes steel.  
Shelf life: Indefinite, if stored properly.

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**SECTION 11 — TOXICOLOGICAL INFORMATION**

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Acute effects: **May be FATAL if ingested**, severe skin and eye burns.

ORL-RAT LD<sub>50</sub>: 375 mg/kg (Merck)

Chronic effects: Damaging to many organs and organ systems

IHL-RAT LC<sub>50</sub>: N.A.

Target organs: Kidneys, nervous system, skin, eyes, brain, heart

SKN-RBT LD<sub>50</sub>: N.A.

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

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**SECTION 12 — ECOLOGICAL INFORMATION**

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LC<sub>50</sub> Bluegill: 4000 mg/l 24 hours

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**SECTION 13 — DISPOSAL CONSIDERATIONS**

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Please review all federal, state and local regulations that may apply before proceeding.  
Flinn Suggested Disposal Method #24a is one option.

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**SECTION 14 — TRANSPORT INFORMATION**

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Shipping name: Corrosive Solids, Toxic, N.O.S. Hazard class: 8. UN number: UN2923.

N/A = Not applicable

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**SECTION 15 — REGULATORY INFORMATION**

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Not listed.

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**SECTION 16 — OTHER INFORMATION**

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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

## Oxygen


## Section 1. Identification

<b>GHS product identifier</b>	: Oxygen
<b>Chemical name</b>	: oxygen
<b>Other means of identification</b>	: Molecular oxygen; Oxygen molecule; Pure oxygen; O <sub>2</sub> ; UN 1072; Dioxygen; Oxygen USP, Aviator's Breathing Oxygen (ABO)
<b>Product use</b>	: Synthetic/Analytical chemistry.
<b>Synonym</b>	: Molecular oxygen; Oxygen molecule; Pure oxygen; O <sub>2</sub> ; UN 1072; Dioxygen; Oxygen USP, Aviator's Breathing Oxygen (ABO)
<b>SDS #</b>	: 001043
<b>Supplier's details</b>	: Airgas USA, LLC and its affiliates 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
<b>24-hour telephone</b>	: 1-866-734-3438

## Section 2. Hazards identification

<b>OSHA/HCS status</b>	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>Classification of the substance or mixture</b>	: OXIDIZING GASES - Category 1 GASES UNDER PRESSURE - Compressed gas

GHS label elements

<b>Hazard pictograms</b>	: 
<b>Signal word</b>	: Danger
<b>Hazard statements</b>	: May cause or intensify fire; oxidizer. Contains gas under pressure; may explode if heated.

Precautionary statements

<b>General</b>	: 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. Open valve slowly. Use only with equipment cleaned for Oxygen service.
<b>Prevention</b>	: Keep away from clothing, incompatible materials and combustible materials. Keep reduction valves, valves and fittings free from oil and grease.
<b>Response</b>	: In case of fire: Stop leak if safe to do so.
<b>Storage</b>	: Protect from sunlight when ambient temperature exceeds 52°C/125°F. Store in a well-ventilated place.
<b>Disposal</b>	: Not applicable.
<b>Hazards not otherwise classified</b>	: None known.

## Section 3. Composition/information on ingredients

<b>Substance/mixture</b>	: Substance
<b>Chemical name</b>	: oxygen
<b>Other means of identification</b>	: Molecular oxygen; Oxygen molecule; Pure oxygen; O <sub>2</sub> ; UN 1072; Dioxygen; Oxygen USP, Aviator's Breathing Oxygen (ABO)

### CAS number/other identifiers

<b>CAS number</b>	: 7782-44-7
<b>Product code</b>	: 001043

Ingredient name	%	CAS number
oxygen	100	7782-44-7

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 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

<b>Eye contact</b>	: 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.
<b>Inhalation</b>	: 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.
<b>Skin contact</b>	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
<b>Ingestion</b>	: As this product is a gas, refer to the inhalation section.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

<b>Eye contact</b>	: Contact with rapidly expanding gas may cause burns or frostbite.
<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: Contact with rapidly expanding gas may cause burns or frostbite.
<b>Frostbite</b>	: Try to warm up the frozen tissues and seek medical attention.
<b>Ingestion</b>	: As this product is a gas, refer to the inhalation section.

#### Over-exposure signs/symptoms

<b>Eye contact</b>	: No specific data.
<b>Inhalation</b>	: No specific data.
<b>Skin contact</b>	: No specific data.
<b>Ingestion</b>	: No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

<b>Notes to physician</b>	: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
<b>Specific treatments</b>	: 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. 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. Oxidizing material. This material increases the risk of fire and may aid combustion. Contact with combustible material may cause fire. In a fire or if heated, a pressure increase will occur and the container may burst or explode.

- 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. 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.

- 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. 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.

