



# EZCLEAR SDS PACK - Military Products-

---

**Name:** EZCLEAR SDS Pack  
**Part Number:** A1004  
**Date:** October 2017

---

<b>Contents:</b>	<b>Page No.</b>
EZCLEAR MILITARY Major Restoration Polish SDS <i>(Formerly Accelerator Polish)</i>	2-11
EZCLEAR MILITARY Minor Restoration Polish SDS <i>(Formerly Principle Polish)</i>	12-21
EZCLEAR MILITARY Finishing Polish SDS <i>(Formerly Finishing Polish)</i>	22-33
EZCLEAR MILITARY Light Polish SDS	34-45
EZCLEAR MILITARY Hydration Spray SDS <i>(Formerly Prep Polish)</i>	46-56
EZCLEAR MILITARY Acrylic Cleaner SDS <i>(Formerly Master Clear)</i>	57-61



# SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS 2015 (HPR-GHS), European Union CLP EC 1272/2008, REACH, and the Global Harmonization Standard.

## 1. IDENTIFICATION of the SUBSTANCE or PREPARATION

### IDENTIFICATION of the SUBSTANCE or PREPARATION

<b>Trade Name (as Labeled):</b>	<b>EZCLEAR MILITARY MAJOR RESTORATION POLISH</b>
<b>Chemical Name/Class:</b>	Aluminum Oxide Polish
<b>Synonyms:</b>	None Allocated
<b>Relevant Product Use:</b>	Plastic Polish
<b>Uses Advised Against:</b>	Other than Relevant Use
<b>Supplier/Manufacturer's Name:</b>	<b>EZCLEAR</b> (formerly Plastek)
<b>Address:</b>	3300 Industry Drive; Signal Hill, CA 90755, USA
<b>Business Phone:</b>	+1-650-367-7075
<b>Fax Phone:</b>	+1 650-249-5163
<b>European supplier/ distributor's name:</b>	
<b>Address:</b>	
<b>Business Phone:</b>	
<b>Emergency Phone:</b>	1-800-424-9300 (CHEMTREC) 24-hours [North America] +1-703-527-3887 (CHEMTREC) 24-hours [International]
<b>Email:</b>	<a href="mailto:info@ezclear.com">info@ezclear.com</a>
<b>Website:</b>	<a href="http://www.ezclear.com">www.ezclear.com</a>
<b>Date of Preparation:</b>	August 19, 2017
<b>Date of Revision:</b>	March 5, 2018

NOTE: ALL United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS 2015 [HPR-GHS], and European Union CLP EC 1272/2008, required information is included in appropriate sections based on the Global Harmonization Standard format.

## 2. HAZARD IDENTIFICATION

Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2208 Labeling and Classification:

**Classification:** Eye Irritation Cat. 2A  
**Signal Word:** Warning  
**Hazard Statement Codes:** H319  
**Precautionary Statement Codes:** P264, P280, P305 + P351 + P338, P337 + P313, P321, P501  
**Hazard Symbol/Pictogram:** GHS07



**EMERGENCY OVERVIEW: Product Description:** This product is a white to off-white paste with a mild hydrocarbon odor. **Health Hazards:** The primary hazards associated with exposure to this product are the potential for central nervous system effects by inhalation if product is heated. Contact with the eyes can cause irritation. Skin contact may cause irritation, especially if contact is prolonged. **Flammability Hazards:** This product may be combustible and could ignite if exposed to direct flame or if involved in a fire. If exposed to extremely high temperatures, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., aluminum, carbon, magnesium, and silicon oxides). **Reactivity Hazards:** This product is not known to be reactive. **Environmental Hazards:** This product may cause harm if released. **Emergency Response Procedures:** Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

## 3. COMPOSITION and INFORMATION ON INGREDIENTS

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Aluminum Oxide	1344-28-1	215-691-6	30.0-60.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Acute Oral Toxicity Cat. 4, Acute Inhalation Toxicity Cat. 4 Hazard Classification Codes: H302 + H332
Proprietary Alkane Hydrocarbon			5.0-10.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Flammable Liquid Cat. 3, Acute Oral Toxicity Cat. 3, Aspiration Hazard Cat. 1, Skin Irritation Cat. 2, STOT (Inhalation-Narcotic Effects) SE Cat. 3, Aquatic Chronic Toxicity Cat. 2 Hazard Classification Codes: H226, H301, H304, H315, H336, H410
Proprietary Aluminum Silicate			1.0-10.0	Classification: Not Applicable

See Section 16 for full text of Classification

### 3. COMPOSITION and INFORMATION ON INGREDIENTS (Continued)

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Proprietary Silicon			1.0-3.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Eye Irritation Cat. 2A, Aquatic Chronic Toxicity Cat. 3 Hazard Classification Codes: H319, H413
Water and other trace constituents. Each of the other trace constituents is present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).			Balance	Classification: Not Applicable

Specific concentration of components is being withheld under confidential information. See Section 16 for full text of Classification

### 4. FIRST-AID MEASURES

**PROTECTION OF FIRST AID RESPONDERS:** Rescuers should not attempt to retrieve victims of exposure to this material without adequate personal protective equipment. Rescuers should be taken for medical attention, if necessary.

**DESCRIPTION OF FIRST AID MEASURES:** Remove victim(s) to fresh air, as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation, if necessary. Remove and isolate contaminated clothing and shoes. Seek immediate medical attention. Take copy of label and SDS to physician or other health professional with victim(s).

**Skin Exposure:** If this product contaminates the skin and irritation develops, immediately begin decontamination with soap and water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if adverse effects continue after flushing.

**Eye Exposure:** If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek medical attention.

**Inhalation:** Although unlikely, if this product is inhaled or if fumes resulting from heating of product are inhaled, remove victim to fresh air. Seek medical attention if adverse symptoms continue after removal to fresh air.

**Ingestion:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing dermatitis, other skin conditions, and respiratory conditions may be aggravated by acute or chronic exposure to this product.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate exposure.

### 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Not established.

**AUTOIGNITION TEMPERATURE:** Not established.

**FLAMMABLE LIMITS (in air by volume, %):**

**Lower (LEL):** Not established.

**Upper (UEL):** Not established.

**FIRE EXTINGUISHING MEDIA:** Fire extinguishing materials that can be used against fires of this product include carbon dioxide, dry chemical powder, halon, 'ABC' Class, or appropriate foam. Consideration for surrounding materials must be taken into account.

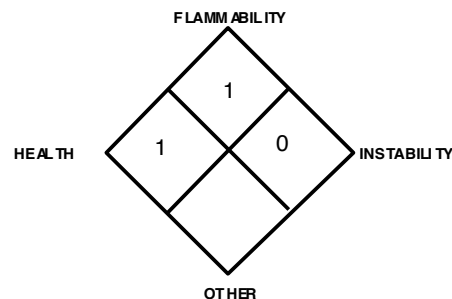
**UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

**SPECIAL HAZARDS ARISING FROM THE PRODUCT:** This product is combustible; it must be heated to a relatively high temperature before ignition can occur. When involved in a fire, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., aluminum, carbon, magnesium, and silicon oxides). This product can cause eye irritation.

**Explosion Sensitivity to Mechanical Impact or Static Discharge:** Not applicable.

**SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS:** Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

#### NFPA RATING



Hazard Scale: 0 = Minimal 1 = Slight  
2 = Moderate 3 = Serious 4 = Severe

### 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES:** Proper protective equipment should be used. In the event of a spill, clear the area and protect people. Eliminate all sources of ignition before cleanup begins. Use non-sparking tools. The atmosphere must have levels of components lower than those listed in Section 8, (Exposure Controls and Personal Protective Equipment) if applicable, and have at least 19.5 percent oxygen before personnel can be allowed into the area without Self-Contained Breathing Apparatus (SCBA).

## 6. ACCIDENTAL RELEASE MEASURES (Continued)

**PERSONAL PROTECTIVE EQUIPMENT:** Responders should wear the level of protection appropriate to the type of chemical released, the amount of the material spilled, and the location where the incident has occurred.

**Small Spills:** Wear rubber gloves, splash goggles, and appropriate body protection. Wipe up spilled paste with polypads or other suitable absorbent materials. Wash contaminated area with soap and water, absorb with paper towels, and rinse with water.

**Large Spills:** Trained personnel following pre-planned procedures should handle non-incident releases. Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield, and Tyvek suit. Minimum level of personal protective equipment for releases in which the level of oxygen is less than 19.5% or is unknown must be **Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus.** Wipe up spilled paste with polypads or other suitable absorbent materials. Prevent material from entering sewer or confined spaces, waterways, soil or public waters. Monitor area and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, before non-response personnel are allowed into the spill area.

**METHODS FOR CLEAN-UP AND CONTAINMENT:** Non sparking tools should be used.

**All Spills:** Access to the spill area should be restricted. Spread should be limited by gently covering the spill with polypads. Absorb spilled liquid with clay, sand, polypads, or other suitable inert absorbent materials. All contaminated absorbents and other materials should be placed in an appropriate container and seal. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). Dispose of recovered material and report spill per regulatory requirements. Remove all residue before decontamination of spill area. Clean spill area with soap and copious amounts of water. Monitor area for combustible vapor levels and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, and that levels are below applicable LELs (see Section 5 – Fire Fighting Measures) before non-response personnel are allowed into the spill area.

**ENVIRONMENTAL PRECAUTIONS:** Minimize use of water to prevent environmental contamination. Prevent spill or rinsate from contaminating storm drains, sewers, soil or groundwater. Place all spill residues in a suitable container and seal. Do not discharge effluent containing this product into streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**OTHER INFORMATION:** U.S. regulations may require reporting of spills of this material that reach surface waters if a sheen is formed. If necessary, the toll-free phone number for the U.S. Coast Guard National Response Center is 1-800-424-8802.

**REFERENCE TO OTHER SECTIONS:** See information in Section 8 (Exposure Controls – Personal Protection) and Section 13 (Disposal Considerations) for additional information.

## 7. HANDLING and STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** All employees who handle this material should be trained to handle it safely. Use in a well ventilated location. Keep away from heat, sparks, and other sources of ignition. As with all chemicals, avoid getting this product ON YOU or IN YOU. Avoid breathing airborne fumes or vapors generated by this product. Wash thoroughly after using this product. Do not eat or drink while using this product. Remove contaminated clothing immediately. Open containers slowly on a stable surface. Do not expose containers to extreme temperatures.

**CONDITIONS FOR SAFE STORAGE:** Keep container tightly closed when not in use. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight or sources of intense heat. Containers should be separated from oxidizing materials by a minimum distance of 20 ft. or by a barrier of non-combustible material at least 5 ft. high having a fire-resistance rating of at least 0.5 hours. Storage areas should be made of fire resistant materials. Post warning and “NO SMOKING” signs in storage and use areas, as appropriate. Refer to NFPA 30, *Flammable and Combustible Liquids Code*, for additional information on storage. Have appropriate extinguishing equipment in the storage area (such as sprinkler systems or portable fire extinguishers). Keep away from heat, sparks, and other sources of ignition. Use non-sparking tools. Bond and ground containers during transfers of material. Store away from incompatible materials (see Section 10, Stability and Reactivity). Material should be stored in secondary containers, as appropriate. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged.

**SPECIFIC END USE(S):** This product is for use as a plastic polish. Follow all industry standards for use of this product.

**PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:** Follow practices indicated in Section 6 (Accidental Release Measures). If necessary, ensure that application equipment is locked and tagged-out safely. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

**EXPOSURE LIMITS/CONTROL PARAMETERS:**

**Ventilation, Engineering, And Occupational Exposure Controls:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in later in this Section. Use local exhaust ventilation. As with all products that contain chemicals, ensure proper decontamination equipment (e.g., eyewash/safety shower stations) are available near areas where this product is used as necessary.

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

### EXPOSURE LIMITS/CONTROL PARAMETERS (continued):

#### Occupational/Workplace Exposure Limits/Guidelines:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							OTHER mg/m <sup>3</sup>
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELS		NIOSH IDLH mg/m <sup>3</sup>	
		TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>		
Aluminum Oxide	1344-28-1	For aluminum metal and insoluble compounds	NE	15 (total dust) 5 (resp. fraction)	NE	NE	NE	NE	DFG MAKs: TWA = 4 (Inhalable fraction), 1.5 (resp. fraction) Pregnancy Risk Group: D Carcinogen: MAK-2 (fibrous dust)
Proprietary Silicon			NE	NE	NE	NE	NE	NE	NE
Proprietary Aluminum Silicate			NE	NE	NE	NE	NE	NE	NE
Proprietary Alkane Solvent			NE	NE	NE	NE	NE	NE	NE

NE = Not Established. See Section 16 for Definitions of Terms Used

**International Occupational Exposure Limits:** Currently the following additional international exposure limits are in place for some components.

**ALUMINUM OXIDE:**

Austria: TMW = 5 mg/m<sup>3</sup>, KZW = 10 mg/m<sup>3</sup>, resp, 2007  
 Belgium: TWA = 10 mg(Al)/m<sup>3</sup>, MAR 2002  
 Denmark: TWA = 2 mg(Al)/m<sup>3</sup>, MAY 2011  
 France: VME = 10 mg/m<sup>3</sup>, FEB 2006  
 Hungary: TWA = 6 mg/m<sup>3</sup> (resp), SEP 2000  
 Iceland: TWA = 10 mg(Al)/m<sup>3</sup>, NOV 2011  
 Japan: OEL = 0.5 mg/m<sup>3</sup> (resp. dust), 2 mg/m<sup>3</sup> (total dust), MAY 2012  
 Korea: TWA = 10 mg/m<sup>3</sup>, 2006  
 Mexico: TWA = 10 mg(Al<sub>2</sub>O<sub>3</sub>)/m<sup>3</sup> (inhalable), 2004  
 The Netherlands: MAC-TGG = 10 mg/m<sup>3</sup>, 2003

**ALUMINUM OXIDE (continued):**

New Zealand: TWA = 10 mg/m<sup>3</sup> (inspirable dust), JAN 2002  
 Norway: TWA = 2 mg(Al)/m<sup>3</sup>, JAN 1999  
 Poland: MAC(TWA) = 2 mg/m<sup>3</sup>, MAC(STEL) = 16 mg/m<sup>3</sup>, JAN 1999  
 Russia: TWA = 6 mg/m<sup>3</sup>, JUN 2003  
 Sweden: TWA = 5 mg/m<sup>3</sup> (total dust); TWA = 2 mg/m<sup>3</sup> (resp. dust), JUN 2005  
 Switzerland: MAK-W = 3 mg/m<sup>3</sup>, KZG-W = 24 mg/m<sup>3</sup>, resp, fume, JAN 2011  
 Switzerland: MAK-W = 3 mg/m<sup>3</sup>, resp, JAN 2011  
 United Kingdom: TWA = 10 mg/m<sup>3</sup> (inhal. dust), OCT 2007  
 United Kingdom: TWA = 4 mg/m<sup>3</sup> (resp. dust), OCT,2007  
 In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV.

**ACGIH Biological Exposure Indices (BEIs):** Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for the components of this product.

**PROTECTIVE EQUIPMENT:** *The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132, including U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hand Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR 1910.132), equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02, Z94.3-M1982, Industrial Eye and Face Protectors and CSA Standard Z195-02, Protective Footwear), or standards of EU member states (including EN 529:2005 for respiratory PPE, CEN/TR 15419:2006 for hand protection, and CR 13464:1999 for face/eye protection). Please reference applicable regulations and standards for relevant details.*

**Respiratory Protection:** Maintain airborne contaminant concentrations below exposure limits listed above. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations. Oxygen levels below 19.5% are considered IDLH by U.S. OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. OSHA's Respiratory Protection Standard (1910.134-1998).

**Eye Protection:** Wear splash goggles or safety glasses as appropriate for the task. Face shields are recommended if solutions are made. If necessary, refer to appropriate regulations.

**Hand Protection:** Wash hands and wrists before putting on and after removing gloves. During manufacture or other similar operations, wear the appropriate hand protection for the process. Use double gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS. Because all gloves are to some extent permeable and their permeability increases with time, they should be changed regularly (hourly is preferable) or immediately if torn or punctured. If necessary refer to appropriate regulations.

**Skin Protection:** Use appropriate protective clothing for the task (e.g., lab coat, etc.). If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in appropriate regulations.

## 9. PHYSICAL and CHEMICAL PROPERTIES

**FORM:** Paste.

**ODOR:** Mild hydrocarbon.

**pH:** Not established.

**BOILING POINT:** Not established.

**FLASH POINT:** Not established.

**EXPLOSIVE PROPERTIES:** Not explosive

**VAPOR PRESSURE:** Not applicable.

**SOLUBILITY:** Partially soluble in organic solvents.

**VISCOSITY:** 800-6000 cps

**AUTOIGNITION TEMPERATURE:** Not determined.

**COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT):** Not determined.

**HOW TO DETECT THIS SUBSTANCE (warning properties):** The appearance of this product can be a distinguishing characteristic to identify it in event of accidental release.

**COLOR:** White to off-white.

**ODOR THRESHOLD:** Not determined.

**EVAPORATION RATE:** Not available.

**MELTING/FREEZING POINT:** Not established.

**FLAMMABILITY:** Combustible.

**OXIDIZING PROPERTIES:** Not an oxidizer.

**SPECIFIC GRAVITY @ 25°C:** 1.65

**SOLUBILITY IN WATER:** Insoluble.

**RELATIVE VAPOR DENSITY (air = 1):** Not determined.



## 10. STABILITY and REACTIVITY

**CHEMICAL STABILITY:** Stable under conditions of normal temperature and pressure.

**DECOMPOSITION PRODUCTS:** **Combustion:** Aluminum, carbon, magnesium, and silicon oxides). **Hydrolysis:** None known.

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** This product would be incompatible with strong oxidizers, chlorine trifluoride, ethylene oxide, strong acid, strong bases, halocarbons, oxygen difluoride, sodium nitrate, vinyl acetate, and water reactive materials.

**POSSIBILITY OF HAZARDOUS REACTION/POLYMERIZATION:** If exposed to high temperatures, this product may polymerize and generate excessive heat. A buildup of heat can occur in closed containers and may present a serious danger of overpressure of containers.

**CONDITIONS TO AVOID:** Exposure or contact to extreme temperatures and incompatible chemicals.

## 11. TOXICOLOGICAL INFORMATION

**SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE:** The most significant routes of occupational exposure are inhalation of vapors and contact with skin and eyes. The symptoms of exposure to this product, via route of exposure, are as follows:

**Inhalation:** Inhalation of aerosols from this product can irritate the nose, throat, and other tissues of the respiratory system. Symptoms of such exposure may include displayed general weakness, ataxia, rapid respiration, nausea and tremors.

**Contact with Skin or Eyes:** If this product enters the eyes, it may cause redness and pain. Depending on the duration and concentration of exposure, skin contact may be irritating. Chronic skin contact may cause dermatitis.

**Skin Absorption:** The components of this product are not known to be absorbed through the skin.

**Ingestion:** Ingestion is not anticipated to be a significant route of occupational exposure for this product. If this product is swallowed (i.e., through poor hygiene practices), it may cause nausea, vomiting, and diarrhea.

**Injection:** Though not anticipated to be a significant route of exposure for this product, injection (via punctures or lacerations by contaminated objects) may cause redness at the site of injection.

**HEALTH EFFECTS OR RISKS FROM EXPOSURE:** An Explanation in Lay Terms.

**Acute:** Inhalation exposure may cause central nervous system effects.

**Chronic:** Chronic skin contact may cause dermatitis.

**TARGET ORGANS:** **Acute:** Skin, eyes, respiratory system, central nervous system. **Chronic:** Skin.

**TOXICITY DATA:** The following toxicological data are available for components of this product in 1% or greater concentration:

**ALUMINUM OXIDE:**

LD<sub>50</sub> (Intraperitoneal-Mouse) > 3600 mg/kg

TCLo (Inhalation-Rat) 200 mg/m<sup>3</sup>/5 hours/28 weeks-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi, chronic pulmonary edema; Related to Chronic Data: death

TCLo (Inhalation-Rabbit) 200 mg/m<sup>3</sup>/5 hours/28 weeks-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi, chronic pulmonary edema; Related to Chronic Data: death

TDLo (Intraperitoneal-Rat) 90 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: tumors

TDLo (Implant-Rat) 200 mg/kg: Tumorigenic: neoplastic by RTECS criteria, tumors at site of application

TD (Implant-Rat) 200 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria, tumors at site of application

**PROPRIETARY SILICON:**

Standard Draize Test (Eye-Rabbit) 100 mg/1 hour: Mild

Eye Irritancy (rabbit) = 100 mg; mild



LD<sub>50</sub> (Oral-Rat) > 24 gm/kg: Gastrointestinal: hypermotility, diarrhea

Skin Irritancy (human) = 500 mg/7 days; mild

Skin Irritancy (human) = 104 mg/3 days/intermittent; moderate

Skin Irritancy (man) = 10%/2 days

TDLo (oral, child) = 79 g/kg/56 weeks/intermittent; Central nervous system effects, BRN

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD (BLUE)		1	
FLAMMABILITY HAZARD (RED)		1	
PHYSICAL HAZARD (YELLOW)		0	
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8
For Routine Industrial Use and Handling Applications			

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate  
3 = Serious 4 = Severe \* = Chronic hazard

**CARCINOGENIC POTENTIAL OF COMPONENTS:** Components are listed by agencies tracking the carcinogenic potential of chemical compounds as follows:

**ALUMINUM OXIDE (as fibrous dust):** MAK-2 (Substances that are Considered to be Carcinogenic for Man because sufficient data from long-term animal studies or limited to evidence from animal studies substantiated by evidence from epidemiological studies indicate that they can make a significant contribution to cancer risk.)

The remaining components of this product are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

**IRRITANCY OF PRODUCT:** Contact with this product can irritate the nose, throat, eyes, skin and other contaminated tissues.

**SENSITIZATION TO THE PRODUCT:** This product contains trace amounts of Methyl Paraben. Some information indicates Methyl Paraben may cause sensitization and allergic skin reaction in susceptible individuals from skin contact.

**REPRODUCTIVE TOXICITY INFORMATION:** This product has not been tested for reproductive toxicity effects; however, components are not known to cause human mutagenic, embryotoxic, teratogenic or reproductive toxicity effects.

## 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

**MOBILITY:** This product has not been tested for mobility in soil. The following information is available for some components.

**PROPRIETARY SILICON:** Water Solubility: Insoluble. Terrestrial Fate: If released to soil, this compound will absorb strongly and will remain essentially immobile. This compound will not volatilize to the atmosphere, nor will it biodegrade. This compound will not undergo hydrolysis except in clay soils which are known to catalyze this reaction at a rate dependent upon the amount of water present.