- 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

## Section 7. Handling and storage

- 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. Keep away from clothing, incompatible materials and combustible materials. Keep reduction valves free from grease and oil. 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). Separate from acids, alkalies, reducing agents and combustibles. 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

oxygen

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. 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.

## Section 8. Exposure controls/personal protection

- 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. [Compressed gas.]
- Color** : Colorless. Blue.
- Molecular weight** : 32 g/mole
- Molecular formula** : O<sub>2</sub>
- Boiling/condensation point** : -183°C (-297.4°F)
- Melting/freezing point** : -218.4°C (-361.1°F)
- Critical temperature** : -118.15°C (-180.7°F)
- Odor** : Odorless.
- Odor threshold** : Not available.
- pH** : Not available.
- Flash point** : [Product does not sustain combustion.]
- 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: reducing materials, combustible materials and organic materials.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : Not available.
- Vapor density** : 1.1 (Air = 1)
- Specific Volume (ft<sup>3</sup>/lb)** : 12.0482
- Gas Density (lb/ft<sup>3</sup>)** : 0.083
- Relative density** : Not applicable.
- Solubility** : Not available.
- Solubility in water** : Not available.
- Partition coefficient: n-octanol/water** : 0.65
- Auto-ignition temperature** : Not available.
- 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.

## Section 10. Stability and reactivity

- Possibility of hazardous reactions** : Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following:  
contact with combustible materials  
Reactions may include the following:  
risk of causing fire
- Conditions to avoid** : No specific data.
- Incompatible materials** : Highly reactive or incompatible with the following materials:  
combustible materials  
reducing materials  
grease  
oil
- 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** : Contact with rapidly expanding gas may cause burns or frostbite.
- Inhalation** : No known significant effects or critical hazards.



## Section 11. Toxicological information

- Skin contact** : Contact with rapidly expanding gas may cause burns or frostbite.  
**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

- 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 <sub>ow</sub>	BCF	Potential
oxygen	0.65	-	low

### Mobility in soil

- Soil/water partition coefficient (K<sub>oc</sub>)** : 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. 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.

## Section 14. Transport information

	DOT	TDG	Mexico	IMDG	IATA
<b>UN number</b>	UN1072	UN1072	UN1072	UN1072	UN1072
<b>UN proper shipping name</b>	OXYGEN, COMPRESSED	OXYGEN, COMPRESSED	OXYGEN, COMPRESSED	OXYGEN, COMPRESSED	OXYGEN, COMPRESSED
<b>Transport hazard class(es)</b>	2.2 (5.1)  	2.2 	2.2 (5.1)  	2.2 (5.1)  	2.2 (5.1)  
<b>Packing group</b>	-	-	-	-	-
<b>Environment</b>	No.	No.	No.	No.	No.
<b>Additional information</b>	<u>Limited quantity</u> Yes.  <u>Packaging instruction</u> <b>Passenger aircraft</b> Quantity limitation: 75 kg  <b>Cargo aircraft</b> Quantity limitation: 150 kg  <u>Special provisions</u> A52	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2), 2.23-2.25 (Class 5).  <u>Explosive Limit and Limited Quantity Index</u> 0.125  <u>ERAP Index</u> 3000  <u>Passenger Carrying Ship Index</u> 50  <u>Passenger Carrying Road or Rail Index</u> 75  <u>Special provisions</u> 42	-	-	<u>Passenger and Cargo Aircraft</u> Quantity limitation: 75 kg <b>Cargo Aircraft Only</b> 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.

## 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:** This material is listed or exempted.  
**United States inventory (TSCA 8b):** This material is 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** : Sudden release of pressure

#### Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
oxygen	100	No.	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.

### International regulations

#### International lists

#### National inventory

**Australia** : This material is listed or exempted.

**Canada** : This material is listed or exempted.

**China** : This material is listed or exempted.

**Europe** : This material is listed or exempted.

**Japan** : Not determined.

**Malaysia** : Not determined.

**New Zealand** : This material is listed or exempted.

**Philippines** : This material is listed or exempted.

**Republic of Korea** : This material is listed or exempted.

**Taiwan** : This material is listed or exempted.

## Section 15. Regulatory information

### Canada

#### WHMIS (Canada)

: Class A: Compressed gas.  
 Class C: Oxidizing material.  
**CEPA Toxic substances:** This material is not listed.  
**Canadian ARET:** This material is not listed.  
**Canadian NPRI:** This material is not 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.

## Section 16. Other information

**Canada Label requirements** : Class A: Compressed gas.  
 Class C: Oxidizing material.

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

Health	0
Flammability	0
Physical hazards	3

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
Ox. Gas 1, H270 Press. Gas Comp. Gas, H280	Expert judgment According to package

### History

**Date of printing** : 8/26/2015  
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**Date of previous issue** : No previous validation  
**Version** : 0.01

## 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 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.