**PERSISTENCE AND BIODEGRADABILITY:** This product has not been tested for persistence or biodegradability. It is expected that the components will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known. Data for components of this product are available as follows:

**PROPRIETARY SILICON:** If released to an aquatic environment, this material is expected to absorb strongly to sediment and suspended organic matter. Although insoluble in water, this material is not expected to bioconcentrate, due to its inherent hydrophobicity. This compound will not bioconcentrate in fish and aquatic environments as this compound is molecularly too large to pass through biological membranes and concentrate in fatty tissue. This compound will hydrolyze in water and will not volatilize to the atmosphere. If released to the atmosphere, this material will only enter the atmosphere if in aerosol form, due to its heavy molecular weight, very low vapor pressure and liquid physical state. The most likely atmospheric fate process is by dry deposition to the surface of the earth.

**BIO-ACCUMULATION POTENTIAL:** This product has not been tested for bio-accumulation potential.

**ECOTOXICITY:** This product has not been tested for aquatic or animal toxicity. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

**RESULTS OF PBT AND vPvB ASSESSMENT:** No Data Available. PBT and vPvB assessments are part of the chemical safety report required for some substances in European Union Regulation (EC) 1907/2006, Article 14.

**OTHER ADVERSE EFFECTS:** The components of this product are not listed as having ozone depletion potential.

**ENVIRONMENTAL EXPOSURE CONTROLS:** Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHODS:** It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.

**DISPOSAL CONTAINERS:** Waste materials must be placed in and shipped in appropriate 5-gallon or 55-gallon poly or metal waste pails or drums. Permeable cardboard containers are not appropriate and should not be used. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

**PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING:** Wear proper protective equipment when handling waste materials.

**U.S. EPA WASTE NUMBER:** Not applicable.

**EWC WASTE CODE:** Wastes from shaping and physical and mechanical surface treatment of metals and plastics, not otherwise specified: 12 01 99

## 14. TRANSPORTATION INFORMATION

**U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS:** This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

**TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** This product is not classified as Dangerous Goods, per regulations of Transport Canada.

**INTERNATIONAL AIR TRANSPORT ASSOCIATION/ICAO (IATA/ICAO):** This product is not classified as dangerous goods, per rules of IATA.

**INTERNATIONAL MARITIME ORGANIZATION (IMO):** This product is not classified as Dangerous Goods, per rules of IMO.

**EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):** This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

**TRANSPORT IN BULK ACCORDING TO THE IBC CODE:** Not applicable.

**ENVIRONMENTAL HAZARDS:** This product does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not specifically listed in Annex III under MARPOL 73/78.

## 15. REGULATORY INFORMATION

**UNITED STATES REGULATIONS:**

**U.S. SARA Reporting Requirements:** The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

COMPONENT	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Aluminum Oxides (fibrous forms)	No	No	Yes

---

## 15. REGULATORY INFORMATION (Continued)

### UNITED STATES REGULATIONS (continued):

**U.S. SARA Threshold Planning Quantity (TPQ):** There are no specific Threshold Planning Quantities for this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

**U.S. CERCLA Reportable Quantity (RQ):** Not applicable.

**U.S. TSCA Inventory Status:** The components of this product are listed on the TSCA Inventory.

**Other U.S. Federal Regulations:** Not applicable.

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):** The components of this product are not on the California Proposition 65 Lists.

### CANADIAN REGULATIONS:

**Canadian DSL/NDL Status:** The components of this product are listed on the DSL inventory.

**Other Canadian Regulations:** Not applicable.

**Canadian Environmental Protection Agency (CEPA) Priorities Substances List:** No component of this product is on the Priority Substances Lists.

**Canadian WHMIS HPR 2015 Classification and Symbols:** See the following section for classification and symbols under WHMIS.

### EUROPEAN REGULATIONS:

**Safety, Health, and Environmental Regulations/Legislation Specific for the Product:** None known.

**Chemical Safety Assessment:** No Data Available. The chemical safety assessment is required for some substances according to European Union Regulation (EC) 1907/2006, Article 14.

---

## 16. OTHER INFORMATION

**U.S. ANSI STANDARD LABELING (Precautionary Statements):** **CAUTION!** MAY BE A COMBUSTIBLE LIQUID. MAY CAUSE EYE IRRITATION. Avoid contact with eyes, skin and clothing. Avoid breathing mists or sprays. Keep container closed. Keep away from heat, sparks and flame. Use only with adequate ventilation. Wash thoroughly after use. Wear gloves, eye protection, respiratory protection, and appropriate body protection. **FIRST-AID:** In case of contact, immediately flush skin and eyes with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, foam, dry chemical, or CO<sub>2</sub>. **IN CASE OF SPILL:** Absorb spilled product with polypads or other suitable absorbing material. Place all spill residue in an appropriate container and seal. Dispose of in accordance with International, National, State, and local hazardous waste disposal regulations. Consult Safety Data Sheet for additional information.

**Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2008 Labeling and Classification:**

**Classification:** Eye Irritation Category 2A

**Signal Word:** Warning

**Hazard Statement Codes:** H319: Causes serious eye irritation.

#### Precautionary Statements:

**Prevention:** P264: Wash thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. P337 + P313: If eye irritation persists: Get medical advice/attention. P321: Specific treatment (remove from exposure and treat symptoms). Refer to other portions of precautionary text on this label, SDS or other product information sheets, as appropriate.

**Storage:** None.

**Disposal:** P501: Dispose of contents/containers in accordance with all local, regional, national and international regulations.

**Hazard Symbol/Pictograms:** GHS07

### CLASSIFICATION FOR COMPONENTS:

**Full Text Global Harmonization Under Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP Regulation (EC) 1272/2008:**

**Aluminum Oxide:** Notified classification.

**Classification:** Acute Oral Toxicity Category 4, Acute Inhalation Toxicity Category 4

**Hazard Statements:** H312 + H332: Harmful in contact with skin or if inhaled. H312 + H332: Harmful in contact with skin or if inhaled.

**Proprietary Silicon:** Notified classification.

**Classification:** Eye Irritation Category 2A, Aquatic Chronic Toxicity Category 3

**Hazard Statements:** H319: Causes serious eye irritation. H413: May cause long-lasting harmful effects to aquatic life. H413: May cause long-lasting harmful effects to aquatic life.

**Proprietary Alkane Hydrocarbon:** Notified classification.

**Classification:** Flammable Liquid Category 3, Acute Oral Toxicity Category 3, Aspiration Hazard Category 1, Skin Irritation Category 2, Specific Target Organ Effects (Inhalation-Narcotic Effect) Single Exposure Category 3, Aquatic Chronic Toxicity Category 2

**Hazard Statements:** H226: Flammable liquid and vapour. H301: Toxic if swallowed. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. H412: Harmful to aquatic life with long-lasting effects.

**All Other Components:** No classification has been published or is applicable.



## 16. OTHER INFORMATION (Continued)

**REVISION DETAILS:** August 2014: Add Global Harmonization Standard compliance and up-date of entire SDS for current compliance. October 2017: Update SDS to the most current U.S., Canadian and European GHS classification. Remove old EU DPD classification. March 2018: Correction of typo for classification code, Section 2.

**REFERENCES AND DATA SOURCES:** Contact the supplier for information.

**METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION:** Criteria of the GHS and CLP 1272: 2008 were used for classification.

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721-1961 • (800) 441-3365

**DATE OF PRINTING:** October 21, 2019

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, CA 96721 • (800) 441-3365 • (808) 969-4648 • info@msdsprep-csa.com

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. EZCLEAR 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. Additionally, EZCLEAR assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

## DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these, which are commonly used, include the following:

**CAS #:** This is the Chemical Abstract Service Number that uniquely identifies each constituent.

### EXPOSURE LIMITS IN AIR:

**CEILING LEVEL:** The concentration that shall not be exceeded during any part of the working exposure.

**DFG MAKs:** Federal Republic of Germany Maximum Concentration Values in the workplace. Exposure limits are given as TWA (Time-Weighted Average) or PEAK (short-term exposure) values.

**DFG MAK Germ Cell Mutagen Categories:** **1:** Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed humans. **2:** Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed mammals. **3A:** Substances that have been shown to induce genetic damage in germ cells of human of animals, or which produce mutagenic effects in somatic cells of mammals *in vivo* and have been shown to reach the germ cells in an active form. **3B:** Substances that are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell *in vivo*; in exceptional cases, substances for which there are no *in vivo* data, but that are clearly mutagenic *in vitro* and structurally related to known *in vivo* mutagens. **4:** Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances] if research results make this seem sensible.) **5:** Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is expected not to be significant.

**DFG MAK Pregnancy Risk Group Classification:** **Group A:** A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. **Group B:** Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A–C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.

**IDLH:** Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

**LOQ:** Limit of Quantitation.

**NE:** Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

**NIC:** Notice of Intended Change.

**NIOSH CEILING:** The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

**NIOSH RELs:** NIOSH's Recommended Exposure Limits.

**PEL:** OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL" is placed next to the PEL that was vacated by Court Order.

**SKIN:** Used when there is a danger of cutaneous absorption.

**STEL:** Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

**TLV:** Threshold Limit Value. An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

**TWA:** Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

**WEEL:** Workplace Environmental Exposure Limits from the ALHA.

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:** This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

**HEALTH HAZARD: 0 Minimal Hazard:** No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation:* Essentially non-irritating. Mechanical irritation may occur. *P11 or Draize = 0. Eye Irritation:* Essentially non-irritating, minimal effects clearing in < 24 hours. Mechanical irritation may occur. *Draize = 0. Oral Toxicity LD<sub>50</sub> Rat:* > 5000 mg/kg.

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

**HEALTH HAZARD (continued): 0 (continued):** *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 2000 mg/kg. *Inhalation Toxicity 4-hrs LC<sub>50</sub> Rat:* > 20 mg/L. **1 Slight Hazard:** Minor reversible injury may occur; may irritate the stomach if swallowed; may defat the skin and exacerbate existing dermatitis. *Skin Irritation:* Slightly or mildly irritating. *P11 or Draize > 0 < 5. Eye Irritation:* Slightly to mildly irritating, but reversible within 7 days. *Draize > 0 ≤ 25. Oral Toxicity LD<sub>50</sub> Rat:* > 500–5000 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 1000–2000 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 2–20 mg/L. **2 Moderate Hazard:** Temporary or transitory injury may occur; prolonged exposure may affect the CNS. *Skin Irritation:* Moderately irritating; primary irritant; sensitizer. *P11 or Draize ≥ 5*, with no destruction of dermal tissue. *Eye Irritation:* Moderately to severely irritating; reversible corneal opacity; corneal involvement or irritation clearing in 8–21 days. *Draize = 26–100*, with reversible effects. *Oral Toxicity LD<sub>50</sub> Rat:* > 50–500 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 200–1000 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 0.5–2 mg/L. **3 Serious Hazard:** Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation:* Severely irritating and/or corrosive; may cause destruction of dermal tissue, skin burns, and dermal necrosis. *P11 or Draize > 5–8*, with destruction of tissue. *Eye Irritation:* Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. *Draize > 80* with effects irreversible in 21 days. *Oral Toxicity LD<sub>50</sub> Rat:* > 1–50 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 20–200 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 0.05–0.5 mg/L. **4 Severe Hazard:** Life-threatening; major or permanent damage may result from single or repeated exposure; extremely toxic; irreversible injury may result from brief contact. *Skin Irritation:* Not appropriate. Do not rate as a 4, based on skin irritation alone. *Eye Irritation:* Not appropriate. Do not rate as a 4, based on eye irritation alone. *Oral Toxicity LD<sub>50</sub> Rat:* ≤ 1 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* ≤ 20 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* ≤ 0.05 mg/L.

**FLAMMABILITY HAZARD: 0 Minimal Hazard:** Materials that will not burn in air when exposure to a temperature of 815.5°C (1500°F) for a period of 5 minutes. **1 Slight Hazard:** Materials that must be pre-heated before ignition can occur. Material requires considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur. This usually includes the following: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C (200°F) (i.e. OSHA Class IIIb); and Most ordinary combustible materials (e.g. wood, paper, etc.). **2 Moderate Hazard:** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This usually includes the following: Liquids having a flash-point at or above 37.8°C (100°F); Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp); and Solids and semisolids (e.g. viscous and slow flowing as asphalt) that readily give off flammable vapors. **3 Serious Hazard:** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions. This usually includes the following: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 38°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. OSHA Class IB and IC); Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air (e.g., dusts of combustible solids, mists or droplets of flammable liquids); and Materials that burn extremely rapidly, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). **4 Severe Hazard:** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and that will burn readily. This usually includes the following: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. OSHA Class IA); and Materials that ignite spontaneously when exposed to air at a temperature of 54.4°C (130°F) or below (pyrophoric). **SPONTANEOUS HAZARD: 0 Water Reactivity:** Materials that do not react with water. *Organic Peroxides:* Materials that are normally stable, even under fire conditions and will not react with water. *Explosives:* Substances that are Non-Explosive. *Compressed Gases:* No Rating. *Pyrophorics:* No Rating. *Oxidizers:* No 0 rating. *Unstable Reactives:* Substances that will not polymerize, decompose, condense, or self-react.). **1 Water Reactivity:** Materials that change or decompose upon exposure to moisture. *Organic Peroxides:* Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy violently.

## DEFINITIONS OF TERMS (Continued)

## HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

**PHYSICAL HAZARD (continued): 1 (continued):** Explosives: Division 1.5 & 1.6 explosives. Substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases:* Pressure below OSHA definition. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group III oxidizers; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives:* Substances that may decompose, condense, or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosion hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors. **2 Water Reactivity:** Materials that may react violently with water. *Organic Peroxides:* Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives:* Division 1.4 explosives. Explosive substances where the explosive effects are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases:* Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packing Group II oxidizers. Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential (or low risk) for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature. **3 Water Reactivity:** Materials that may form explosive reactions with water. *Organic Peroxides:* Materials that are capable of detonation or explosive reaction, but require a strong initiating source or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives:* Division 1.3 explosives. Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases:* Pressure  $\geq$  514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packing Group I oxidizers. Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3:2 potassium bromate/cellulose mixture. Liquids: any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a moderate potential (or moderate risk) to cause significant heat generation or explosion. **4 Water Reactivity:** Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides:* Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives:* Division 1.1 & 1.2 explosives. Explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases:* No Rating. *Pyrophorics:* Add to the definition of Flammability 4. *Oxidizers:* No 4 rating. *Unstable Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a high potential (or high risk) to cause significant heat generation or explosion.

## NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

**HEALTH HAZARD: 0** Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 2000 mg/kg. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 2000 mg/kg. Materials essentially non-irritating to the respiratory tract, eyes, and skin. **1** Materials that, under emergency conditions, can cause significant irritation. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 10 mg/L but less than or equal to 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials that slightly to moderately irritate the respiratory tract, eyes and skin. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 500 mg/kg but less than or equal to 2000 mg/kg. **2** Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 3,000 ppm but less than or equal to 5,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 200 mg/kg but less than or equal to 1000 mg/kg. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators. Materials that are primary skin irritants or sensitizers. Materials whose LD<sub>50</sub> for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. **3** Materials that, under emergency conditions, can cause serious or permanent injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 1,000 ppm but less than or equal to 3,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials corrosive to the skin.

## NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

**HEALTH HAZARDS (continued): 3 (continued):** Cryogenic gases that cause frostbite and irreversible tissue damage. Compressed liquefied gases with boiling points below -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 5 mg/kg but less than or equal to 50 mg/kg. **4** Materials that, under emergency conditions, can be lethal. Gases with an LC<sub>50</sub> for acute inhalation toxicity less than or equal to 1,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than ten times its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 1000 ppm. Dusts and mists whose LC<sub>50</sub> for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD<sub>50</sub> for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD<sub>50</sub> for acute oral toxicity is less than or equal to 5 mg/kg.

**FLAMMABILITY HAZARD: 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D of NFPA 704. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D of NFPA 704. Liquids, solids, and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the *Method of Testing for Sustained Combustibility*, per 49 CFR 173, Appendix H or the *UN Recommendations on the Transport of Dangerous Goods, Model Regulations* (current edition) and the related *Manual of Tests and Criteria* (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85% by weight. Liquids that have no fire point when tested by ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup*, up to the boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Most ordinary combustible materials. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures with air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal, and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily. Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

**INSTABILITY HAZARD: 0** Materials that in themselves are normally stable, even under fire conditions. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100W/mL. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater.

## FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **Flash Point:** Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air near the surface of the liquid or within the test vessel used. **Autoignition Temperature:** Minimum temperature of a solid, liquid, or gas required to initiate or cause self-sustained combustion in air with no other source of ignition. **LEL:** Lowest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame. **UEL:** Highest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame.

## DEFINITIONS OF TERMS (Continued)

## TOXICOLOGICAL INFORMATION:

**Human and Animal Toxicology:** Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. LD<sub>50</sub>: Lethal Dose (solids & liquids) that kills 50% of the exposed animals. LC<sub>50</sub>: Lethal Concentration (gases) that kills 50% of the exposed animals. ppm: Concentration expressed in parts of material per million parts of air or water. mg/m<sup>3</sup>: Concentration expressed in weight of substance per volume of air. mg/kg: Quantity of material, by weight, administered to a test subject, based on their body weight in kg. TDLo: Lowest dose to cause a symptom. TCLo: Lowest concentration to cause a symptom. TDo, LDLo, and LDo, or IC, ICo, LCLo, and LCo: Lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** IARC: International Agency for Research on Cancer. NTP: National Toxicology Program. RTECS: Registry of Toxic Effects of Chemical Substances. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** BEI: ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

## REPRODUCTIVE TOXICITY INFORMATION:

A mutagen is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical that causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance that interferes in any way with the reproductive process.

## ECOLOGICAL INFORMATION:

EC: Effect concentration in water. BCE: Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. TLm: Median threshold limit. log K<sub>OW</sub> or log K<sub>OC</sub>: Coefficient of Oil/Water Distribution is used to assess a substance's behavior in the environment.

## REGULATORY INFORMATION:

## U.S. and CANADA:

This section explains the impact of various laws and regulations on the material. EPA: U.S. Environmental Protection Agency. ACGIH: American Conference of Governmental Industrial Hygienists, a professional association that establishes exposure limits. OSHA: U.S. Occupational Safety and Health Administration. NIOSH: National Institute of Occupational Safety and Health, which is the research arm of OSHA. WHMIS: Canadian Workplace Hazardous Materials Information System. DOT: U.S. Department of Transportation. TC: Transport Canada. SARA: Superfund Amendments and Reauthorization Act. DSL/NDSL: Canadian Domestic/Non-Domestic Substances List. TSCA: U.S. Toxic Substance Control Act. CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act. Marine Pollutant status according to the DOT; CERCLA or Superfund; and various state regulations. This section also includes information on the precautionary warnings that appear on the material's package label.

## EUROPE:

EU: European Union (formerly known as the EEC, European Economic Community). EINECS: European Inventory of Now-Existing Chemical Substances. ARD: European Agreement Concerning the International Carriage of Dangerous Goods by Road. RID: International Regulations Concerning the Carriage of Dangerous Goods by Rail.



# SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS 2015 (HPR-GHS), European Union CLP EC 1272/2008, REACH, and the Global Harmonization Standard.

## 1. IDENTIFICATION of the SUBSTANCE or PREPARATION

### IDENTIFICATION of the SUBSTANCE or PREPARATION

<b>Trade Name (as Labeled):</b>	<b>EZCLEAR MILITARY MINOR RESTORATION POLISH</b>
<b>Chemical Name/Class:</b>	Aluminum Oxide Polish
<b>Synonyms:</b>	None Allocated
<b>Relevant Product Use:</b>	Plastic Polish
<b>Uses Advised Against:</b>	Other than Relevant Use
<b>Supplier/Manufacturer's Name:</b>	<b>EZCLEAR</b> (formerly Plastek)
<b>Address:</b>	3300 Industry Drive; Signal Hill, CA 90755, USA
<b>Business Phone:</b>	+1-650-367-7075
<b>Fax Phone:</b>	+1 650-249-5163
<b>European supplier/ distributor's name:</b>	
<b>Address:</b>	
<b>Business Phone:</b>	
<b>Emergency Phone:</b>	1-800-424-9300 (CHEMTREC) 24-hours [North America] +1-703-527-3887 (CHEMTREC) 24-hours [International]
<b>Email:</b>	<a href="mailto:info@ezclear.com">info@ezclear.com</a>
<b>Website:</b>	<a href="http://www.ezclear.com">www.ezclear.com</a>
<b>Date of Preparation:</b>	August 19, 2017
<b>Date of Revision:</b>	March 5, 2018

NOTE: ALL United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS 2015 [HPR-GHS], and European Union CLP EC 1272/2008, required information is included in appropriate sections based on the Global Harmonization Standard format.

## 2. HAZARD IDENTIFICATION

Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2208 Labeling and Classification:

**Classification:** Eye Irritation Cat. 2A  
**Signal Word:** Warning  
**Hazard Statement Codes:** H319  
**Precautionary Statement Codes:** P264, P280, P305 + P351 + P338, P337 + P313, P321, P501  
**Hazard Symbol/Pictogram:** GHS07



**EMERGENCY OVERVIEW: Product Description:** This product is a white to off-white paste with a mild hydrocarbon odor. **Health Hazards:** The primary hazards associated with exposure to this product are the potential for central nervous system effects by inhalation if product is heated. Contact with the eyes can cause irritation. Skin contact may cause irritation, especially if contact is prolonged. **Flammability Hazards:** This product may be combustible and could ignite if exposed to direct flame or if involved in a fire. If exposed to extremely high temperatures, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., aluminum, carbon, magnesium, and silicon oxides). **Reactivity Hazards:** This product is not known to be reactive. **Environmental Hazards:** This product may cause harm if released. **Emergency Response Procedures:** Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

## 3. COMPOSITION and INFORMATION ON INGREDIENTS

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Aluminum Oxide	1344-28-1	215-691-6	30.0-60.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Acute Oral Toxicity Cat. 4, Acute Inhalation Toxicity Cat. 4 Hazard Classification Codes: H302 + H332
Proprietary Alkane Hydrocarbon			5.0-10.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Flammable Liquid Cat. 3, Acute Oral Toxicity Cat. 3, Aspiration Hazard Cat. 1, Skin Irritation Cat. 2, STOT (Inhalation-Narcotic Effects) SE Cat. 3, Aquatic Chronic Toxicity Cat. 2 Hazard Classification Codes: H226, H301, H304, H315, H336, H410
Proprietary Aluminum Silicate			1.0-10.0	Classification: Not Applicable

See Section 16 for full text of Classification



### 3. COMPOSITION and INFORMATION ON INGREDIENTS (Continued)

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Proprietary Silicon			1.0-3.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Eye Irritation Cat. 2A, Aquatic Chronic Toxicity Cat. 3 Hazard Classification Codes: H319, H413
Water and other trace constituents. Each of the other trace constituents is present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).			Balance	Classification: Not Applicable

Specific concentration of components is being withheld under confidential information. See Section 16 for full text of Classification

### 4. FIRST-AID MEASURES

**PROTECTION OF FIRST AID RESPONDERS:** Rescuers should not attempt to retrieve victims of exposure to this material without adequate personal protective equipment. Rescuers should be taken for medical attention, if necessary.

**DESCRIPTION OF FIRST AID MEASURES:** Remove victim(s) to fresh air, as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation, if necessary. Remove and isolate contaminated clothing and shoes. Seek immediate medical attention. Take copy of label and SDS to physician or other health professional with victim(s).

**Skin Exposure:** If this product contaminates the skin and irritation develops, immediately begin decontamination with soap and water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if adverse effects continue after flushing.

**Eye Exposure:** If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek medical attention.

**Inhalation:** Although unlikely, if this product is inhaled or if fumes resulting from heating of product are inhaled, remove victim to fresh air. Seek medical attention if adverse symptoms continue after removal to fresh air.

**Ingestion:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing dermatitis, other skin conditions, and respiratory conditions may be aggravated by acute or chronic exposure to this product.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate exposure.

### 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Not established.

**AUTOIGNITION TEMPERATURE:** Not established.

**FLAMMABLE LIMITS (in air by volume, %):**

**Lower (LEL):** Not established.

**Upper (UEL):** Not established.

**FIRE EXTINGUISHING MEDIA:** Fire extinguishing materials that can be used against fires of this product include carbon dioxide, dry chemical powder, halon, 'ABC' Class, or appropriate foam. Consideration for surrounding materials must be taken into account.

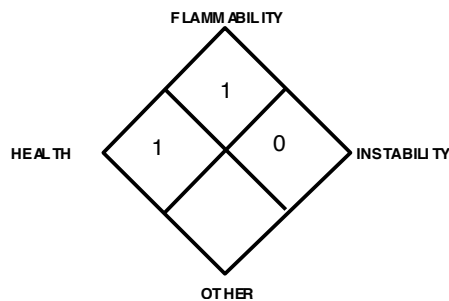
**UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

**SPECIAL HAZARDS ARISING FROM THE PRODUCT:** This product is combustible; it must be heated to a relatively high temperature before ignition can occur. When involved in a fire, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., aluminum, carbon, magnesium, and silicon oxides). This product can cause eye irritation.

**Explosion Sensitivity to Mechanical Impact or Static Discharge:** Not applicable.

**SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS:** Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

#### NFPA RATING



Hazard Scale: 0 = Minimal 1 = Slight  
2 = Moderate 3 = Serious 4 = Severe

### 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES:** Proper protective equipment should be used. In the event of a spill, clear the area and protect people. Eliminate all sources of ignition before cleanup begins. Use non-sparking tools. The atmosphere must have levels of components lower than those listed in Section 8, (Exposure Controls and Personal Protective Equipment) if applicable, and have at least 19.5 percent oxygen before personnel can be allowed into the area without Self-Contained Breathing Apparatus (SCBA).



## 6. ACCIDENTAL RELEASE MEASURES (Continued)

**PERSONAL PROTECTIVE EQUIPMENT:** Responders should wear the level of protection appropriate to the type of chemical released, the amount of the material spilled, and the location where the incident has occurred.

**Small Spills:** Wear rubber gloves, splash goggles, and appropriate body protection. Wipe up spilled paste with polypads or other suitable absorbent materials. Wash contaminated area with soap and water, absorb with paper towels, and rinse with water.

**Large Spills:** Trained personnel following pre-planned procedures should handle non-incident releases. Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield, and Tyvek suit. Minimum level of personal protective equipment for releases in which the level of oxygen is less than 19.5% or is unknown must be **Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus.** Wipe up spilled paste with polypads or other suitable absorbent materials. Prevent material from entering sewer or confined spaces, waterways, soil or public waters. Monitor area and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, before non-response personnel are allowed into the spill area.

**METHODS FOR CLEAN-UP AND CONTAINMENT:** Non sparking tools should be used.

**All Spills:** Access to the spill area should be restricted. Spread should be limited by gently covering the spill with polypads. Absorb spilled liquid with clay, sand, polypads, or other suitable inert absorbent materials. All contaminated absorbents and other materials should be placed in an appropriate container and seal. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). Dispose of recovered material and report spill per regulatory requirements. Remove all residue before decontamination of spill area. Clean spill area with soap and copious amounts of water. Monitor area for combustible vapor levels and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, and that levels are below applicable LELs (see Section 5 – Fire Fighting Measures) before non-response personnel are allowed into the spill area.

**ENVIRONMENTAL PRECAUTIONS:** Minimize use of water to prevent environmental contamination. Prevent spill or rinsate from contaminating storm drains, sewers, soil or groundwater. Place all spill residues in a suitable container and seal. Do not discharge effluent containing this product into streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**OTHER INFORMATION:** U.S. regulations may require reporting of spills of this material that reach surface waters if a sheen is formed. If necessary, the toll-free phone number for the U.S. Coast Guard National Response Center is 1-800-424-8802.

**REFERENCE TO OTHER SECTIONS:** See information in Section 8 (Exposure Controls – Personal Protection) and Section 13 (Disposal Considerations) for additional information.

---

## 7. HANDLING and STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** All employees who handle this material should be trained to handle it safely. Use in a well ventilated location. Keep away from heat, sparks, and other sources of ignition. As with all chemicals, avoid getting this product ON YOU or IN YOU. Avoid breathing airborne fumes or vapors generated by this product. Wash thoroughly after using this product. Do not eat or drink while using this product. Remove contaminated clothing immediately. Open containers slowly on a stable surface. Do not expose containers to extreme temperatures.

**CONDITIONS FOR SAFE STORAGE:** Keep container tightly closed when not in use. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight or sources of intense heat. Containers should be separated from oxidizing materials by a minimum distance of 20 ft. or by a barrier of non-combustible material at least 5 ft. high having a fire-resistance rating of at least 0.5 hours. Storage areas should be made of fire resistant materials. Post warning and “NO SMOKING” signs in storage and use areas, as appropriate. Refer to NFPA 30, *Flammable and Combustible Liquids Code*, for additional information on storage. Have appropriate extinguishing equipment in the storage area (such as sprinkler systems or portable fire extinguishers). Keep away from heat, sparks, and other sources of ignition. Use non-sparking tools. Bond and ground containers during transfers of material. Store away from incompatible materials (see Section 10, Stability and Reactivity). Material should be stored in secondary containers, as appropriate. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged.

**SPECIFIC END USE(S):** This product is for use as a plastic polish. Follow all industry standards for use of this product.

**PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:** Follow practices indicated in Section 6 (Accidental Release Measures). If necessary, ensure that application equipment is locked and tagged-out safely. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

---

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

**EXPOSURE LIMITS/CONTROL PARAMETERS:**

**Ventilation, Engineering, And Occupational Exposure Controls:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in later in this Section. Use local exhaust ventilation. As with all products that contain chemicals, ensure proper decontamination equipment (e.g., eyewash/safety shower stations) are available near areas where this product is used as necessary.

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

### EXPOSURE LIMITS/CONTROL PARAMETERS (continued):

#### Occupational/Workplace Exposure Limits/Guidelines:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							OTHER mg/m <sup>3</sup>
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELs		NIOSH IDLH mg/m <sup>3</sup>	
		TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>		
Aluminum Oxide	1344-28-1	For aluminum metal and insoluble compounds	NE	15 (total dust) 5 (resp. fraction)	NE	NE	NE	NE	DFG MAKs: TWA = 4 (Inhalable fraction), 1.5 (resp. fraction) Pregnancy Risk Group: D Carcinogen: MAK-2 (fibrous dust)
Proprietary Silicon			NE	NE	NE	NE	NE	NE	NE
Proprietary Aluminum Silicate			NE	NE	NE	NE	NE	NE	NE
Proprietary Alkane Solvent			NE	NE	NE	NE	NE	NE	NE

NE = Not Established. See Section 16 for Definitions of Terms Used

**International Occupational Exposure Limits:** Currently the following additional international exposure limits are in place for some components.

#### ALUMINUM OXIDE:

Austria: TMW = 5 mg/m<sup>3</sup>, KZW = 10 mg/m<sup>3</sup>, resp, 2007  
 Belgium: TWA = 10 mg(Al)/m<sup>3</sup>, MAR 2002  
 Denmark: TWA = 2 mg(Al)/m<sup>3</sup>, MAY 2011  
 France: VME = 10 mg/m<sup>3</sup>, FEB 2006  
 Hungary: TWA = 6 mg/m<sup>3</sup> (resp), SEP 2000  
 Iceland: TWA = 10 mg(Al)/m<sup>3</sup>, NOV 2011  
 Japan: OEL = 0.5 mg/m<sup>3</sup> (resp. dust), 2 mg/m<sup>3</sup> (total dust), MAY 2012  
 Korea: TWA = 10 mg/m<sup>3</sup>, 2006  
 Mexico: TWA = 10 mg(Al<sub>2</sub>O<sub>3</sub>)/m<sup>3</sup> (inhalable), 2004  
 The Netherlands: MAC-TGG = 10 mg/m<sup>3</sup>, 2003

#### ALUMINUM OXIDE (continued):

New Zealand: TWA = 10 mg/m<sup>3</sup> (inspirable dust), JAN 2002  
 Norway: TWA = 2 mg(Al)/m<sup>3</sup>, JAN 1999  
 Poland: MAC(TWA) = 2 mg/m<sup>3</sup>, MAC(STEL) = 16 mg/m<sup>3</sup>, JAN 1999  
 Russia: TWA = 6 mg/m<sup>3</sup>, JUN 2003  
 Sweden: TWA = 5 mg/m<sup>3</sup> (total dust); TWA = 2 mg/m<sup>3</sup> (resp. dust), JUN 2005  
 Switzerland: MAK-W = 3 mg/m<sup>3</sup>, KZG-W = 24 mg/m<sup>3</sup>, resp, fume, JAN 2011  
 Switzerland: MAK-W = 3 mg/m<sup>3</sup>, resp, JAN 2011  
 United Kingdom: TWA = 10 mg/m<sup>3</sup> (inhal. dust), OCT 2007  
 United Kingdom: TWA = 4 mg/m<sup>3</sup> (resp. dust), OCT,2007  
 In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV.

**ACGIH Biological Exposure Indices (BEIs):** Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for the components of this product.

**PROTECTIVE EQUIPMENT:** *The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132, including U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hand Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR 1910.132), equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02, Z94.3-M1982, Industrial Eye and Face Protectors and CSA Standard Z195-02, Protective Footwear), or standards of EU member states (including EN 529:2005 for respiratory PPE, CEN/TR 15419:2006 for hand protection, and CR 13464:1999 for face/eye protection). Please reference applicable regulations and standards for relevant details.*

**Respiratory Protection:** Maintain airborne contaminant concentrations below exposure limits listed above. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations. Oxygen levels below 19.5% are considered IDLH by U.S. OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. OSHA's Respiratory Protection Standard (1910.134-1998).

**Eye Protection:** Wear splash goggles or safety glasses as appropriate for the task. Face shields are recommended if solutions are made. If necessary, refer to appropriate regulations.

**Hand Protection:** Wash hands and wrists before putting on and after removing gloves. During manufacture or other similar operations, wear the appropriate hand protection for the process. Use double gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS. Because all gloves are to some extent permeable and their permeability increases with time, they should be changed regularly (hourly is preferable) or immediately if torn or punctured. If necessary refer to appropriate regulations.

**Skin Protection:** Use appropriate protective clothing for the task (e.g., lab coat, etc.). If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in appropriate regulations.

## 9. PHYSICAL and CHEMICAL PROPERTIES

**FORM:** Paste.

**ODOR:** Mild hydrocarbon.

**pH:** Not established.

**BOILING POINT:** Not established.

**FLASH POINT:** Not established.

**EXPLOSIVE PROPERTIES:** Not explosive

**VAPOR PRESSURE:** Not applicable.

**SOLUBILITY:** Partially soluble in organic solvents.

**VISCOSITY:** 800-6000 cps

**AUTOIGNITION TEMPERATURE:** Not determined.

**COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT):** Not determined.

**HOW TO DETECT THIS SUBSTANCE (warning properties):** The appearance of this product can be a distinguishing characteristic to identify it in event of accidental release.

**COLOR:** White to off-white.

**ODOR THRESHOLD:** Not determined.

**EVAPORATION RATE:** Not available.

**MELTING/FREEZING POINT:** Not established.

**FLAMMABILITY:** Combustible.

**OXIDIZING PROPERTIES:** Not an oxidizer.

**SPECIFIC GRAVITY @ 25°C:** 1.65

**SOLUBILITY IN WATER:** Insoluble.

**RELATIVE VAPOR DENSITY (air = 1):** Not determined.

## 10. STABILITY and REACTIVITY

**CHEMICAL STABILITY:** Stable under conditions of normal temperature and pressure.

**DECOMPOSITION PRODUCTS:** **Combustion:** Aluminum, carbon, magnesium, and silicon oxides). **Hydrolysis:** None known.

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** This product would be incompatible with strong oxidizers, chlorine trifluoride, ethylene oxide, strong acid, strong bases, halocarbons, oxygen difluoride, sodium nitrate, vinyl acetate, and water reactive materials.

**POSSIBILITY OF HAZARDOUS REACTION/POLYMERIZATION:** If exposed to high temperatures, this product may polymerize and generate excessive heat. A buildup of heat can occur in closed containers and may present a serious danger of overpressure of containers.

**CONDITIONS TO AVOID:** Exposure or contact to extreme temperatures and incompatible chemicals.

## 11. TOXICOLOGICAL INFORMATION

**SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE:** The most significant routes of occupational exposure are inhalation of vapors and contact with skin and eyes. The symptoms of exposure to this product, via route of exposure, are as follows:

**Inhalation:** Inhalation of aerosols from this product can irritate the nose, throat, and other tissues of the respiratory system. Symptoms of such exposure may include displayed general weakness, ataxia, rapid respiration, nausea and tremors.

**Contact with Skin or Eyes:** If this product enters the eyes, it may cause redness and pain. Depending on the duration and concentration of exposure, skin contact may be irritating. Chronic skin contact may cause dermatitis.

**Skin Absorption:** The components of this product are not known to be absorbed through the skin.

**Ingestion:** Ingestion is not anticipated to be a significant route of occupational exposure for this product. If this product is swallowed (i.e., through poor hygiene practices), it may cause nausea, vomiting, and diarrhea.

**Injection:** Though not anticipated to be a significant route of exposure for this product, injection (via punctures or lacerations by contaminated objects) may cause redness at the site of injection.

**HEALTH EFFECTS OR RISKS FROM EXPOSURE:** An Explanation in Lay Terms.

**Acute:** Inhalation exposure may cause central nervous system effects.

**Chronic:** Chronic skin contact may cause dermatitis.

**TARGET ORGANS:** **Acute:** Skin, eyes, respiratory system, central nervous system. **Chronic:** Skin.

**TOXICITY DATA:** The following toxicological data are available for components of this product in 1% or greater concentration:

**ALUMINUM OXIDE:**

LD<sub>50</sub> (Intraperitoneal-Mouse) > 3600 mg/kg

TCLo (Inhalation-Rat) 200 mg/m<sup>3</sup>/5 hours/28 weeks-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi, chronic pulmonary edema; Related to Chronic Data: death

TCLo (Inhalation-Rabbit) 200 mg/m<sup>3</sup>/5 hours/28 weeks-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi, chronic pulmonary edema; Related to Chronic Data: death

TDLo (Intraperitoneal-Rat) 90 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: tumors

TDLo (Implant-Rat) 200 mg/kg: Tumorigenic: neoplastic by RTECS criteria, tumors at site of application

TD (Implant-Rat) 200 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria, tumors at site of application

**PROPRIETARY SILICON:**

Standard Draize Test (Eye-Rabbit) 100 mg/1 hour: Mild Eye Irritancy (rabbit) = 100 mg; mild



LD<sub>50</sub> (Oral-Rat) > 24 gm/kg: Gastrointestinal: hypermotility, diarrhea

Skin Irritancy (human) = 500 mg/7 days; mild

Skin Irritancy (human) = 104 mg/3 days/intermittent; moderate

Skin Irritancy (man) = 10%/2 days

TDLo (oral, child) = 79 g/kg/56 weeks/intermittent; Central nervous system effects, BRN

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD	(BLUE)	1	
FLAMMABILITY HAZARD	(RED)	1	
PHYSICAL HAZARD	(YELLOW)	0	
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8
For Routine Industrial Use and Handling Applications			

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate  
3 = Serious 4 = Severe \* = Chronic hazard

**CARCINOGENIC POTENTIAL OF COMPONENTS:** Components are listed by agencies tracking the carcinogenic potential of chemical compounds as follows:

**ALUMINUM OXIDE (as fibrous dust):** MAK-2 (Substances that are Considered to be Carcinogenic for Man because sufficient data from long-term animal studies or limited to evidence from animal studies substantiated by evidence from epidemiological studies indicate that they can make a significant contribution to cancer risk.)

The remaining components of this product are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

**IRRITANCY OF PRODUCT:** Contact with this product can irritate the nose, throat, eyes, skin and other contaminated tissues.

**SENSITIZATION TO THE PRODUCT:** This product contains trace amounts of Methyl Paraben. Some information indicates Methyl Paraben may cause sensitization and allergic skin reaction in susceptible individuals from skin contact.

**REPRODUCTIVE TOXICITY INFORMATION:** This product has not been tested for reproductive toxicity effects; however, components are not known to cause human mutagenic, embryotoxic, teratogenic or reproductive toxicity effects.

## 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

**MOBILITY:** This product has not been tested for mobility in soil. The following information is available for some components.

**PROPRIETARY SILICON:** Water Solubility: Insoluble. Terrestrial Fate: If released to soil, this compound will absorb strongly and will remain essentially immobile. This compound will not volatilize to the atmosphere, nor will it biodegrade. This compound will not undergo hydrolysis except in clay soils which are known to catalyze this reaction at a rate dependent upon the amount of water present.

**PERSISTENCE AND BIODEGRADABILITY:** This product has not been tested for persistence or biodegradability. It is expected that the components will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known. Data for components of this product are available as follows:

**PROPRIETARY SILICON:** If released to an aquatic environment, this material is expected to absorb strongly to sediment and suspended organic matter. Although insoluble in water, this material is not expected to bioconcentrate, due to its inherent hydrophobicity. This compound will not bioconcentrate in fish and aquatic environments as this compound is molecularly too large to pass through biological membranes and concentrate in fatty tissue. This compound will hydrolyze in water and will not volatilize to the atmosphere. If released to the atmosphere, this material will only enter the atmosphere if in aerosol form, due to its heavy molecular weight, very low vapor pressure and liquid physical state. The most likely atmospheric fate process is by dry deposition to the surface of the earth.

**BIO-ACCUMULATION POTENTIAL:** This product has not been tested for bio-accumulation potential.

**ECOTOXICITY:** This product has not been tested for aquatic or animal toxicity. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. All releases to terrestrial, atmospheric and aquatic environments should be avoided.

**RESULTS OF PBT AND vPvB ASSESSMENT:** No Data Available. PBT and vPvB assessments are part of the chemical safety report required for some substances in European Union Regulation (EC) 1907/2006, Article 14.

**OTHER ADVERSE EFFECTS:** The components of this product are not listed as having ozone depletion potential.

**ENVIRONMENTAL EXPOSURE CONTROLS:** Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHODS:** It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.

**DISPOSAL CONTAINERS:** Waste materials must be placed in and shipped in appropriate 5-gallon or 55-gallon poly or metal waste pails or drums. Permeable cardboard containers are not appropriate and should not be used. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

**PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING:** Wear proper protective equipment when handling waste materials.

**U.S. EPA WASTE NUMBER:** Not applicable.

**EWC WASTE CODE:** Wastes from shaping and physical and mechanical surface treatment of metals and plastics, not otherwise specified: 12 01 99

## 14. TRANSPORTATION INFORMATION

**U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS:** This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

**TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** This product is not classified as Dangerous Goods, per regulations of Transport Canada.

**INTERNATIONAL AIR TRANSPORT ASSOCIATION/ICAO (IATA/ICAO):** This product is not classified as dangerous goods, per rules of IATA.

**INTERNATIONAL MARITIME ORGANIZATION (IMO):** This product is not classified as Dangerous Goods, per rules of IMO.

**EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):** This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

**TRANSPORT IN BULK ACCORDING TO THE IBC CODE:** Not applicable.

**ENVIRONMENTAL HAZARDS:** This product does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not specifically listed in Annex III under MARPOL 73/78.

## 15. REGULATORY INFORMATION

**UNITED STATES REGULATIONS:**

**U.S. SARA Reporting Requirements:** The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

COMPONENT	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Aluminum Oxides (fibrous forms)	No	No	Yes



---

## 15. REGULATORY INFORMATION (Continued)

### UNITED STATES REGULATIONS (continued):

**U.S. SARA Threshold Planning Quantity (TPQ):** There are no specific Threshold Planning Quantities for this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

**U.S. CERCLA Reportable Quantity (RQ):** Not applicable.

**U.S. TSCA Inventory Status:** The components of this product are listed on the TSCA Inventory.

**Other U.S. Federal Regulations:** Not applicable.

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):** The components of this product are not on the California Proposition 65 Lists.

### CANADIAN REGULATIONS:

**Canadian DSL/NDL Status:** The components of this product are listed on the DSL inventory.

**Other Canadian Regulations:** Not applicable.

**Canadian Environmental Protection Agency (CEPA) Priorities Substances List:** No component of this product is on the Priority Substances Lists.

**Canadian WHMIS HPR 2015 Classification and Symbols:** See the following section for classification and symbols under WHMIS.

### EUROPEAN REGULATIONS:

**Safety, Health, and Environmental Regulations/Legislation Specific for the Product:** None known.

**Chemical Safety Assessment:** No Data Available. The chemical safety assessment is required for some substances according to European Union Regulation (EC) 1907/2006, Article 14.

---

## 16. OTHER INFORMATION

**U.S. ANSI STANDARD LABELING (Precautionary Statements):** **CAUTION!** MAY BE A COMBUSTIBLE LIQUID. MAY CAUSE EYE IRRITATION. Avoid contact with eyes, skin and clothing. Avoid breathing mists or sprays. Keep container closed. Keep away from heat, sparks and flame. Use only with adequate ventilation. Wash thoroughly after use. Wear gloves, eye protection, respiratory protection, and appropriate body protection. **FIRST-AID:** In case of contact, immediately flush skin and eyes with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, foam, dry chemical, or CO<sub>2</sub>. **IN CASE OF SPILL:** Absorb spilled product with polypads or other suitable absorbing material. Place all spill residue in an appropriate container and seal. Dispose of in accordance with International, National, State, and local hazardous waste disposal regulations. Consult Safety Data Sheet for additional information.

**Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2008 Labeling and Classification:**

**Classification:** Eye Irritation Category 2A

**Signal Word:** Warning

**Hazard Statement Codes:** H319: Causes serious eye irritation.

#### Precautionary Statements:

**Prevention:** P264: Wash thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. P337 + P313: If eye irritation persists: Get medical advice/attention. P321: Specific treatment (remove from exposure and treat symptoms). Refer to other portions of precautionary text on this label, SDS or other product information sheets, as appropriate.

**Storage:** None.

**Disposal:** P501: Dispose of contents/containers in accordance with all local, regional, national and international regulations.

**Hazard Symbol/Pictograms:** GHS07

### CLASSIFICATION FOR COMPONENTS:

**Full Text Global Harmonization Under Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP Regulation (EC) 1272/2008:**

**Aluminum Oxide:** Notified classification.

**Classification:** Acute Oral Toxicity Category 4, Acute Inhalation Toxicity Category 4

**Hazard Statements:** H312 + H332: Harmful in contact with skin or if inhaled. H312 + H332: Harmful in contact with skin or if inhaled.

**Proprietary Silicon:** Notified classification.

**Classification:** Eye Irritation Category 2A, Aquatic Chronic Toxicity Category 3

**Hazard Statements:** H319: Causes serious eye irritation. H413: May cause long-lasting harmful effects to aquatic life. H413: May cause long-lasting harmful effects to aquatic life.

**Proprietary Alkane Hydrocarbon:** Notified classification.

**Classification:** Flammable Liquid Category 3, Acute Oral Toxicity Category 3, Aspiration Hazard Category 1, Skin Irritation Category 2, Specific Target Organ Effects (Inhalation-Narcotic Effect) Single Exposure Category 3, Aquatic Chronic Toxicity Category 2

**Hazard Statements:** H226: Flammable liquid and vapour. H301: Toxic if swallowed. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. H412: Harmful to aquatic life with long-lasting effects.

**All Other Components:** No classification has been published or is applicable.



## 16. OTHER INFORMATION (Continued)

**REVISION DETAILS:** August 2014: Add Global Harmonization Standard compliance and up-date of entire SDS for current compliance. October 2017: Update SDS to the most current U.S., Canadian and European GHS classification. Remove old EU DPD classification. March 2018: Correction of typo for classification code, Section 2.

**REFERENCES AND DATA SOURCES:** Contact the supplier for information.

**METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION:** Criteria of the GHS and CLP 1272: 2008 were used for classification.

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721-1961 • (800) 441-3365

**DATE OF PRINTING:** October 21, 2019

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, CA 96721 • (800) 441-3365 • (808) 969-4648 • info@msdsprep-csa.com

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. EZCLEAR 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. Additionally, EZCLEAR assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

## DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these, which are commonly used, include the following:

**CAS #:** This is the Chemical Abstract Service Number that uniquely identifies each constituent.

### EXPOSURE LIMITS IN AIR:

**CEILING LEVEL:** The concentration that shall not be exceeded during any part of the working exposure.

**DFG MAKs:** Federal Republic of Germany Maximum Concentration Values in the workplace. Exposure limits are given as TWA (Time-Weighted Average) or PEAK (short-term exposure) values.

**DFG MAK Germ Cell Mutagen Categories:** 1: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed humans. 2: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed mammals. 3A: Substances that have been shown to induce genetic damage in germ cells of human of animals, or which produce mutagenic effects in somatic cells of mammals *in vivo* and have been shown to reach the germ cells in an active form. 3B: Substances that are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell *in vivo*; in exceptional cases, substances for which there are no *in vivo* data, but that are clearly mutagenic *in vitro* and structurally related to known *in vivo* mutagens. 4: Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances] if research results make this seem sensible.) 5: Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is expected not to be significant.

**DFG MAK Pregnancy Risk Group Classification:** **Group A:** A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. **Group B:** Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A–C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.

**IDLH:** Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

**LOQ:** Limit of Quantitation.

**NE:** Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

**NIC:** Notice of Intended Change.

**NIOSH CEILING:** The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

**NIOSH RELs:** NIOSH's Recommended Exposure Limits.

**PEL:** OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL" is placed next to the PEL that was vacated by Court Order.

**SKIN:** Used when there is a danger of cutaneous absorption.

**STEL:** Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

**TLV:** Threshold Limit Value. An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

**TWA:** Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

**WEEL:** Workplace Environmental Exposure Limits from the ALHA.

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:** This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

**HEALTH HAZARD: 0 Minimal Hazard:** No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation:* Essentially non-irritating. Mechanical irritation may occur. *P11 or Draize = 0. Eye Irritation:* Essentially non-irritating, minimal effects clearing in < 24 hours. Mechanical irritation may occur. *Draize = 0. Oral Toxicity LD<sub>50</sub> Rat:* > 5000 mg/kg.

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

**HEALTH HAZARD (continued): 0 (continued):** *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 2000 mg/kg. *Inhalation Toxicity 4-hrs LC<sub>50</sub> Rat:* > 20 mg/L. **1 Slight Hazard:** Minor reversible injury may occur; may irritate the stomach if swallowed; may defat the skin and exacerbate existing dermatitis. *Skin Irritation:* Slightly or mildly irritating. *P11 or Draize > 0 < 5. Eye Irritation:* Slightly to mildly irritating, but reversible within 7 days. *Draize > 0 ≤ 25. Oral Toxicity LD<sub>50</sub> Rat:* > 500–5000 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 1000–2000 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 2–20 mg/L. **2 Moderate Hazard:** Temporary or transitory injury may occur; prolonged exposure may affect the CNS. *Skin Irritation:* Moderately irritating; primary irritant; sensitizer. *P11 or Draize ≥ 5*, with no destruction of dermal tissue. *Eye Irritation:* Moderately to severely irritating; reversible corneal opacity; corneal involvement or irritation clearing in 8–21 days. *Draize = 26–100*, with reversible effects. *Oral Toxicity LD<sub>50</sub> Rat:* > 50–500 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 200–1000 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 0.5–2 mg/L. **3 Serious Hazard:** Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation:* Severely irritating and/or corrosive; may cause destruction of dermal tissue, skin burns, and dermal necrosis. *P11 or Draize > 5–8*, with destruction of tissue. *Eye Irritation:* Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. *Draize > 80* with effects irreversible in 21 days. *Oral Toxicity LD<sub>50</sub> Rat:* > 1–50 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 20–200 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 0.05–0.5 mg/L. **4 Severe Hazard:** Life-threatening; major or permanent damage may result from single or repeated exposure; extremely toxic; irreversible injury may result from brief contact. *Skin Irritation:* Not appropriate. Do not rate as a 4, based on skin irritation alone. *Eye Irritation:* Not appropriate. Do not rate as a 4, based on eye irritation alone. *Oral Toxicity LD<sub>50</sub> Rat:* ≤ 1 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* ≤ 20 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* ≤ 0.05 mg/L.

**FLAMMABILITY HAZARD: 0 Minimal Hazard:** Materials that will not burn in air when exposure to a temperature of 815.5°C (1500°F) for a period of 5 minutes. **1 Slight Hazard:** Materials that must be pre-heated before ignition can occur. Material requires considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur. This usually includes the following: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C (200°F) (i.e. OSHA Class IIIB); and Most ordinary combustible materials (e.g. wood, paper, etc.). **2 Moderate Hazard:** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This usually includes the following: Liquids having a flash-point at or above 37.8°C (100°F); Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp); and Solids and semisolids (e.g. viscous and slow flowing as asphalt) that readily give off flammable vapors. **3 Serious Hazard:** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions. This usually includes the following: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 38°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. OSHA Class IB and IC); Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air (e.g., dusts of combustible solids, mists or droplets of flammable liquids); and Materials that burn extremely rapidly, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). **4 Severe Hazard:** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and that will burn readily. This usually includes the following: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. OSHA Class IA); and Materials that ignite spontaneously when exposed to air at a temperature of 54.4°C (130°F) or below (pyrophoric). **SPONTANEOUS HAZARD: 0 Water Reactivity:** Materials that do not react with water. *Organic Peroxides:* Materials that are normally stable, even under fire conditions and will not react with water. *Explosives:* Substances that are Non-Explosive. *Compressed Gases:* No Rating. *Pyrophorics:* No Rating. *Oxidizers:* No 0 rating. *Unstable Reactives:* Substances that will not polymerize, decompose, condense, or self-react.) **1 Water Reactivity:** Materials that change or decompose upon exposure to moisture. *Organic Peroxides:* Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy violently.

## DEFINITIONS OF TERMS (Continued)

## HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

**PHYSICAL HAZARD (continued): 1 (continued):** Explosives: Division 1.5 & 1.6 explosives. Substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases:* Pressure below OSHA definition. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group III oxidizers; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives:* Substances that may decompose, condense, or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosion hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors. **2 Water Reactivity:** Materials that may react violently with water. *Organic Peroxides:* Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives:* Division 1.4 explosives. Explosive substances where the explosive effects are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases:* Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packing Group II oxidizers. Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential (or low risk) for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature. **3 Water Reactivity:** Materials that may form explosive reactions with water. *Organic Peroxides:* Materials that are capable of detonation or explosive reaction, but require a strong initiating source or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives:* Division 1.3 explosives. Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases:* Pressure  $\geq$  514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packing Group I oxidizers. Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3:2 potassium bromate/cellulose mixture. Liquids: any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a moderate potential (or moderate risk) to cause significant heat generation or explosion. **4 Water Reactivity:** Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides:* Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives:* Division 1.1 & 1.2 explosives. Explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases:* No Rating. *Pyrophorics:* Add to the definition of Flammability 4. *Oxidizers:* No 4 rating. *Unstable Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a high potential (or high risk) to cause significant heat generation or explosion.

## NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

**HEALTH HAZARD: 0** Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 2000 mg/kg. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 2000 mg/kg. Materials essentially non-irritating to the respiratory tract, eyes, and skin. **1** Materials that, under emergency conditions, can cause significant irritation. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 10 mg/L but less than or equal to 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials that slightly to moderately irritate the respiratory tract, eyes and skin. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 500 mg/kg but less than or equal to 2000 mg/kg. **2** Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 3,000 ppm but less than or equal to 5,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 200 mg/kg but less than or equal to 1000 mg/kg. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators. Materials that are primary skin irritants or sensitizers. Materials whose LD<sub>50</sub> for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. **3** Materials that, under emergency conditions, can cause serious or permanent injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 1,000 ppm but less than or equal to 3,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials corrosive to the skin.

## NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

**HEALTH HAZARDS (continued): 3 (continued):** Cryogenic gases that cause frostbite and irreversible tissue damage. Compressed liquefied gases with boiling points below -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 5 mg/kg but less than or equal to 50 mg/kg. **4** Materials that, under emergency conditions, can be lethal. Gases with an LC<sub>50</sub> for acute inhalation toxicity less than or equal to 1,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than ten times its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 1000 ppm. Dusts and mists whose LC<sub>50</sub> for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD<sub>50</sub> for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD<sub>50</sub> for acute oral toxicity is less than or equal to 5 mg/kg.

**FLAMMABILITY HAZARD: 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D of NFPA 704. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D of NFPA 704. Liquids, solids, and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the *Method of Testing for Sustained Combustibility*, per 49 CFR 173, Appendix H or the *UN Recommendations on the Transport of Dangerous Goods, Model Regulations* (current edition) and the related *Manual of Tests and Criteria* (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85% by weight. Liquids that have no fire point when tested by ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup*, up to the boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Most ordinary combustible materials. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures with air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal, and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily. Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

**INSTABILITY HAZARD: 0** Materials that in themselves are normally stable, even under fire conditions. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100W/mL. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater.

## FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **Flash Point:** Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air near the surface of the liquid or within the test vessel used. **Autoignition Temperature:** Minimum temperature of a solid, liquid, or gas required to initiate or cause self-sustained combustion in air with no other source of ignition. **LEL:** Lowest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame. **UEL:** Highest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame.

## DEFINITIONS OF TERMS (Continued)

### TOXICOLOGICAL INFORMATION:

**Human and Animal Toxicology:** Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. LD<sub>50</sub>: Lethal Dose (solids & liquids) that kills 50% of the exposed animals. LC<sub>50</sub>: Lethal Concentration (gases) that kills 50% of the exposed animals. ppm: Concentration expressed in parts of material per million parts of air or water. mg/m<sup>3</sup>: Concentration expressed in weight of substance per volume of air. mg/kg: Quantity of material, by weight, administered to a test subject, based on their body weight in kg. TDLo: Lowest dose to cause a symptom. TCLo: Lowest concentration to cause a symptom. TDo, LDLo, and LDo, or TC, TCo, LCLo, and LCo: Lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** IARC: International Agency for Research on Cancer. NTP: National Toxicology Program. RTECS: Registry of Toxic Effects of Chemical Substances. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** BEI: ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

### REPRODUCTIVE TOXICITY INFORMATION:

A mutagen is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical that causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance that interferes in any way with the reproductive process.

### ECOLOGICAL INFORMATION:

EC: Effect concentration in water. BCE: Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. TLm: Median threshold limit. log K<sub>OW</sub> or log K<sub>OC</sub>: Coefficient of Oil/Water Distribution is used to assess a substance's behavior in the environment.

### REGULATORY INFORMATION:

#### U.S. and CANADA:

This section explains the impact of various laws and regulations on the material. EPA: U.S. Environmental Protection Agency. ACGIH: American Conference of Governmental Industrial Hygienists, a professional association that establishes exposure limits. OSHA: U.S. Occupational Safety and Health Administration. NIOSH: National Institute of Occupational Safety and Health, which is the research arm of OSHA. WHMIS: Canadian Workplace Hazardous Materials Information System. DOT: U.S. Department of Transportation. TC: Transport Canada. SARA: Superfund Amendments and Reauthorization Act. DSL/NDSL: Canadian Domestic/Non-Domestic Substances List. TSCA: U.S. Toxic Substance Control Act. CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act. Marine Pollutant status according to the DOT; CERCLA or Superfund; and various state regulations. This section also includes information on the precautionary warnings that appear on the material's package label.

#### EUROPE:

EU: European Union (formerly known as the EEC, European Economic Community). EINECS: European Inventory of Now-Existing Chemical Substances. ARD: European Agreement Concerning the International Carriage of Dangerous Goods by Road. RID: International Regulations Concerning the Carriage of Dangerous Goods by Rail.

# SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS 2015 (HPR-GHS), European Union CLP EC 1272/2008, REACH, and the Global Harmonization Standard.

## 1. IDENTIFICATION of the SUBSTANCE or PREPARATION

### IDENTIFICATION of the SUBSTANCE or PREPARATION

<b>Trade Name (as Labeled):</b>	<b>EZCLEAR MILITARY FINISHING RESTORATION POLISH</b>
<b>Chemical Name/Class:</b>	Aluminum Oxide Polish
<b>Synonyms:</b>	None Allocated
<b>Relevant Product Use:</b>	Plastic Polish
<b>Uses Advised Against:</b>	Other than Relevant Use
<b>Supplier/Manufacturer's Name:</b>	<b>EZCLEAR</b> (formerly Plastek)
<b>Address:</b>	3300 Industry Drive; Signal Hill, CA 90755, USA
<b>Business Phone:</b>	+1-650-367-7075
<b>Fax Phone:</b>	+1-650-249-5163
<b>European supplier/ distributor's name:</b>	
<b>Address:</b>	
<b>Business Phone:</b>	
<b>Emergency Phone:</b>	1-800-424-9300 (CHEMTREC) 24-hours [North America] +1-703-527-3887 (CHEMTREC) 24-hours [International]
<b>Email:</b>	<a href="mailto:info@ezclear.com">info@ezclear.com</a>
<b>Website:</b>	<a href="http://www.ezclear.com">www.ezclear.com</a>
<b>Date of Preparation:</b>	August 18, 2008
<b>Date of Revision:</b>	October 19, 2017

NOTE: ALL United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS 2015 [HPR-GHS], and European Union CLP EC 1272/2008, required information is included in appropriate sections based on the Global Harmonization Standard format.

## 2. HAZARD IDENTIFICATION

### Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2008 Labeling and Classification:

**Classification:** Flammable Liquid Cat. 3, Eye Irritation Cat. 2A

**Signal Word:** Warning

**Hazard Statement Codes:** H226, H315

**Precautionary Statement Codes:** P210, P240, P241, P242, P243, P264, P280, P370 + P378, P303 + P361 + P353, P305 + P351 + P338, P337 + P313, P321, P403 + P233 + P235, P501

**Hazard Symbol/Pictograms:** GHS02, GHS07



**EMERGENCY OVERVIEW: Product Description:** This product is a flammable, white to off-white paste with a mild hydrocarbon odor. **Health Hazards:** The primary hazards associated with exposure to this product are the potential for central nervous system effects by inhalation if product is heated. Contact with the eyes can cause irritation. Skin contact may cause irritation, especially if contact is prolonged. **Flammability Hazards:** This product is flammable and can ignite if exposed to its flash point or if exposed to direct flame. If exposed to extremely high temperatures, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., aluminum, carbon, magnesium, and silicon oxides). **Reactivity Hazards:** This product is not known to be reactive. **Environmental Hazards:** This product may cause harm if released. **Emergency Response Procedures:** Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

## 3. COMPOSITION and INFORMATION ON INGREDIENTS

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Aluminum Oxide	1344-28-1	215-691-6	10.0-25.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Acute Oral Toxicity Cat. 4, Acute Inhalation Toxicity Cat. 4 Hazard Classification Codes: H302 + H332
Proprietary Alkane Hydrocarbon			10.0-20.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Flammable Liquid Cat. 3, Acute Oral Toxicity Cat. 3, Aspiration Hazard Cat. 1, Skin Irritation Cat. 2, STOT (Inhalation-Narcotic Effects) SE Cat. 3, Aquatic Chronic Toxicity Cat. 2 Hazard Classification Codes: H226, H301, H304, H315, H336, H410

See Section 16 for full text of Classification



### 3. COMPOSITION and INFORMATION ON INGREDIENTS (Continued)

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Proprietary Silicon			2.0-5.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Eye Irritation Cat. 2A, Aquatic Chronic Toxicity Cat. 3 Hazard Classification Codes: H319, H413
Ethoxylated Propoxylated Alcohol	68603-25-8	614-633-0	2.0-5.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Eye Damage/Corrosion Cat. 1, Acute Oral Toxicity Cat. 4, Skin Irritation Cat. 2, Aquatic Chronic Toxicity Cat. 2 Hazard Statement Codes: H318, H302, H315, H410
Proprietary Alkane Diol			1.0-5.0	Classification: Not Applicable
Proprietary Aluminum Silicate			1.0-3.0	Classification: <i>Not Applicable</i>
Water and other trace constituents. Each of the other trace constituents is present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).			Balance	Classification: Not Applicable

Specific concentration of components is being withheld under confidential information. See Section 16 for full text of Classification

### 4. FIRST-AID MEASURES

**PROTECTION OF FIRST AID RESPONDERS:** Rescuers should not attempt to retrieve victims of exposure to this material without adequate personal protective equipment. Rescuers should be taken for medical attention, if necessary.

**DESCRIPTION OF FIRST AID MEASURES:** Remove victim(s) to fresh air, as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation, if necessary. Remove and isolate contaminated clothing and shoes. Seek immediate medical attention. Take copy of label and SDS to physician or other health professional with victim(s).

**Skin Exposure:** If this product contaminates the skin and irritation develops, immediately begin decontamination with soap and water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if adverse effects continue after flushing.

**Eye Exposure:** If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek medical attention.

**Inhalation:** Although unlikely, if this product is inhaled or if fumes resulting from heating of product are inhaled, remove victim to fresh air. Seek medical attention if adverse symptoms continue after removal to fresh air.

**Ingestion:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing dermatitis, other skin conditions, and respiratory conditions may be aggravated by acute or chronic exposure to this product.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate exposure.

### 5. FIRE-FIGHTING MEASURES

**FLASH POINT (closed cup):** 48°C (118.4°F).

**AUTOIGNITION TEMPERATURE:** Not established.

**FLAMMABLE LIMITS (in air by volume, %):**

**Lower (LEL):** Not established.

**Upper (UEL):** Not established.

**FIRE EXTINGUISHING MEDIA:** Fire extinguishing materials that can be used against fires of this product include carbon dioxide, dry chemical powder, halon, 'ABC' Class, or appropriate foam. Consideration for surrounding materials must be taken into account.

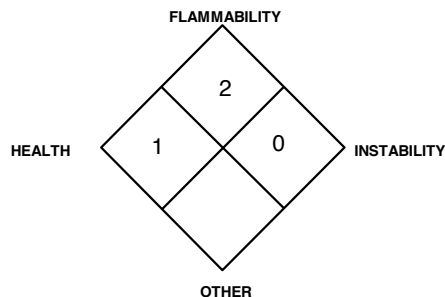
**UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

**SPECIAL HAZARDS ARISING FROM THE PRODUCT:** This product is flammable and can ignite if exposed to its flash point. When involved in a fire, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., aluminum, carbon, magnesium, and silicon oxides). This product can cause eye irritation.

**Explosion Sensitivity to Mechanical Impact or Static Discharge:** Not applicable.

**SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS:** Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

#### NFPA RATING



Hazard Scale: 0 = Minimal 1 = Slight  
2 = Moderate 3 = Serious 4 = Severe



---

## 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES:** Proper protective equipment should be used. In the event of a spill, clear the area and protect people. Eliminate all sources of ignition before cleanup begins. Use non-sparking tools. The atmosphere must have levels of components lower than those listed in Section 8, (Exposure Controls and Personal Protective Equipment) if applicable, and have at least 19.5 percent oxygen before personnel can be allowed into the area without Self-Contained Breathing Apparatus (SCBA).

**PERSONAL PROTECTIVE EQUIPMENT:** Responders should wear the level of protection appropriate to the type of chemical released, the amount of the material spilled, and the location where the incident has occurred.

**Small Spills:** Wear rubber gloves, splash goggles, and appropriate body protection. Wipe up spilled paste with polypads or other suitable absorbent materials. Wash contaminated area with soap and water, absorb with paper towels, and rinse with water.

**Large Spills:** Trained personnel following pre-planned procedures should handle non-incident releases. Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield, and Tyvek suit. Minimum level of personal protective equipment for releases in which the level of oxygen is less than 19.5% or is unknown must be **Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus.** Wipe up spilled paste with polypads or other suitable absorbent materials. Prevent material from entering sewer or confined spaces, waterways, soil or public waters. Monitor area and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, before non-response personnel are allowed into the spill area.

**METHODS FOR CLEAN-UP AND CONTAINMENT:** Non sparking tools should be used.

**All Spills:** Access to the spill area should be restricted. Spread should be limited by gently covering the spill with polypads. Absorb spilled liquid with clay, sand, polypads, or other suitable inert absorbent materials. All contaminated absorbents and other materials should be placed in an appropriate container and seal. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). Dispose of recovered material and report spill per regulatory requirements. Remove all residue before decontamination of spill area. Clean spill area with soap and copious amounts of water. Monitor area for combustible vapor levels and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, and that levels are below applicable LELs (see Section 5 – Fire Fighting Measures) before non-response personnel are allowed into the spill area.

**ENVIRONMENTAL PRECAUTIONS:** Minimize use of water to prevent environmental contamination. Prevent spill or rinsate from contaminating storm drains, sewers, soil or groundwater. Place all spill residues in a suitable container and seal. Do not discharge effluent containing this product into streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**OTHER INFORMATION:** U.S. regulations may require reporting of spills of this material that reach surface waters if a sheen is formed. If necessary, the toll-free phone number for the U.S. Coast Guard National Response Center is 1-800-424-8802.

**REFERENCE TO OTHER SECTIONS:** See information in Section 8 (Exposure Controls – Personal Protection) and Section 13 (Disposal Considerations) for additional information.

---

## 7. HANDLING and STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** All employees who handle this material should be trained to handle it safely. Use in a well ventilated location. Keep away from heat, sparks, and other sources of ignition. As with all chemicals, avoid getting this product ON YOU or IN YOU. Avoid breathing airborne fumes or vapors generated by this product. Wash thoroughly after using this product. Do not eat or drink while using this product. Remove contaminated clothing immediately. Open containers slowly on a stable surface. Do not expose containers to extreme temperatures.

**CONDITIONS FOR SAFE STORAGE:** Keep container tightly closed when not in use. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight or sources of intense heat. Containers should be separated from oxidizing materials by a minimum distance of 20 ft. or by a barrier of non-combustible material at least 5 ft. high having a fire-resistance rating of at least 0.5 hours. Storage areas should be made of fire resistant materials. Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Refer to NFPA 30, *Flammable and Combustible Liquids Code*, for additional information on storage. Have appropriate extinguishing equipment in the storage area (such as sprinkler systems or portable fire extinguishers). Keep away from heat, sparks, and other sources of ignition. Use non-sparking tools. Bond and ground containers during transfers of material. Store away from incompatible materials (see Section 10, Stability and Reactivity). Material should be stored in secondary containers, as appropriate. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged.

**SPECIFIC END USE(S):** This product is for use as a plastic polisher. Follow all industry standards for use of this product.

**PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:** Follow practices indicated in Section 6 (Accidental Release Measures). If necessary, ensure that application equipment is locked and tagged-out safely. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

### EXPOSURE LIMITS/CONTROL PARAMETERS:

**Ventilation, Engineering, And Occupational Exposure Controls:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in later in this Section. Use local exhaust ventilation. As with all products that contain chemicals, ensure proper decontamination equipment (e.g., eyewash/safety shower stations) are available near areas where this product is used as necessary.

### Occupational/Workplace Exposure Limits/Guidelines:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							OTHER
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELS		NIOSH	
		TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>		
Aluminum Oxide	1344-28-1	For aluminum metal and insoluble compounds	NE	15 (total dust) 5 (resp. fraction)	NE	NE	NE	NE	DFG MAKs: TWA = 4 (Inhalable fraction), 1.5 (resp. fraction) Pregnancy Risk Group: D Carcinogen: MAK-2 (fibrous dust)
Proprietary Silicone			NE	NE	NE	NE	NE	NE	NE
Proprietary Aluminum Silicate			NE	NE	NE	NE	NE	NE	NE
Ethoxylated Propoxylated Alcohol	68603-25-8		NE	NE	NE	NE	NE	NE	NE
Proprietary Alkane			NE	NE	NE	NE	NE	NE	NE
Proprietary Aliphatic Diol			NE	NE	NE	NE	NE	NE	AIHA WEEL: TWA = 10

NE = Not Established. See Section 16 for Definitions of Terms Used

**International Occupational Exposure Limits:** Currently the following additional international exposure limits are in place for some components.

**ALUMINUM OXIDE:**

Austria: TMW = 5 mg/m<sup>3</sup>; KZW = 10 mg/m<sup>3</sup>, resp, 2007  
 Belgium: TWA = 10 mg(Al)/m<sup>3</sup>, MAR 2002  
 Denmark: TWA = 2 mg(Al)/m<sup>3</sup>, MAY 2011  
 France: VME = 10 mg/m<sup>3</sup>, FEB 2006  
 Hungary: TWA = 6 mg/m<sup>3</sup> (resp), SEP 2000  
 Iceland: TWA = 10 mg(Al)/m<sup>3</sup>, NOV 2011  
 Japan: OEL = 0.5 mg/m<sup>3</sup> (resp. dust), 2 mg/m<sup>3</sup> (total dust), MAY 2012  
 Korea: TWA = 10 mg/m<sup>3</sup>, 2006  
 Mexico: TWA = 10 mg(Al<sub>2</sub>O<sub>3</sub>)/m<sup>3</sup> (inhalable), 2004  
 The Netherlands: MAC-TGG = 10 mg/m<sup>3</sup>, 2003  
 New Zealand: TWA = 10 mg/m<sup>3</sup> (inspirable dust), JAN 2002  
 Norway: TWA = 2 mg(Al)/m<sup>3</sup>, JAN 1999  
 Poland: MAC(TWA) = 2 mg/m<sup>3</sup>, MAC(STEL) = 16 mg/m<sup>3</sup>, JAN 1999  
 Russia: TWA = 6 mg/m<sup>3</sup>, JUN 2003

**ALUMINUM OXIDE (continued):**

Sweden: TWA = 5 mg/m<sup>3</sup> (total dust); TWA = 2 mg/m<sup>3</sup> (resp. dust), JUN 2005  
 Switzerland: MAK-W = 3 mg/m<sup>3</sup>, KZG-W = 24 mg/m<sup>3</sup>, resp, fume, JAN 2011  
 Switzerland: MAK-W = 3 mg/m<sup>3</sup>, resp, JAN 2011  
 United Kingdom: TWA = 10 mg/m<sup>3</sup> (inhal. dust), OCT 2007  
 United Kingdom: TWA = 4 mg/m<sup>3</sup> (resp. dust), OCT,2007  
 In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV  
**PROPRIETARY ALIPHATIC DIOL:**  
 Australia: TWA = 10 mg/m<sup>3</sup> (particulates), JUL 2008  
 Australia: TWA = 150 ppm (474 mg/m<sup>3</sup>) (total), JUL 2008  
 New Zealand: TWA = 10 mg/m<sup>3</sup> (particulates only), JAN 2002  
 New Zealand: TWA = 150 ppm (474 mg/m<sup>3</sup>) (vapor and particulates), JAN 2002  
 Russia: STEL = 7 mg/m<sup>3</sup>, JUN 2003  
 United Kingdom: TWA = 10 mg/m<sup>3</sup> (particulate), OCT 2007  
 United Kingdom: TWA = 150 ppm (474 mg/m<sup>3</sup>) (total vapor and particulate), OCT 2007

**ACGIH Biological Exposure Indices (BEIs):** Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for the components of this product.

**PROTECTIVE EQUIPMENT:** *The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132, including U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hand Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR 1910.132), equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02, Z94.3-M1982, Industrial Eye and Face Protectors and CSA Standard Z195-02, Protective Footwear), or standards of EU member states (including EN 529:2005 for respiratory PPE, CEN/TR 15419:2006 for hand protection, and CR 13464:1999 for face/eye protection). Please reference applicable regulations and standards for relevant details.*

**Respiratory Protection:** Maintain airborne contaminant concentrations below exposure limits listed above. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations. Oxygen levels below 19.5% are considered IDLH by U.S. OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. OSHA's Respiratory Protection Standard (1910.134-1998).

**Eye Protection:** Wear splash goggles or safety glasses as appropriate for the task. Face shields are recommended if solutions are made. If necessary, refer to appropriate regulations.

**Hand Protection:** Wash hands and wrists before putting on and after removing gloves. During manufacture or other similar operations, wear the appropriate hand protection for the process. Use double gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS. Because all gloves are to some extent permeable and their permeability increases with time, they should be changed regularly (hourly is preferable) or immediately if torn or punctured. If necessary refer to appropriate regulations.

**Skin Protection:** Use appropriate protective clothing for the task (e.g., lab coat, etc.). If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in appropriate regulations.

## 9. PHYSICAL and CHEMICAL PROPERTIES

**FORM:** Paste.

**ODOR:** Mild hydrocarbon.

**pH:** 6.5-7.8

**BOILING POINT:** Not established.

**COLOR:** White to off-white.

**ODOR THRESHOLD:** Not determined.

**EVAPORATION RATE:** Not available.

**MELTING/FREEZING POINT:** Not established.

## 9. PHYSICAL and CHEMICAL PROPERTIES (Continued)

**FLASH POINT (closed cup):** > 61°C (142°F)

**EXPLOSIVE PROPERTIES:** Not explosive

**VAPOR PRESSURE:** Not applicable.

**SOLUBILITY:** Partially soluble in organic solvents.

**VISCOSITY:** 800-6000 cps

**AUTOIGNITION TEMPERATURE:** Not determined.

**COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT):** Not determined.

**HOW TO DETECT THIS SUBSTANCE (warning properties):** The appearance of this product can be a distinguishing characteristic to identify it in event of accidental release.

**FLAMMABILITY:** Combustible.

**OXIDIZING PROPERTIES:** Not an oxidizer.

**SPECIFIC GRAVITY @ 25°C:** 1.1-1.7

**SOLUBILITY IN WATER:** Insoluble.

**RELATIVE VAPOR DENSITY (air = 1):** Not determined.

## 10. STABILITY and REACTIVITY

**CHEMICAL STABILITY:** Stable under conditions of normal temperature and pressure.

**DECOMPOSITION PRODUCTS:** **Combustion:** Aluminum, carbon, magnesium, and silicon oxides). **Hydrolysis:** None known.

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** This product would be incompatible with strong oxidizers, chlorine trifluoride, ethylene oxide, strong acid, strong bases, halocarbons, oxygen difluoride, sodium nitrate, vinyl acetate, and water reactive materials.

**POSSIBILITY OF HAZARDOUS REACTION/POLYMERIZATION:** If exposed to high temperatures, this product may polymerize and generate excessive heat. A buildup of heat can occur in closed containers and may present a serious danger of overpressure of containers.

**CONDITIONS TO AVOID:** Exposure or contact to extreme temperatures and incompatible chemicals.

## 11. TOXICOLOGICAL INFORMATION

**SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE:** The most significant routes of occupational exposure are inhalation of vapors and contact with skin and eyes. The symptoms of exposure to this product, via route of exposure, are as follows:

**Inhalation:** Inhalation of aerosols from this product can irritate the nose, throat, and other tissues of the respiratory system. Symptoms of such exposure may include displayed general weakness, ataxia, rapid respiration, nausea and tremors.

**Contact with Skin or Eyes:** If this product enters the eyes, it may cause redness and pain. Depending on the duration and concentration of exposure, skin contact may be irritating. Chronic skin contact may cause dermatitis.

**Skin Absorption:** The components of this product are not known to be absorbed through the skin.

**Ingestion:** Ingestion is not anticipated to be a significant route of occupational exposure for this product. If this product is swallowed (i.e., through poor hygiene practices), it may cause nausea, vomiting, and diarrhea.

**Injection:** Though not anticipated to be a significant route of exposure for this product, injection (via punctures or lacerations by contaminated objects) may cause redness at the site of injection.

**HEALTH EFFECTS OR RISKS FROM EXPOSURE:** An Explanation in Lay Terms.

**Acute:** Inhalation exposure may cause central nervous system effects.

**Chronic:** Organic skin contact may cause dermatitis.

**TARGET ORGANS:** **Acute:** Skin, eyes, respiratory system, central nervous system. **Chronic:** Skin.

**TOXICITY DATA:** The following toxicological data are available for components of this product in 1% or greater concentration:

### ALUMINUM OXIDE:

LD<sub>50</sub> (Intraperitoneal-Mouse) > 3600 mg/kg

TCLo (Inhalation-Rat) 200 mg/m<sup>3</sup>/5 hours/28 weeks-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi, chronic pulmonary edema; Related to Chronic Data: death

TCLo (Inhalation-Rabbit) 200 mg/m<sup>3</sup>/5 hours/28 weeks-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi, chronic pulmonary edema; Related to Chronic Data: death

TDLo (Intraperitoneal-Rat) 90 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: tumors

TDLo (Implant-Rat) 200 mg/kg: Tumorigenic: neoplastic by RTECS criteria, tumors at site of application

TD (Implant-Rat) 200 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria, tumors at site of application

### ETHOXYLATED PROPOXYLATED ALCOHOL:

Standard Draize Test (Eye-Rabbit) 100 µL/24 hours: Severe

### PROPRIETARY

#### ALIPHATIC DIOL:

Standard Draize Test (Eye-Rabbit) 100 mg/1 hour: Mild

Eye Irritancy (rabbit) = 100 mg; mild

LD<sub>50</sub> (Oral-Rat) > 24 gm/kg: Gastrointestinal: hypermotility, diarrhea

Skin Irritancy (human) = 500 mg/7 days; mild

Skin Irritancy (human) = 104 mg/3 days/intermittent; moderate

Skin Irritancy (man) = 10%/2 days

TDLo (oral, child) = 79 g/kg/56 weeks/intermittent; Central nervous system effects, BRN

TDLo (parenteral, infant) = 10 g/kg/3 days/continuous; Systemic effects

LD<sub>50</sub> (oral, rat) = 20 g/kg

LD<sub>50</sub> (oral, mouse) = 22 g/kg

LD<sub>50</sub> (oral, rabbit) 18500 mg/kg

LD<sub>50</sub> (oral, dog) = 22 g/kg

LD<sub>50</sub> (oral, guinea pig) = 18350 mg/kg

LD<sub>50</sub> (oral, quail) > 2080 mg/kg



### HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

<b>HEALTH HAZARD</b>	(BLUE)	1
----------------------	--------	---

<b>FLAMMABILITY HAZARD</b>	(RED)	2
----------------------------	-------	---

<b>PHYSICAL HAZARD</b>	(YELLOW)	0
------------------------	----------	---

### PROTECTIVE EQUIPMENT

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8

For Routine Industrial Use and Handling Applications

Hazard Scale: **0** = Minimal **1** = Slight **2** = Moderate  
**3** = Serious **4** = Severe \* = Chronic hazard

## 11. TOXICOLOGICAL INFORMATION (Continued)

### TOXICITY DATA (continued):

#### PROPRIETARY ALIPHATIC DIOL (continued):

LD<sub>50</sub> (intraperitoneal, rat) = 6660 mg/kg  
 LD<sub>50</sub> (intraperitoneal, mouse) = 9718 mg/kg  
 LD<sub>50</sub> (subcutaneous, rat) = 22,500 mg/kg  
 LD<sub>50</sub> (intravenous, rat) = 6423 mg/kg  
 LD<sub>50</sub> (intravenous, mouse) = 6630 mg/kg  
 LD<sub>50</sub> (intravenous, rabbit) = 6500 mg/kg  
 LD<sub>50</sub> (intravenous, dog) = 26 g/kg  
 LDLo (intravenous, chicken) = 27 g/kg; Vascular: other changes  
 LD<sub>50</sub> (intramuscular, rat) = 14 g/kg  
 LD<sub>50</sub> (subcutaneous, mouse) = 17,370 mg/kg  
 LDLo (subcutaneous, guinea pig) = 15500 mg/kg  
 LD<sub>50</sub> (skin, rabbit) = 20800 mg/kg

#### PROPRIETARY ALIPHATIC DIOL: (continued):

LDLo (intramuscular, rabbit) = 6300 mg/kg; Behavioral: somnolence (general depressed activity); Behavioral: coma; Lungs, Thorax, or Respiration: respiratory stimulation  
 TCLo (inhalation, rat) = 2180 mg/m<sup>3</sup>/6 hours/90 days/intermittent; Behavioral: food intake (animal); Endocrine: changes in spleen weight; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: dehydrogenases  
 TDLo (intraperitoneal, mouse) = 100 mg/kg/15 days preg; Teratogenic effects  
 TDLo (intraperitoneal, mouse) = 100 mg/kg/11 days preg; Reproductive effects  
 Eye Irritancy (rabbit) = 500 mg/24 hours; mild  
 DNA Inhibition (subcutaneous, mouse) = 8000 mg/kg  
 Cytogenetic Analysis (subcutaneous, mouse) = 8000 mg/kg  
 Cytogenetic Analysis (fibroblast, hamster) = 32 g/L

**CARCINOGENIC POTENTIAL OF COMPONENTS:** Components are listed by agencies tracking the carcinogenic potential of chemical compounds as follows:

**ALUMINUM OXIDE (as fibrous dust):** MAK-2 (Substances that are Considered to be Carcinogenic for Man because sufficient data from long-term animal studies or limited to evidence from animal studies substantiated by evidence from epidemiological studies indicate that they can make a significant contribution to cancer risk.)

The remaining components of this product are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

**IRRITANCY OF PRODUCT:** Contact with this product can irritate the nose, throat, eyes, skin and other contaminated tissues.

**SENSITIZATION TO THE PRODUCT:** This product contains trace amounts of Methyl Paraben. Some information indicates Methyl Paraben may cause sensitization and allergic skin reaction in susceptible individuals from skin contact.

**REPRODUCTIVE TOXICITY INFORMATION:** This product has not been tested for reproductive toxicity effects; however, components are not known to cause human mutagenic, embryotoxic, teratogenic or reproductive toxicity effects.

## 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

**MOBILITY:** This product has not been tested for mobility in soil. The following information is available for some components.

**PROPRIETARY SILICON:** Water Solubility: Insoluble. Terrestrial Fate: If released to soil, this compound will absorb strongly and will remain essentially immobile. This compound will not volatilize to the atmosphere, nor will it biodegrade. This compound will not undergo hydrolysis except in clay soils which are known to catalyze this reaction at a rate dependent upon the amount of water present.

**PROPRIETARY ALIPHATIC DIOL:** The Koc of this compound is estimated as 8, using a log Kow of -0.92 and a regression-derived equation. According to a classification scheme, this estimated Koc value suggests that this material is expected to have very high mobility in soil.

**PERSISTENCE AND BIODEGRADABILITY:** This product has not been tested for persistence or biodegradability. It is expected that the components will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known. Data for components of this product are available as follows:

**PROPRIETARY SILICON:** If released to an aquatic environment, this material is expected to absorb strongly to sediment and suspended organic matter. Although insoluble in water, this material is not expected to bioconcentrate, due to its inherent hydrophobicity. This compound will not bioconcentrate in fish and aquatic environments as this compound is molecularly too large to pass through biological membranes and concentrate in fatty tissue. This compound will hydrolyze in water and will not volatilize to the atmosphere. If released to the atmosphere, this material will only enter the atmosphere if in aerosol form, due to its heavy molecular weight, very low vapor pressure and liquid physical state. The most likely atmospheric fate process is by dry deposition to the surface of the earth.

**PROPRIETARY ALIPHATIC DIOL:** Based on a classification scheme, an estimated Koc value of 8, determined from a log Kow of -0.92 and a regression-derived equation, indicates that this compound is expected to have very high mobility in soil. Volatilization from moist soil surfaces is not expected to be an important fate process given an estimated Henry's Law constant of  $1.3 \times 10^{-8}$  atm-cu m/mole, derived from its vapor pressure, 0.13 mmHg, and water solubility,  $1 \times 10^{+6}$  mg/liter. This compound is not expected to volatilize from dry soil surfaces based upon its vapor pressure. Laboratory experiments using agricultural soils from South Carolina conducted at 22 deg C and a fortification of 1,000 ppm, yielded 73-78% mineralization during a 51-day incubation period, suggesting that biodegradation will be an important fate process in soils. Based on a classification scheme, an estimated Koc value of 8, determined from a log Kow of -0.92 and a regression-derived equation, indicates that this compound is not expected to adsorb to suspended solids and sediment. Volatilization from water surfaces is not expected based upon an estimated Henry's Law constant of  $1.3 \times 10^{-8}$  atm-cu m/mole, derived from its vapor pressure, 0.13 mmHg, and water solubility,  $1 \times 10^{+6}$  mg/L. Numerous screening studies using wastewater or sewage inoculum as seed, suggests that this material will be degraded readily under aqueous environments. According to a model of gas/particle partitioning of semi-volatile organic compounds in the atmosphere, this compound, which has a vapor pressure of 0.13 mmHg at 25°C, is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase material is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 32 hours, calculated from its rate constant of  $1.2 \times 10^{-11}$  cu cm/molecule-sec at 25°C

**BIO-ACCUMULATION POTENTIAL:** This product has not been tested for bio-accumulation potential. The following information is available for some components.

**PROPRIETARY ALIPHATIC DIOL:** An estimated BCF of 3 was calculated for this compound, using a log Kow of -0.92 and a regression-derived equation. According to a classification scheme, this BCF suggests the potential for bioconcentration in aquatic organisms is low.

**ECOTOXICITY:** This product has not been tested for aquatic or animal toxicity. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. All releases to terrestrial, atmospheric and aquatic environments should be avoided. Data for components of this product are available as follows:

#### PROPRIETARY ALIPHATIC DIOL:

EC<sub>50</sub> (*Photobacterium phosphoreum*, bacteria) 30 minutes = 26,800 mg/L  
 EC<sub>50</sub> (*Daphnia magna*, crustacean) 48 hours = 34,400 mg/L  
 EC<sub>50</sub> (*Daphnia magna*, crustacean) 24 hours = > 10,000 mg/L  
 EC<sub>50</sub> (*Nitocra spinipes*, crustacean) 96 hours = > 10,000 mg/L

#### PROPRIETARY ALIPHATIC DIOL PROPRIETARY ALIPHATIC DIOL (continued):

LC<sub>50</sub> (*Lebistes reticulatus*, guppy) 48 hours > 10,000 mg/L  
 LC<sub>50</sub> (*Carassius auratus*) 24 hours = > 5,000 mg/L  
 LC<sub>50</sub> (*Salmo gairdneri*) 24 hours = 50,000 mg/L  
 LC<sub>50</sub> (*Pimephales promelas*) 96 hours = 54,900 mg/L  
 LC<sub>50</sub> (*Artemia salina*) 24 hours = >10,000 mg/L

**RESULTS OF PBT AND vPvB ASSESSMENT:** No Data Available. PBT and vPvB assessments are part of the chemical safety report required for some substances in European Union Regulation (EC) 1907/2006, Article 14.

**OTHER ADVERSE EFFECTS:** The components of this product are not listed as having ozone depletion potential.

**ENVIRONMENTAL EXPOSURE CONTROLS:** Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.



### 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHODS:** It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.

**DISPOSAL CONTAINERS:** Waste materials must be placed in and shipped in appropriate 5-gallon or 55-gallon poly or metal waste pails or drums. Permeable cardboard containers are not appropriate and should not be used. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

**PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING:** Wear proper protective equipment when handling waste materials.

**U.S. EPA WASTE NUMBER:** Not applicable.

**EWC WASTE CODE:** Wastes from shaping and physical and mechanical surface treatment of metals and plastics, not otherwise specified: 12 01 99

### 14. TRANSPORTATION INFORMATION

**U.S. DEPARTMENT OF TRANSPORTATION 49 CFR 172.101:** This material is classified as Dangerous Goods, per regulations of the DOT.

<b>UN Identification Number:</b>	UN 1993
<b>Proper Shipping Name:</b>	Flammable liquids, n.o.s. (Mineral Spirits)
<b>Hazard Class Number and Description:</b>	3 (Flammable)
<b>Packing Group:</b>	PG III
<b>Dot Label(s) Required:</b>	Class 3 (Flammable)
<b>Emergency Response Guidebook Number (2016):</b>	138
<b>Marine Pollutant:</b>	Components are not specifically listed as Marine Pollutants and do not meet the criteria of a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B).

**TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** This material is classified as Dangerous Goods, per regulations of Transport Canada. The use of the above U.S. DOT information from the U.S. 49 CFR regulations is allowed for shipments that originate in the U.S. For shipments via ground vehicle or rail that originate in Canada, the following information is applicable.

<b>UN Identification Number:</b>	UN 1993
<b>Proper Shipping Name:</b>	Flammable liquid, n.o.s. (Mineral Spirits)
<b>Hazard Class Number and Description:</b>	3 (Flammable)
<b>Packing Group:</b>	PG III
<b>Hazard Label(s) Required:</b>	3 (Flammable)
<b>Special Provisions:</b>	16, 150
<b>Explosive Limit and Limited Quantity Index:</b>	5 L
<b>Excepted Quantities:</b>	E1
<b>ERAP Index:</b>	None
<b>Passenger Carrying Ship Index:</b>	None
<b>Passenger Carrying Road or Rail Vehicle Index:</b>	60 L
<b>Marine Pollutant:</b>	Components are not specifically listed as Marine Pollutants and do not meet the criteria of a Marine Pollutant under Transport Canada regulations, as per TDG 2.7.

**INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA):** This material is classified as dangerous goods, per the International Air Transport Association.

<b>UN Identification Number:</b>	UN 1993
<b>Proper Shipping Name:</b>	Flammable liquid, n.o.s. (Mineral Spirits)
<b>Hazard Class or Division:</b>	3 (Flammable)
<b>Hazard Label(s) Required:</b>	3 (Flammable)
<b>Packing Group:</b>	III
<b>Excepted Quantities:</b>	E1
<b>Passenger and Cargo Aircraft Packing Instruction:</b>	355
<b>Passenger and Cargo Aircraft Packing Maximum Net Quantity per Pkg.:</b>	60 L
<b>Passenger and Cargo Aircraft Packing Limited Quantity Packing Instruction:</b>	Y364
<b>Passenger and Cargo Aircraft Packing Limited Quantity Maximum Net Quantity per Pkg.:</b>	10 L
<b>Cargo Aircraft Only Packing Instruction:</b>	366
<b>Cargo Aircraft Only Maximum Net Quantity per Pkg.:</b>	120 L
<b>Special Provisions:</b>	A3
<b>ERG Code:</b>	3L



**14. TRANSPORTATION INFORMATION**

**INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO):** This compound is classified as dangerous goods, per the International Maritime Organization.

**UN No.:** 1993  
**Proper Shipping Name:** Flammable liquid, n.o.s. (Mineral Spirits)  
**Hazard Class Number:** 3  
**Packing Group:** III  
**Special Provisions:** 223, 274, 955  
**Limited Quantities:** 5 L  
**Excepted Quantities:** E1  
**Packing:** Instructions: P001, LP01; Provisions: None  
**IBCs:** Instructions: IBC03; Provisions: None  
**Tanks:** Instructions: T4; Provisions: TP1, TP29  
**EmS:** F-E, S-E  
**Stowage Category:** Category 1.  
**Segregation:** None

**Marine Pollutant:** Components do not meet the criteria of a Marine Pollutant under UN criteria.

**EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):** This material is classified by the Economic Commission for Europe to be dangerous goods.

**UN No.:** 1993  
**Name and Description:** Flammable liquid, n.o.s. (Mineral Spirits)  
**Classification Code:** F1  
**Class:** 3  
**Packing Group:** III  
**Labels:** 3  
**Special Provisions:** 274, 601  
**Limited Quantities:** 5 L  
**Excepted Quantities:** E1  
**Packagings and IBCs:** Packing Instruction: P001, IBC03, LP01, R001; Special Packing Instructions: None  
**Mixed Packing Provisions:** MP19  
**Portable Tanks and Bulk Containers:** Instructions: T4, Special Provisions: TP1, TP29  
**Hazard Identification Code:** 30

**TRANSPORT IN BULK ACCORDING TO THE IBC CODE:** See the information under the individual jurisdiction listings for IBC information.

**ENVIRONMENTAL HAZARDS:** This product does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not specifically listed in Annex III under MARPOL 73/78.

**15. REGULATORY INFORMATION**

**UNITED STATES REGULATIONS:**

**U.S. SARA Reporting Requirements:** The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

COMPONENT	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Aluminum Oxides (fibrous forms)	No	No	Yes

**U.S. SARA Threshold Planning Quantity (TPQ):** There are no specific Threshold Planning Quantities for this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

**U.S. CERCLA Reportable Quantity (RQ):** Not applicable.

**U.S. TSCA Inventory Status:** The components of this product are listed on the TSCA Inventory.

**Other U.S. Federal Regulations:** Not applicable.

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):** The components of this product are not on the California Proposition 65 Lists.

**CANADIAN REGULATIONS:**

**Canadian DSL/NDSL Status:** The components of this product are listed on the DSL inventory.

**Other Canadian Regulations:** Not applicable.

**Canadian Environmental Protection Agency (CEPA) Priorities Substances List:** No component of this product is on the Priority Substances Lists.

**Canadian WHMIS HPR 2015 Classification and Symbols:** See the following section for classification and symbols under WHMIS.

**EUROPEAN REGULATIONS:**

**Safety, Health, and Environmental Regulations/Legislation Specific for the Product:** None known.

**Chemical Safety Assessment:** No Data Available. The chemical safety assessment is required for some substances according to European Union Regulation (EC) 1907/2006, Article 14.

## 16. OTHER INFORMATION

**U.S. ANSI STANDARD LABELING (Precautionary Statements): CAUTION! FLAMMABLE LIQUID. MAY CAUSE EYE AND SKIN IRRITATION.** Avoid contact with eyes, skin and clothing. Avoid breathing mists or sprays. Keep container closed. Keep away from heat, sparks and flame. Use only with adequate ventilation. Wash thoroughly after use. Wear gloves, eye protection, respiratory protection, and appropriate body protection. **FIRST-AID:** In case of contact, immediately flush skin and eyes with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, foam, dry chemical, or CO<sub>2</sub>. **IN CASE OF SPILL:** Absorb spilled product with polypads or other suitable absorbing material. Place all spill residue in an appropriate container and seal. Dispose of in accordance with International, National, State, and local hazardous waste disposal regulations. Consult Safety Data Sheet for additional information.

**Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2208 Labeling and Classification:**

**Classification:** Flammable Liquid Category 3, Eye Irritation Category 2A

**Signal Word:** Warning

**Hazard Statement Codes:** H226: Combustible liquid. H319: Causes serious eye irritation.

**Precautionary Statements:**

**Prevention:** P210: Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting/equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P264: Wash thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** P370 + P378: In case of fire: Use materials appropriate for surrounding fire for extinction. P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. P337 + P313: If eye irritation persists: Get medical advice/attention. P321: Specific treatment (remove from exposure and treat symptoms). Refer to other portions of precautionary text on this label, SDS or other product information sheets, as appropriate.

**Storage:** P403 + P233 + P235: Store in a well-ventilated place. Keep container tightly closed. Keep cool.

**Disposal:** P501: Dispose of contents/containers in accordance with all local, regional, national and international regulations.

**Hazard Symbol/Pictograms:** GHS02, GHS07

### CLASSIFICATION FOR COMPONENTS:

**Full Text Global Harmonization Under Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP Regulation (EC) 1272/2008:**

**Aluminum Oxide:** Notified classification.

**Classification:** Acute Oral Toxicity Category 4, Acute Inhalation Toxicity Category 4

**Hazard Statements:** H312 + H332: Harmful in contact with skin or if inhaled. H312 + H332: Harmful in contact with skin or if inhaled.

**Proprietary Silicon:** Notified classification.

**Classification:** Eye Irritation Category 2A, Aquatic Chronic Toxicity Category 3

**Hazard Statements:** H319: Causes serious eye irritation. H413: May cause long-lasting harmful effects to aquatic life. H413: May cause long-lasting harmful effects to aquatic life.

**Ethoxylated Propoxylated Alcohol:** Notified classification.

**Classification:** Eye Damage/Corrosion Category 1, Acute Oral Toxicity Category 4, Skin Irritation Category 2, Aquatic Chronic Toxicity Category 2

**Hazard Statements:** H318: Causes serious eye damage. H302: Harmful if swallowed. H315: Causes skin irritation. H411: Toxic to aquatic life with long-lasting effects.

**Proprietary Alkane Hydrocarbon:** Notified classification.

**Classification:** Flammable Liquid Category 3, Acute Oral Toxicity Category 3, Aspiration Hazard Category 1, Skin Irritation Category 2, Specific Target Organ Effects (Inhalation-Narcotic Effect) Single Exposure Category 3, Aquatic Chronic Toxicity Category 2

**Hazard Statements:** H226: Flammable liquid and vapour. H301: Toxic if swallowed. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. H412: Harmful to aquatic life with long-lasting effects.

**All Other Components:** No classification has been published or is applicable.

**REVISION DETAILS:** August 2014: Add Global Harmonization Standard compliance and up-date of entire SDS for current compliance. October 2017: Update SDS to the most current U.S., Canadian and European GHS classification. Remove old EU DPD classification.

**REFERENCES AND DATA SOURCES:** Contact the supplier for information.

**METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION:** Criteria of the GHS and CLP 1272: 2008 were used for classification.

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721-1961 • (800) 441-3365

**DATE OF PRINTING:** October 21, 2019

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, CA 96721 • (800) 441-3365 • (808) 969-4648 • info@msdsprep-csa.com

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. EZCLEAR assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, EZCLEAR assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

## DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these, which are commonly used, include the following:

**CAS #:** This is the Chemical Abstract Service Number that uniquely identifies each constituent.

### EXPOSURE LIMITS IN AIR:

**CEILING LEVEL:** The concentration that shall not be exceeded during any part of the working exposure.

**DFG MAKs:** Federal Republic of Germany Maximum Concentration Values in the workplace. Exposure limits are given as TWA (Time-Weighted Average) or PEAK (short-term exposure) values.

**DFG MAK Germ Cell Mutagen Categories:** 1: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed humans. 2: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed mammals. 3A: Substances that have been shown to induce genetic damage in germ cells of human of animals, or which produce mutagenic effects in somatic cells of mammals *in vivo* and have been shown to reach the germ cells in an active form.

3B: Substances that are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell *in vivo*; in exceptional cases, substances for which there are no *in vivo* data, but that are clearly mutagenic *in vitro* and structurally related to known *in vivo* mutagens. 4: Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances] if research results make this seem sensible.) 5: Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is expected not to be significant.

**DFG MAK Pregnancy Risk Group Classification:** **Group A:** A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. **Group B:** Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A–C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.

**IDLH:** Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

**LOQ:** Limit of Quantitation.

**NE:** Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

**NIC:** Notice of Intended Change.

**NIOSH CEILING:** The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

**NIOSH RELs:** NIOSH's Recommended Exposure Limits.

**PEL:** OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL" is placed next to the PEL that was vacated by Court Order.

**SKIN:** Used when there is a danger of cutaneous absorption.

**STEL:** Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

**TLV:** Threshold Limit Value. An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

**TWA:** Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

**WEEL:** Workplace Environmental Exposure Limits from the ALHA.

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD

**RATINGS:** This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

**HEALTH HAZARD: 0 Minimal Hazard:** No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation:* Essentially non-irritating. Mechanical irritation may occur. PII or Draize = 0. *Eye Irritation:* Essentially non-irritating, minimal effects clearing in < 24 hours. Mechanical irritation may occur. Draize = 0. *Oral Toxicity LD<sub>50</sub> Rat:* > 5000 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 2000 mg/kg. *Inhalation Toxicity 4-hrs LC<sub>50</sub> Rat:* > 20 mg/L. **1 Slight Hazard:** Minor reversible injury may occur; may irritate the stomach if swallowed; may defat the skin and exacerbate existing dermatitis. *Skin Irritation:* Slightly or mildly irritating. PII or Draize > 0 < 5. *Eye Irritation:* Slightly to mildly irritating, but reversible within 7 days. Draize > 0 ≤ 25. *Oral Toxicity LD<sub>50</sub> Rat:* > 500–5000 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 1000–2000 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 2–20 mg/L. **2 Moderate Hazard:** Temporary or transitory injury may occur; prolonged exposure may affect the CNS. *Skin Irritation:* Moderately irritating; primary irritant; sensitizer. PII or Draize ≥ 5, with no destruction of dermal tissue. *Eye Irritation:* Moderately to severely irritating; reversible corneal opacity; corneal involvement or irritation clearing in 8–21 days. Draize = 26–100, with reversible effects. *Oral Toxicity LD<sub>50</sub> Rat:* > 50–500 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 200–1000 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 0.5–2 mg/L.

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

**HEALTH HAZARD (C): 3 Serious Hazard:** Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation:* Severely irritating and/or corrosive; may cause destruction of dermal tissue, skin burns, and dermal necrosis. PII or Draize > 5–8, with destruction of tissue. *Eye Irritation:* Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. Draize > 80 with effects irreversible in 21 days. *Oral Toxicity LD<sub>50</sub> Rat:* > 1–50 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 20–200 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 0.05–0.5 mg/L. **4 Severe Hazard:** Life-threatening; major or permanent damage may result from single or repeated exposure; extremely toxic; irreversible injury may result from brief contact. *Skin Irritation:* Not appropriate. Do not rate as a 4, based on skin irritation alone. *Eye Irritation:* Not appropriate. Do not rate as a 4, based on eye irritation alone. *Oral Toxicity LD<sub>50</sub> Rat:* ≤ 1 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* ≤ 20 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* ≤ 0.05 mg/L.

**FLAMMABILITY HAZARD: 0 Minimal Hazard:** Materials that will not burn in air when exposure to a temperature of 815.5°C (1500°F) for a period of 5 minutes. **1 Slight Hazard:** Materials that must be pre-heated before ignition can occur. Material requires considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur. This usually includes the following: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C (200°F) (i.e. OSHA Class IIIB); and Most ordinary combustible materials (e.g. wood, paper, etc.). **2 Moderate Hazard:** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This usually includes the following: Liquids having a flash-point at or above 37.8°C (100°F); Solid materials in the form of coarse dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp); and Solids and semisolids (e.g. viscous and slow flowing as asphalt) that readily give off flammable vapors. **3 Serious Hazard:** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions. This usually includes the following: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 38°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. OSHA Class IB and IC); Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air (e.g., dusts of combustible solids, mists or droplets of flammable liquids); and Materials that burn extremely rapidly, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides).

**4 Severe Hazard:** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and that will burn readily. This usually includes the following: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. OSHA Class IA); and Materials that ignite spontaneously when exposed to air at a temperature of 54.4°C (130°F) or below (pyrophoric).

**PHYSICAL HAZARD: 0 Water Reactivity:** Materials that do not react with water. *Organic Peroxides:* Materials that are normally stable, even under fire conditions and will not react with water. *Explosives:* Substances that are Non-Explosive. *Compressed Gases:* No Rating. *Pyrophorics:* No Rating. *Oxidizers:* No 0 rating. *Unstable Reactives:* Substances that will not polymerize, decompose, condense, or self-react. **1 Water Reactivity:** Materials that change or decompose upon exposure to moisture. *Organic Peroxides:* Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy violently. *Explosives:* Division 1.5 & 1.6 explosives. Substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases:* Pressure below OSHA definition. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group III oxidizers; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives:* Substances that may decompose condense, or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosion hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors. **2 Water Reactivity:** Materials that may react violently with water. *Organic Peroxides:* Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives:* Division 1.4 explosives. Explosive substances where the explosive effects are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases:* Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packing Group II oxidizers. Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. *Reactive:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential (or low risk) for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature



## DEFINITIONS OF TERMS (Continued)

## HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

**PHYSICAL HAZARD (continued):** **3 Water Reactivity:** Materials that may form explosive reactions with water. **Organic Peroxides:** Materials that are capable of detonation or explosive reaction, but require a strong initiating source or must be heated under confinement before initiation; or materials that react explosively with water. **Explosives:** Division 1.3 explosives. Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. **Compressed Gases:** Pressure  $\geq$  514.7 psi absolute at 21.1°C (70°F) [500 psig]. **Pyrophorics:** No Rating. **Oxidizers:** Packing Group I oxidizers. Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3:2 potassium bromate/cellulose mixture. Liquids: any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. **Unstable Reactives:** Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a moderate potential (or moderate risk) to cause significant heat generation or explosion. **4 Water Reactivity:** Materials that react explosively with water without requiring heat or confinement. **Organic Peroxides:** Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. **Explosives:** Division 1.1 & 1.2 explosives. Explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. **Compressed Gases:** No Rating. **Pyrophorics:** Add to the definition of Flammability 4. **Oxidizers:** No 4 rating. **Unstable Reactives:** Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a high potential (or high risk) to cause significant heat generation or explosion.

## NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

**HEALTH HAZARD: 0** Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 2000 mg/kg. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 2000 mg/kg. Materials essentially non-irritating to the respiratory tract, eyes, and skin. **1** Materials that, under emergency conditions, can cause significant irritation. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 10 mg/L but less than or equal to 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials that slightly to moderately irritate the respiratory tract, eyes and skin. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 500 mg/kg but less than or equal to 2000 mg/kg. **2** Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 3,000 ppm but less than or equal to 5,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 200 mg/kg but less than or equal to 1000 mg/kg. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators. Materials that are primary skin irritants or sensitizers. Materials whose LD<sub>50</sub> for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. **3** Materials that, under emergency conditions, can cause serious or permanent injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 1,000 ppm but less than or equal to 3,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials corrosive to the skin. Cryogenic gases that cause frostbite and irreversible tissue damage. Compressed liquefied gases with boiling points below -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 5 mg/kg but less than or equal to 50 mg/kg. **4** Materials that, under emergency conditions, can be lethal. Gases with an LC<sub>50</sub> for acute inhalation toxicity less than or equal to 1,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than ten times its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 1000 ppm. Dusts and mists whose LC<sub>50</sub> for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD<sub>50</sub> for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD<sub>50</sub> for acute oral toxicity is less than or equal to 5 mg/kg.

## NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

**FLAMMABILITY HAZARD: 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D of NFPA 704. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in accordance with Annex D of NFPA 704. Liquids, solids, and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the *Method of Testing for Sustained Combustibility*, per 49 CFR 173, Appendix H or the UN *Recommendations on the Transport of Dangerous Goods, Model Regulations* (current edition) and the related *Manual of Tests and Criteria* (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85% by weight. Liquids that have no fire point when tested by ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup*, up to the boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Most ordinary combustible materials. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures with air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal, and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily. Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

**INSTABILITY HAZARD: 0** Materials that in themselves are normally stable, even under fire conditions. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100 W/mL. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater.

## FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **Flash Point:** Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air near the surface of the liquid or within the test vessel used. **Autoignition Temperature:** Minimum temperature of a solid, liquid, or gas required to initiate or cause self-sustained combustion in air with no other source of ignition. **LEL:** Lowest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame. **UEL:** Highest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame.



## DEFINITIONS OF TERMS (Continued)

### TOXICOLOGICAL INFORMATION:

**Human and Animal Toxicology:** Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. LD<sub>50</sub>: Lethal Dose (solids & liquids) that kills 50% of the exposed animals. LC<sub>50</sub>: Lethal Concentration (gases) that kills 50% of the exposed animals. ppm: Concentration expressed in parts of material per million parts of air or water. mg/m<sup>3</sup>: Concentration expressed in weight of substance per volume of air. mg/kg: Quantity of material, by weight, administered to a test subject, based on their body weight in kg. TDLo: Lowest dose to cause a symptom. TCLo: Lowest concentration to cause a symptom. TDo, LDLo, and LDo, or IC, ICo, LCLo, and LCo: Lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** IARC: International Agency for Research on Cancer. NTP: National Toxicology Program. RTECS: Registry of Toxic Effects of Chemical Substances. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** BEI: ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

### REPRODUCTIVE TOXICITY INFORMATION:

A mutagen is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical that causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance that interferes in any way with the reproductive process.

### ECOLOGICAL INFORMATION:

EC: Effect concentration in water. BCE: Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. TLm: Median threshold limit. log K<sub>OW</sub> or log K<sub>OC</sub>: Coefficient of Oil/Water Distribution is used to assess a substance's behavior in the environment.

### REGULATORY INFORMATION:

#### U.S. and CANADA:

This section explains the impact of various laws and regulations on the material. EPA: U.S. Environmental Protection Agency. ACGIH: American Conference of Governmental Industrial Hygienists, a professional association that establishes exposure limits. OSHA: U.S. Occupational Safety and Health Administration. NIOSH: National Institute of Occupational Safety and Health, which is the research arm of OSHA. WHMIS: Canadian Workplace Hazardous Materials Information System. DOT: U.S. Department of Transportation. TC: Transport Canada. SARA: Superfund Amendments and Reauthorization Act. DSL/NDSL: Canadian Domestic/Non-Domestic Substances List. TSCA: U.S. Toxic Substance Control Act. CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act. Marine Pollutant status according to the DOT; CERCLA or Superfund; and various state regulations. This section also includes information on the precautionary warnings that appear on the material's package label.

#### EUROPE:

EU: European Union (formerly known as the EEC, European Economic Community). EINECS: European Inventory of Now-Existing Chemical Substances. ARD: European Agreement Concerning the International Carriage of Dangerous Goods by Road. RID: International Regulations Concerning the Carriage of Dangerous Goods by Rail.



# SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS 2015 (HPR-GHS), European Union CLP EC 1272/2008, REACH, and the Global Harmonization Standard.

## 1. IDENTIFICATION of the SUBSTANCE or PREPARATION

### IDENTIFICATION of the SUBSTANCE or PREPARATION

<b>Trade Name (as Labeled):</b>	<b>EZCLEAR MILITARY LIGHT POLISH</b>
<b>Chemical Name/Class:</b>	Aluminum Oxide Polish
<b>Synonyms:</b>	None Allocated
<b>Relevant Product Use:</b>	Plastic Polish
<b>Uses Advised Against:</b>	Other than Relevant Use
<b>Supplier/Manufacturer's Name:</b>	<b>EZCLEAR</b> (formerly Plastek)
<b>Address:</b>	3300 Industry Drive; Signal Hill, CA 90755, USA
<b>Business Phone:</b>	+1-650-367-7075
<b>Fax Phone:</b>	+1 650-249-5163
<b>European supplier/ distributor's name:</b>	
<b>Address:</b>	
<b>Business Phone:</b>	
<b>Emergency Phone:</b>	1-800-424-9300 (CHEMTREC) 24-hours [North America] +1-703-527-3887 (CHEMTREC) 24-hours [International]
<b>Email:</b>	<a href="mailto:info@ezclear.com">info@ezclear.com</a>
<b>Website:</b>	<a href="http://www.ezclear.com">www.ezclear.com</a>
<b>Date of Preparation:</b>	August 18, 2008
<b>Date of Revision:</b>	October 19, 2017

NOTE: ALL United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS 2015 [HPR-GHS], and European Union CLP EC 1272/2008, required information is included in appropriate sections based on the Global Harmonization Standard format.

## 2. HAZARD IDENTIFICATION

### Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2208 Labeling and Classification:

**Classification:** Flammable Liquid Cat. 3, Eye Irritation Cat. 2A  
**Signal Word:** Warning **Hazard Statement Codes:** H226, H315  
**Precautionary Statement Codes:** P210, P240, P241, P242, P243, P264, P280, P370 + P378, P303 + P361 + P353, P305 + P351 + P338, P337 + P313, P321, P403 + P233 + P235, P501  
**Hazard Symbol/Pictograms:** GHS02, GHS07



**EMERGENCY OVERVIEW: Product Description:** This product is a flammable, white to off-white paste with a mild hydrocarbon odor. **Health Hazards:** The primary hazards associated with exposure to this product are the potential for central nervous system effects by inhalation if product is heated. Contact with the eyes can cause irritation. Skin contact may cause irritation, especially if contact is prolonged. **Flammability Hazards:** This product is flammable and can ignite if exposed to its flash point or if exposed to direct flame. If exposed to extremely high temperatures, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., aluminum, carbon, magnesium, and silicon oxides). **Reactivity Hazards:** This product is not known to be reactive. **Environmental Hazards:** This product may cause harm if released. **Emergency Response Procedures:** Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

## 3. COMPOSITION and INFORMATION ON INGREDIENTS

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Aluminum Oxide	1344-28-1	215-691-6	10.0-20.0	<i>Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008:</i> Classification: Acute Oral Toxicity Cat. 4, Acute Inhalation Toxicity Cat. 4 Hazard Classification Codes: H302 + H332
Proprietary Alkane Hydrocarbon			10.0-15.0	<i>Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008:</i> Classification: Flammable Liquid Cat. 3, Acute Oral Toxicity Cat. 3, Aspiration Hazard Cat. 1, Skin Irritation Cat. 2, STOT (Inhalation-Narcotic Effects) SE Cat. 3, Aquatic Chronic Toxicity Cat. 2 Hazard Classification Codes: H226, H301, H304, H315, H336, H410
Proprietary Aluminum Silicate			10.0-15.0	Classification: Not Applicable

See Section 16 for full text of Classification

### 3. COMPOSITION and INFORMATION ON INGREDIENTS (Continued)

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Proprietary Silicon			2.0-5.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Eye Irritation Cat. 2A, Aquatic Chronic Toxicity Cat. 3 Hazard Classification Codes: H319, H413
Ethoxylated Propoxylated Alcohol	68603-25-8	614-633-0	2.0-5.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Eye Damage/Corrosion Cat. 1, Acute Oral Toxicity Cat. 4, Skin Irritation Cat. 2, Aquatic Chronic Toxicity Cat. 2 Hazard Statement Codes: H318, H302, H315, H410
Proprietary Alkane Diol			1.0-2.0	Classification: Not Applicable
Water and other trace constituents. Each of the other trace constituents is present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).			Balance	Classification: Not Applicable

Specific concentration of components is being withheld under confidential information. See Section 16 for full text of Classification

### 4. FIRST-AID MEASURES

**PROTECTION OF FIRST AID RESPONDERS:** Rescuers should not attempt to retrieve victims of exposure to this material without adequate personal protective equipment. Rescuers should be taken for medical attention, if necessary.

**DESCRIPTION OF FIRST AID MEASURES:** Remove victim(s) to fresh air, as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation, if necessary. Remove and isolate contaminated clothing and shoes. Seek immediate medical attention. Take copy of label and SDS to physician or other health professional with victim(s).

**Skin Exposure:** If this product contaminates the skin and irritation develops, immediately begin decontamination with soap and water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if adverse effects continue after flushing.

**Eye Exposure:** If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek medical attention.

**Inhalation:** Although unlikely, if this product is inhaled or if fumes resulting from heating of product are inhaled, remove victim to fresh air. Seek medical attention if adverse symptoms continue after removal to fresh air.

**Ingestion:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing dermatitis, other skin conditions, and respiratory conditions may be aggravated by acute or chronic exposure to this product.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate exposure.

### 5. FIRE-FIGHTING MEASURES

**FLASH POINT (closed cup):** 42°C (107.6°F).

**AUTOIGNITION TEMPERATURE:** Not established.

**FLAMMABLE LIMITS (in air by volume, %):**

**Lower (LEL):** Not established. **Upper (UEL):** Not established.

**FIRE EXTINGUISHING MEDIA:** Fire extinguishing materials that can be used against fires of this product include carbon dioxide, dry chemical powder, halon, 'ABC' Class, or appropriate foam. Consideration for surrounding materials must be taken into account.

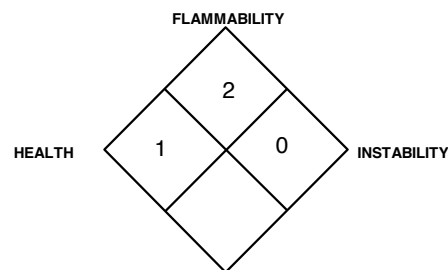
**UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

**SPECIAL HAZARDS ARISING FROM THE PRODUCT:** This product is flammable and can ignite if exposed to its flash point. When involved in a fire, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., aluminum, carbon, magnesium, and silicon oxides). This product can cause eye irritation.

**Explosion Sensitivity to Mechanical Impact or Static Discharge:** Not applicable.

**SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS:** Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

#### NFPA RATING



**OTHER**  
Hazard Scale: 0 = Minimal 1 = Slight  
2 = Moderate 3 = Serious 4 = Severe

---

## 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES:** Proper protective equipment should be used. In the event of a spill, clear the area and protect people. Eliminate all sources of ignition before cleanup begins. Use non-sparking tools. The atmosphere must have levels of components lower than those listed in Section 8, (Exposure Controls and Personal Protective Equipment) if applicable, and have at least 19.5 percent oxygen before personnel can be allowed into the area without Self-Contained Breathing Apparatus (SCBA).

**PERSONAL PROTECTIVE EQUIPMENT:** Responders should wear the level of protection appropriate to the type of chemical released, the amount of the material spilled, and the location where the incident has occurred.

**Small Spills:** Wear rubber gloves, splash goggles, and appropriate body protection. Wipe up spilled paste with polypads or other suitable absorbent materials. Wash contaminated area with soap and water, absorb with paper towels, and rinse with water.

**Large Spills:** Trained personnel following pre-planned procedures should handle non-incident releases. Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield, and Tyvek suit. Minimum level of personal protective equipment for releases in which the level of oxygen is less than 19.5% or is unknown must be **Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus.** Wipe up spilled paste with polypads or other suitable absorbent materials. Prevent material from entering sewer or confined spaces, waterways, soil or public waters. Monitor area and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, before non-response personnel are allowed into the spill area.

**METHODS FOR CLEAN-UP AND CONTAINMENT:** Non sparking tools should be used.

**All Spills:** Access to the spill area should be restricted. Spread should be limited by gently covering the spill with polypads. Absorb spilled liquid with clay, sand, polypads, or other suitable inert absorbent materials. All contaminated absorbents and other materials should be placed in an appropriate container and seal. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). Dispose of recovered material and report spill per regulatory requirements. Remove all residue before decontamination of spill area. Clean spill area with soap and copious amounts of water. Monitor area for combustible vapor levels and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, and that levels are below applicable LELs (see Section 5 – Fire Fighting Measures) before non-response personnel are allowed into the spill area.

**ENVIRONMENTAL PRECAUTIONS:** Minimize use of water to prevent environmental contamination. Prevent spill or rinsate from contaminating storm drains, sewers, soil or groundwater. Place all spill residues in a suitable container and seal. Do not discharge effluent containing this product into streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**OTHER INFORMATION:** U.S. regulations may require reporting of spills of this material that reach surface waters if a sheen is formed. If necessary, the toll-free phone number for the U.S. Coast Guard National Response Center is 1-800-424-8802.

**REFERENCE TO OTHER SECTIONS:** See information in Section 8 (Exposure Controls – Personal Protection) and Section 13 (Disposal Considerations) for additional information.

---

## 7. HANDLING and STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** All employees who handle this material should be trained to handle it safely. Use in a well ventilated location. Keep away from heat, sparks, and other sources of ignition. As with all chemicals, avoid getting this product ON YOU or IN YOU. Avoid breathing airborne fumes or vapors generated by this product. Wash thoroughly after using this product. Do not eat or drink while using this product. Remove contaminated clothing immediately. Open containers slowly on a stable surface. Do not expose containers to extreme temperatures.

**CONDITIONS FOR SAFE STORAGE:** Keep container tightly closed when not in use. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight or sources of intense heat. Containers should be separated from oxidizing materials by a minimum distance of 20 ft. or by a barrier of non-combustible material at least 5 ft. high having a fire-resistance rating of at least 0.5 hours. Storage areas should be made of fire resistant materials. Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Refer to NFPA 30, *Flammable and Combustible Liquids Code*, for additional information on storage. Have appropriate extinguishing equipment in the storage area (such as sprinkler systems or portable fire extinguishers). Keep away from heat, sparks, and other sources of ignition. Use non-sparking tools. Bond and ground containers during transfers of material. Store away from incompatible materials (see Section 10, Stability and Reactivity). Material should be stored in secondary containers, as appropriate. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged.

**SPECIFIC END USE(S):** This product is for use as a plastic polish. Follow all industry standards for use of this product.

**PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:** Follow practices indicated in Section 6 (Accidental Release Measures). If necessary, ensure that application equipment is locked and tagged-out safely. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.



## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

### EXPOSURE LIMITS/CONTROL PARAMETERS:

**Ventilation, Engineering, And Occupational Exposure Controls:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in later in this Section. Use local exhaust ventilation. As with all products that contain chemicals, ensure proper decontamination equipment (e.g., eyewash/safety shower stations) are available near areas where this product is used as necessary.

### Occupational/Workplace Exposure Limits/Guidelines:

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							OTHER
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELS		NIOSH IDLH mg/m <sup>3</sup>	
		TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>	TWA mg/m <sup>3</sup>	STEL mg/m <sup>3</sup>		
Aluminum Oxide	1344-28-1	For aluminum metal and insoluble compounds	NE	15 (total dust) 5 (resp. fraction)	NE	NE	NE	NE	DFG MAKs: TWA = 4 (Inhalable fraction), 1.5 (resp. fraction) Pregnancy Risk Group: D Carcinogen: MAK-2 (fibrous dust)
Proprietary Silicone			NE	NE	NE	NE	NE	NE	NE
Proprietary Aluminum Silicate			NE	NE	NE	NE	NE	NE	NE
Ethoxylated Propoxylated Alcohol	68603-25-8		NE	NE	NE	NE	NE	NE	NE
Proprietary Alkane			NE	NE	NE	NE	NE	NE	NE
Proprietary Aliphatic Diol			NE	NE	NE	NE	NE	NE	AIHA WEEL: TWA = 10

NE = Not Established. See Section 16 for Definitions of Terms Used

**International Occupational Exposure Limits:** Currently the following additional international exposure limits are in place for some components.

**ALUMINUM OXIDE:**

Austria: TMW = 5 mg/m<sup>3</sup>; KZW = 10 mg/m<sup>3</sup>, resp, 2007  
 Belgium: TWA = 10 mg(Al)/m<sup>3</sup>, MAR 2002  
 Denmark: TWA = 2 mg(Al)/m<sup>3</sup>, MAY 2011  
 France: VME = 10 mg/m<sup>3</sup>, FEB 2006  
 Hungary: TWA = 6 mg/m<sup>3</sup> (resp), SEP 2000  
 Iceland: TWA = 10 mg(Al)/m<sup>3</sup>, NOV 2011  
 Japan: OEL = 0.5 mg/m<sup>3</sup> (resp. dust), 2 mg/m<sup>3</sup> (total dust), MAY 2012  
 Korea: TWA = 10 mg/m<sup>3</sup>, 2006  
 Mexico: TWA = 10 mg(Al<sub>2</sub>O<sub>3</sub>)/m<sup>3</sup> (inhalable), 2004  
 The Netherlands: MAC-TGG = 10 mg/m<sup>3</sup>, 2003  
 New Zealand: TWA = 10 mg/m<sup>3</sup> (inspirable dust), JAN 2002  
 Norway: TWA = 2 mg(Al)/m<sup>3</sup>, JAN 1999  
 Poland: MAC(TWA) = 2 mg/m<sup>3</sup>, MAC(STEL) = 16 mg/m<sup>3</sup>, JAN 1999  
 Russia: TWA = 6 mg/m<sup>3</sup>, JUN 2003

**ALUMINUM OXIDE (continued):**

Sweden: TWA = 5 mg/m<sup>3</sup> (total dust); TWA = 2 mg/m<sup>3</sup> (resp. dust), JUN 2005  
 Switzerland: MAK-W = 3 mg/m<sup>3</sup>, KZG-W = 24 mg/m<sup>3</sup>, resp, fume, JAN 2011  
 Switzerland: MAK-W = 3 mg/m<sup>3</sup>, resp, JAN 2011  
 United Kingdom: TWA = 10 mg/m<sup>3</sup> (inhal. dust), OCT 2007  
 United Kingdom: TWA = 4 mg/m<sup>3</sup> (resp. dust), OCT, 2007  
 In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV  
**PROPRIETARY ALIPHATIC DIOL:**  
 Australia: TWA = 10 mg/m<sup>3</sup> (particulates), JUL 2008  
 Australia: TWA = 150 ppm (474 mg/m<sup>3</sup>) (total), JUL 2008  
 New Zealand: TWA = 10 mg/m<sup>3</sup> (particulates only), JAN 2002  
 New Zealand: TWA = 150 ppm (474 mg/m<sup>3</sup>) (vapor and particulates), JAN 2002  
 Russia: STEL = 7 mg/m<sup>3</sup>, JUN 2003  
 United Kingdom: TWA = 10 mg/m<sup>3</sup> (particulate), OCT 2007  
 United Kingdom: TWA = 150 ppm (474 mg/m<sup>3</sup>) (total vapor and particulate), OCT 2007

**ACGIH Biological Exposure Indices (BEIs):** Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for the components of this product.

**PROTECTIVE EQUIPMENT:** The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132, including U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hand Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR 1910.132), equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02, Z94.3-M1982, Industrial Eye and Face Protectors and CSA Standard Z195-02, Protective Footwear), or standards of EU member states (including EN 529:2005 for respiratory PPE, CEN/TR 15419:2006 for hand protection, and CR 13464:1999 for face/eye protection). Please reference applicable regulations and standards for relevant details.

**Respiratory Protection:** Maintain airborne contaminant concentrations below exposure limits listed above. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations. Oxygen levels below 19.5% are considered IDLH by U.S. OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. OSHA's Respiratory Protection Standard (1910.134-1998).

**Eye Protection:** Wear splash goggles or safety glasses as appropriate for the task. Face shields are recommended if solutions are made. If necessary, refer to appropriate regulations.

**Hand Protection:** Wash hands and wrists before putting on and after removing gloves. During manufacture or other similar operations, wear the appropriate hand protection for the process. Use double gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS. Because all gloves are to some extent permeable and their permeability increases with time, they should be changed regularly (hourly is preferable) or immediately if torn or punctured. If necessary refer to appropriate regulations.

**Skin Protection:** Use appropriate protective clothing for the task (e.g., lab coat, etc.). If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in appropriate regulations.

## 9. PHYSICAL and CHEMICAL PROPERTIES

**FORM:** Paste.

**ODOR:** Mild hydrocarbon.

**pH:** 6.5-7.8

**BOILING POINT:** Not established.

**COLOR:** White to off-white.

**ODOR THRESHOLD:** Not determined.

**EVAPORATION RATE:** Not available.

**MELTING/FREEZING POINT:** Not established.

## 9. PHYSICAL and CHEMICAL PROPERTIES (Continued)

**FLASH POINT (closed cup):** 42°C (107.6°F)

**EXPLOSIVE PROPERTIES:** Not explosive

**VAPOR PRESSURE:** Not applicable.

**SOLUBILITY:** Partially soluble in organic solvents.

**VISCOSITY:** 800-6000 cps

**AUTOIGNITION TEMPERATURE:** Not determined.

**COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT):** Not determined.

**HOW TO DETECT THIS SUBSTANCE (warning properties):** The appearance of this product can be a distinguishing characteristic to identify it in event of accidental release.

**FLAMMABILITY:** Combustible.

**OXIDIZING PROPERTIES:** Not an oxidizer.

**SPECIFIC GRAVITY @ 25°C:** 1.1-1.7

**SOLUBILITY IN WATER:** Insoluble.

**RELATIVE VAPOR DENSITY (air = 1):** Not determined.

## 10. STABILITY and REACTIVITY

**CHEMICAL STABILITY:** Stable under conditions of normal temperature and pressure.

**DECOMPOSITION PRODUCTS: Combustion:** Aluminum, carbon, magnesium, and silicon oxides). **Hydrolysis:** None known.

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** This product would be incompatible with strong oxidizers, chlorine trifluoride, ethylene oxide, strong acid, strong bases, halocarbons, oxygen difluoride, sodium nitrate, vinyl acetate, and water reactive materials.

**POSSIBILITY OF HAZARDOUS REACTION/POLYMERIZATION:** If exposed to high temperatures, this product may polymerize and generate excessive heat. A buildup of heat can occur in closed containers and may present a serious danger of overpressure of containers.

**CONDITIONS TO AVOID:** Exposure or contact to extreme temperatures and incompatible chemicals.

## 11. TOXICOLOGICAL INFORMATION

**SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE:** The most significant routes of occupational exposure are inhalation of vapors and contact with skin and eyes. The symptoms of exposure to this product, via route of exposure, are as follows:

**Inhalation:** Inhalation of aerosols from this product can irritate the nose, throat, and other tissues of the respiratory system. Symptoms of such exposure may include displayed general weakness, ataxia, rapid respiration, nausea and tremors.

**Contact with Skin or Eyes:** If this product enters the eyes, it may cause redness and pain. Depending on the duration and concentration of exposure, skin contact may be irritating. Chronic skin contact may cause dermatitis.

**Skin Absorption:** The components of this product are not known to be absorbed through the skin.

**Ingestion:** Ingestion is not anticipated to be a significant route of occupational exposure for this product. If this product is swallowed (i.e., through poor hygiene practices), it may cause nausea, vomiting, and diarrhea.

**Injection:** Though not anticipated to be a significant route of exposure for this product, injection (via punctures or lacerations by contaminated objects) may cause redness at the site of injection.

**HEALTH EFFECTS OR RISKS FROM EXPOSURE:** An Explanation in Lay Terms.

**Acute:** Inhalation exposure may cause central nervous system effects.

**Chronic:** Organic skin contact may cause dermatitis.

**TARGET ORGANS: Acute:** Skin, eyes, respiratory system, central nervous system. **Chronic:** Skin.

**TOXICITY DATA:** The following toxicological data are available for components of this product in 1% or greater concentration:

**ALUMINUM OXIDE:**

LD<sub>50</sub> (Intraperitoneal-Mouse) > 3600 mg/kg

TCLo (Inhalation-Rat) 200 mg/m<sup>3</sup>/5 hours/28 weeks-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi, chronic pulmonary edema; Related to Chronic Data: death

TCLo (Inhalation-Rabbit) 200 mg/m<sup>3</sup>/5 hours/28 weeks-intermittent: Lungs, Thorax, or Respiration: structural or functional change in trachea or bronchi, chronic pulmonary edema; Related to Chronic Data: death

TDLo (Intrapleural-Rat) 90 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria; Lungs, Thorax, or Respiration: tumors

TDLo (Implant-Rat) 200 mg/kg: Tumorigenic: neoplastic by RTECS criteria, tumors at site of application

TD (Implant-Rat) 200 mg/kg: Tumorigenic: equivocal tumorigenic agent by RTECS criteria, tumors at site of application

**ETHOXYLATED PROPOXYLATED ALCOHOL:**

Standard Draize Test (Eye-Rabbit) 100 µL/24 hours: Severe

**PROPRIETARY**

**ALIPHATIC DIOL:**

Standard Draize Test (Eye-Rabbit) 100 mg/1 hour: Mild

Eye Irritancy (rabbit) = 100 mg; mild

**PROPRIETARY ALIPHATIC DIOL:**

LD<sub>50</sub> (Oral-Rat) > 24 gm/kg: Gastrointestinal: hypermotility, diarrhea

Skin Irritancy (human) = 500 mg/7 days; mild

Skin Irritancy (human) = 104 mg/3 days/intermittent; moderate

Skin Irritancy (man) = 10%/2 days

TDLo (oral, child) = 79 g/kg/56 weeks/intermittent; Central nervous system effects, BRN



TDLo (parenteral, infant) = 10 g/kg/3 days/continuous; Systemic effects

LD<sub>50</sub> (oral, rat) = 20 g/kg

LD<sub>50</sub> (oral, mouse) = 22 g/kg

LD<sub>50</sub> (oral, rabbit) 18500 mg/kg

LD<sub>50</sub> (oral, dog) = 22 g/kg

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD	(BLUE)	1	
FLAMMABILITY HAZARD	(RED)	2	
PHYSICAL HAZARD	(YELLOW)	0	
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8
For Routine Industrial Use and Handling Applications			

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate  
3 = Serious 4 = Severe \* = Chronic hazard

## 11. TOXICOLOGICAL INFORMATION (Continued)

### TOXICITY DATA (continued):

#### PROPRIETARY ALIPHATIC DIOL (continued):

LD<sub>50</sub> (oral, guinea pig) = 18350 mg/kg  
 LD<sub>50</sub> (oral, quail) > 2080 mg/kg  
 LD<sub>50</sub> (intraperitoneal, rat) = 6660 mg/kg  
 LD<sub>50</sub> (intraperitoneal, mouse) = 9718 mg/kg  
 LD<sub>50</sub> (subcutaneous, rat) = 22,500 mg/kg  
 LD<sub>50</sub> (intravenous, rat) = 6423 mg/kg  
 LD<sub>50</sub> (intravenous, mouse) = 6630 mg/kg  
 LD<sub>50</sub> (intravenous, rabbit) = 6500 mg/kg  
 LD<sub>50</sub> (intravenous, dog) = 26 g/kg  
 LDLo (intravenous, chicken) = 27 g/kg; Vascular: other changes  
 LD<sub>50</sub> (intramuscular, rat) = 14 g/kg  
 LD<sub>50</sub> (subcutaneous, mouse) = 17,370 mg/kg  
 LDLo (subcutaneous, guinea pig) = 15500 mg/kg

#### PROPRIETARY ALIPHATIC DIOL: (continued):

LD<sub>50</sub> (skin, rabbit) = 20800 mg/kg  
 LDLo (intramuscular, rabbit) = 6300 mg/kg; Behavioral: somnolence (general depressed activity); Behavioral: coma; Lungs, Thorax, or Respiration: respiratory stimulation  
 TCLo (inhalation, rat) = 2180 mg/m<sup>3</sup>/6 hours/90 days/intermittent; Behavioral: food intake (animal); Endocrine: changes in spleen weight; Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: dehydrogenases  
 TDLo (intraperitoneal, mouse) = 100 mg/kg/15 days preg; Teratogenic effects  
 TDLo (intraperitoneal, mouse) = 100 mg/kg/11 days preg; Reproductive effects  
 Eye Irritancy (rabbit) = 500 mg/24 hours; mild  
 DNA Inhibition (subcutaneous, mouse) = 8000 mg/kg  
 Cytogenetic Analysis (subcutaneous, mouse) = 8000 mg/kg  
 Cytogenetic Analysis (fibroblast, hamster) = 32 g/L

**CARCINOGENIC POTENTIAL OF COMPONENTS:** Components are listed by agencies tracking the carcinogenic potential of chemical compounds as follows:

**ALUMINUM OXIDE (as fibrous dust):** MAK-2 (Substances that are Considered to be Carcinogenic for Man because sufficient data from long-term animal studies or limited to evidence from animal studies substantiated by evidence from epidemiological studies indicate that they can make a significant contribution to cancer risk.)

The remaining components of this product are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

**IRRITANCY OF PRODUCT:** Contact with this product can irritate the nose, throat, eyes, skin and other contaminated tissues.

**SENSITIZATION TO THE PRODUCT:** This product contains trace amounts of Methyl Paraben. Some information indicates Methyl Paraben may cause sensitization and allergic skin reaction in susceptible individuals from skin contact.

**REPRODUCTIVE TOXICITY INFORMATION:** This product has not been tested for reproductive toxicity effects; however, components are not known to cause human mutagenic, embryotoxic, teratogenic or reproductive toxicity effects.

## 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

**MOBILITY:** This product has not been tested for mobility in soil. The following information is available for some components.

**PROPRIETARY SILICON:** Water Solubility: Insoluble. Terrestrial Fate: If released to soil, this compound will absorb strongly and will remain essentially immobile. This compound will not volatilize to the atmosphere, nor will it biodegrade. This compound will not undergo hydrolysis except in clay soils which are known to catalyze this reaction at a rate dependent upon the amount of water present.

**PROPRIETARY ALIPHATIC DIOL:** The Koc of this compound is estimated as 8, using a log Kow of -0.92 and a regression-derived equation. According to a classification scheme, this estimated Koc value suggests that this material is expected to have very high mobility in soil.

**PERSISTENCE AND BIODEGRADABILITY:** This product has not been tested for persistence or biodegradability. It is expected that the components will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known. Data for components of this product are available as follows:

**PROPRIETARY SILICON:** If released to an aquatic environment, this material is expected to absorb strongly to sediment and suspended organic matter. Although insoluble in water, this material is not expected to bioconcentrate, due to its inherent hydrophobicity. This compound will not bioconcentrate in fish and aquatic environments as this compound is molecularly too large to pass through biological membranes and concentrate in fatty tissue. This compound will hydrolyze in water and will not volatilize to the atmosphere. If released to the atmosphere, this material will only enter the atmosphere if in aerosol form, due to its heavy molecular weight, very low vapor pressure and liquid physical state. The most likely atmospheric fate process is by dry deposition to the surface of the earth.

**PROPRIETARY ALIPHATIC DIOL:** Based on a classification scheme, an estimated Koc value of 8, determined from a log Kow of -0.92 and a regression-derived equation, indicates that this compound is expected to have very high mobility in soil. Volatilization from moist soil surfaces is not expected to be an important fate process given an estimated Henry's Law constant of 1.3X10<sup>-8</sup> atm-cu m/mole, derived from its vapor pressure, 0.13 mmHg, and water solubility, 1X10<sup>+6</sup> mg/liter. This compound is not expected to volatilize from dry soil surfaces based upon its vapor pressure. Laboratory experiments using agricultural soils from South Carolina conducted at 22 deg C and a fortification of 1,000 ppm, yielded 73-78% mineralization during a 51-day incubation period, suggesting that biodegradation will be an important fate process in soils. Based on a classification scheme, an estimated Koc value of 8, determined from a log Kow of -0.92 and a regression-derived equation, indicates that this compound is not expected to adsorb to suspended solids and sediment. Volatilization from water surfaces is not expected based upon an estimated Henry's Law constant of 1.3X10<sup>-8</sup> atm-cu m/mole, derived from its vapor pressure, 0.13 mmHg, and water solubility, 1X10<sup>+6</sup> mg/L. Numerous screening studies using wastewater or sewage inoculum as seed, suggests that this material will be degraded readily under aqueous environments. According to a model of gas/particle partitioning of semi-volatile organic compounds in the atmosphere, this compound, which has a vapor pressure of 0.13 mmHg at 25°C, is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase material is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 32 hours, calculated from its rate constant of 1.2X10<sup>-11</sup> cu cm/molecule-sec at 25°C

**BIO-ACCUMULATION POTENTIAL:** This product has not been tested for bio-accumulation potential. The following information is available for some components.

**PROPRIETARY ALIPHATIC DIOL:** An estimated BCF of 3 was calculated for this compound, using a log Kow of -0.92 and a regression-derived equation. According to a classification scheme, this BCF suggests the potential for bioconcentration in aquatic organisms is low.

**ECOTOXICITY:** This product has not been tested for aquatic or animal toxicity. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. All releases to terrestrial, atmospheric and aquatic environments should be avoided. Data for components of this product are available as follows:

#### PROPRIETARY ALIPHATIC DIOL:

EC<sub>50</sub> (*Photobacterium phosphoreum*, bacteria) 30 minutes = 26,800 mg/L  
 EC<sub>50</sub> (*Daphnia magna*, crustacean) 48 hours = 34,400 mg/L  
 EC<sub>50</sub> (*Daphnia magna*, crustacean) 24 hours = > 10,000 mg/L  
 EC<sub>50</sub> (*Nitocra spinipes*, crustacean) 96 hours = > 10,000 mg/L

#### PROPRIETARY ALIPHATIC DIOL PROPRIETARY ALIPHATIC DIOL (continued):

LC<sub>50</sub> (*Lebistes reticulatus*, guppy) 48 hours > 10,000 mg/L  
 LC<sub>50</sub> (*Carassius auratus*) 24 hours = > 5,000 mg/L  
 LC<sub>50</sub> (*Salmo gairdneri*) 24 hours = 50,000 mg/L  
 LC<sub>50</sub> (*Pimephales promelas*) 96 hours = 54,900 mg/L  
 LC<sub>50</sub> (*Artemia salina*) 24 hours = >10,000 mg/L

**RESULTS OF PBT AND vPvB ASSESSMENT:** No Data Available. PBT and vPvB assessments are part of the chemical safety report required for some substances in European Union Regulation (EC) 1907/2006, Article 14.

**OTHER ADVERSE EFFECTS:** The components of this product are not listed as having ozone depletion potential.

**ENVIRONMENTAL EXPOSURE CONTROLS:** Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

### 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHODS:** It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.

**DISPOSAL CONTAINERS:** Waste materials must be placed in and shipped in appropriate 5-gallon or 55-gallon poly or metal waste pails or drums. Permeable cardboard containers are not appropriate and should not be used. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

**PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING:** Wear proper protective equipment when handling waste materials.

**U.S. EPA WASTE NUMBER:** Not applicable.

**EWC WASTE CODE:** Wastes from shaping and physical and mechanical surface treatment of metals and plastics, not otherwise specified: 12 01 99

### 14. TRANSPORTATION INFORMATION

**U.S. DEPARTMENT OF TRANSPORTATION 49 CFR 172.101:** This material is classified as Dangerous Goods, per regulations of the DOT.

<b>UN Identification Number:</b>	UN 1993
<b>Proper Shipping Name:</b>	Flammable liquids, n.o.s. (Mineral Spirits)
<b>Hazard Class Number and Description:</b>	3 (Flammable)
<b>Packing Group:</b>	PG III
<b>Dot Label(s) Required:</b>	Class 3 (Flammable)
<b>Emergency Response Guidebook Number (2016):</b>	138
<b>Marine Pollutant:</b>	Components are not specifically listed as Marine Pollutants and do not meet the criteria of a Marine Pollutant (as defined by 49 CFR 172.101, Appendix B).

**TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** This material is classified as Dangerous Goods, per regulations of Transport Canada. The use of the above U.S. DOT information from the U.S. 49 CFR regulations is allowed for shipments that originate in the U.S. For shipments via ground vehicle or rail that originate in Canada, the following information is applicable.

<b>UN Identification Number:</b>	UN 1993
<b>Proper Shipping Name:</b>	Flammable liquid, n.o.s. (Mineral Spirits)
<b>Hazard Class Number and Description:</b>	3 (Flammable)
<b>Packing Group:</b>	PG III
<b>Hazard Label(s) Required:</b>	3 (Flammable)
<b>Special Provisions:</b>	16, 150
<b>Explosive Limit and Limited Quantity Index:</b>	5 L
<b>Excepted Quantities:</b>	E1
<b>ERAP Index:</b>	None
<b>Passenger Carrying Ship Index:</b>	None
<b>Passenger Carrying Road or Rail Vehicle Index:</b>	60 L
<b>Marine Pollutant:</b>	Components are not specifically listed as Marine Pollutants and do not meet the criteria of a Marine Pollutant under Transport Canada regulations, as per TDG 2.7.

**INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA):** This material is classified as dangerous goods, per the International Air Transport Association.

<b>UN Identification Number:</b>	UN 1993
<b>Proper Shipping Name:</b>	Flammable liquid, n.o.s. (Mineral Spirits)
<b>Hazard Class or Division:</b>	3 (Flammable)
<b>Hazard Label(s) Required:</b>	3 (Flammable)
<b>Packing Group:</b>	III
<b>Excepted Quantities:</b>	E1
<b>Passenger and Cargo Aircraft Packing Instruction:</b>	355
<b>Passenger and Cargo Aircraft Packing Maximum Net Quantity per Pkg.:</b>	60 L
<b>Passenger and Cargo Aircraft Packing Limited Quantity Packing Instruction:</b>	Y364
<b>Passenger and Cargo Aircraft Packing Limited Quantity Maximum Net Quantity per Pkg.:</b>	10 L
<b>Cargo Aircraft Only Packing Instruction:</b>	366
<b>Cargo Aircraft Only Maximum Net Quantity per Pkg.:</b>	120 L
<b>Special Provisions:</b>	A3
<b>ERG Code:</b>	3L



**14. TRANSPORTATION INFORMATION**

**INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO):** This compound is classified as dangerous goods, per the International Maritime Organization.

**UN No.:** 1993  
**Proper Shipping Name:** Flammable liquid, n.o.s. (Mineral Spirits)  
**Hazard Class Number:** 3  
**Packing Group:** III  
**Special Provisions:** 223, 274, 955  
**Limited Quantities:** 5 L  
**Excepted Quantities:** E1  
**Packing:** Instructions: P001, LP01; Provisions: None  
**IBCs:** Instructions: IBC03; Provisions: None  
**Tanks:** Instructions: T4; Provisions: TP1, TP29  
**EmS:** F-E, S-E  
**Stowage Category:** Category 1.  
**Segregation:** None

**Marine Pollutant:** Components do not meet the criteria of a Marine Pollutant under UN criteria.

**EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):** This material is classified by the Economic Commission for Europe to be dangerous goods.

**UN No.:** 1993  
**Name and Description:** Flammable liquid, n.o.s. (Mineral Spirits)  
**Classification Code:** F1  
**Class:** 3  
**Packing Group:** III  
**Labels:** 3  
**Special Provisions:** 274, 601  
**Limited Quantities:** 5 L  
**Excepted Quantities:** E1  
**Packagings and IBCs:** Packing Instruction: P001, IBC03, LP01, R001; Special Packing Instructions: None  
**Mixed Packing Provisions:** MP19  
**Portable Tanks and Bulk Containers:** Instructions: T4, Special Provisions: TP1, TP29  
**Hazard Identification Code:** 30

**TRANSPORT IN BULK ACCORDING TO THE IBC CODE:** See the information under the individual jurisdiction listings for IBC information.

**ENVIRONMENTAL HAZARDS:** This product does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not specifically listed in Annex III under MARPOL 73/78.

**15. REGULATORY INFORMATION**

**UNITED STATES REGULATIONS:**

**U.S. SARA Reporting Requirements:** The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

COMPONENT	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Aluminum Oxides (fibrous forms)	No	No	Yes

**U.S. SARA Threshold Planning Quantity (TPQ):** There are no specific Threshold Planning Quantities for this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

**U.S. CERCLA Reportable Quantity (RQ):** Not applicable.

**U.S. TSCA Inventory Status:** The components of this product are listed on the TSCA Inventory.

**Other U.S. Federal Regulations:** Not applicable.

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):** The components of this product are not on the California Proposition 65 Lists.

**CANADIAN REGULATIONS:**

**Canadian DSL/NDSL Status:** The components of this product are listed on the DSL inventory.

**Other Canadian Regulations:** Not applicable.

**Canadian Environmental Protection Agency (CEPA) Priorities Substances List:** No component of this product is on the Priority Substances Lists.

**Canadian WHMIS HPR 2015 Classification and Symbols:** See the following section for classification and symbols under WHMIS.

**EUROPEAN REGULATIONS:**

**Safety, Health, and Environmental Regulations/Legislation Specific for the Product:** None known.

**Chemical Safety Assessment:** No Data Available. The chemical safety assessment is required for some substances according to European Union Regulation (EC) 1907/2006, Article 14.

## 16. OTHER INFORMATION

**U.S. ANSI STANDARD LABELING (Precautionary Statements): CAUTION! FLAMMABLE LIQUID. MAY CAUSE EYE IRRITATION.** Avoid contact with eyes, skin and clothing. Avoid breathing mists or sprays. Keep container closed. Keep away from heat, sparks and flame. Use only with adequate ventilation. Wash thoroughly after use. Wear gloves, eye protection, respiratory protection, and appropriate body protection. **FIRST-AID:** In case of contact, immediately flush skin and eyes with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, foam, dry chemical, or CO<sub>2</sub>. **IN CASE OF SPILL:** Absorb spilled product with polypads or other suitable absorbing material. Place all spill residue in an appropriate container and seal. Dispose of in accordance with International, National, State, and local hazardous waste disposal regulations. Consult Safety Data Sheet for additional information.

**Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2208 Labeling and Classification:**

**Classification:** Flammable Liquid Category 3, Eye Irritation Category 2A

**Signal Word:** Warning

**Hazard Statement Codes:** H226: Combustible liquid. H319: Causes serious eye irritation.

**Precautionary Statements:**

**Prevention:** P210: Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P240: Ground/bond container and receiving equipment. P241: Use explosion-proof electrical/ventilating/lighting/equipment. P242: Use only non-sparking tools. P243: Take precautionary measures against static discharge. P264: Wash thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** P370 + P378: In case of fire: Use materials appropriate for surrounding fire for extinction. P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. P337 + P313: If eye irritation persists: Get medical advice/attention. P321: Specific treatment (remove from exposure and treat symptoms). Refer to other portions of precautionary text on this label, SDS or other product information sheets, as appropriate.

**Storage:** P403 + P233 + P235: Store in a well-ventilated place. Keep container tightly closed. Keep cool.

**Disposal:** P501: Dispose of contents/containers in accordance with all local, regional, national and international regulations.

**Hazard Symbol/Pictograms:** GHS02, GHS07

### CLASSIFICATION FOR COMPONENTS:

**Full Text Global Harmonization Under Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP Regulation (EC) 1272/2008:**

**Aluminum Oxide:** Notified classification.

**Classification:** Acute Oral Toxicity Category 4, Acute Inhalation Toxicity Category 4

**Hazard Statements:** H312 + H332: Harmful in contact with skin or if inhaled. H312 + H332: Harmful in contact with skin or if inhaled.

**Proprietary Silicon:** Notified classification.

**Classification:** Eye Irritation Category 2A, Aquatic Chronic Toxicity Category 3

**Hazard Statements:** H319: Causes serious eye irritation. H413: May cause long-lasting harmful effects to aquatic life. H413: May cause long-lasting harmful effects to aquatic life.

**Ethoxylated Propoxylated Alcohol:** Notified classification.

**Classification:** Eye Damage/Corrosion Category 1, Acute Oral Toxicity Category 4, Skin Irritation Category 2, Aquatic Chronic Toxicity Category 2

**Hazard Statements:** H318: Causes serious eye damage. H302: Harmful if swallowed. H315: Causes skin irritation. H411: Toxic to aquatic life with long-lasting effects.

**Proprietary Alkane Hydrocarbon:** Notified classification.

**Classification:** Flammable Liquid Category 3, Acute Oral Toxicity Category 3, Aspiration Hazard Category 1, Skin Irritation Category 2, Specific Target Organ Effects (Inhalation-Narcotic Effect) Single Exposure Category 3, Aquatic Chronic Toxicity Category 2

**Hazard Statements:** H226: Flammable liquid and vapour. H301: Toxic if swallowed. H304: May be fatal if swallowed and enters airways. H315: Causes skin irritation. H336: May cause drowsiness or dizziness. H412: Harmful to aquatic life with long-lasting effects.

**All Other Components:** No classification has been published or is applicable.

**REVISION DETAILS:** August 2014: Add Global Harmonization Standard compliance and up-date of entire SDS for current compliance. October 2017: Update SDS to the most current U.S., Canadian and European GHS classification. Remove old EU DPD classification.

**REFERENCES AND DATA SOURCES:** Contact the supplier for information.

**METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION:** Criteria of the GHS and CLP 1272: 2008 were used for classification.

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721-1961 • (800) 441-3365

**DATE OF PRINTING:** October 21, 2019

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, CA 96721 • (800) 441-3365 • (808) 969-4648 • info@msdsprep-csa.com

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. EZCLEAR assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, EZCLEAR assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

## DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these, which are commonly used, include the following:

**CAS #:** This is the Chemical Abstract Service Number that uniquely identifies each constituent.

**EXPOSURE LIMITS IN AIR:**

**CEILING LEVEL:** The concentration that shall not be exceeded during any part of the working exposure.

**DFG MAKs:** Federal Republic of Germany Maximum Concentration Values in the workplace. Exposure limits are given as TWA (Time-Weighted Average) or PEAK (short-term exposure) values.

**DFG MAK Germ Cell Mutagen Categories:** 1: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed humans. 2: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed mammals. 3A: Substances that have been shown to induce genetic damage in germ cells of human of animals, or which produce mutagenic effects in somatic cells of mammals *in vivo* and have been shown to reach the germ cells in an active form. 3B: Substances that are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell *in vivo*; in exceptional cases, substances for which there are no *in vivo* data, but that are clearly mutagenic *in vitro* and structurally related to known *in vivo* mutagens. 4: Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances] if research results make this seem sensible.) 5: Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is expected not to be significant.

**DFG MAK Pregnancy Risk Group Classification: Group A:** A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. **Group B:** Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A–C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.

**IDLH:** Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

**LOQ:** Limit of Quantitation.

**NE:** Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

**NIC:** Notice of Intended Change.

**NIOSH CEILING:** The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

**NIOSH RELs:** NIOSH's Recommended Exposure Limits.

**PEL:** OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL" is placed next to the PEL that was vacated by Court Order.

**SKIN:** Used when there is a danger of cutaneous absorption.

**STEL:** Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

**TLV:** Threshold Limit Value. An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

**TWA:** Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

**WEEL:** Workplace Environmental Exposure Limits from the ALHA.

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD**

**RATINGS:** This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

**HEALTH HAZARD: 0 Minimal Hazard:** No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation:* Essentially non-irritating. Mechanical irritation may occur. *PII or Draize = 0. Eye Irritation:* Essentially non-irritating, minimal effects clearing in < 24 hours. Mechanical irritation may occur. *Draize = 0. Oral Toxicity LD<sub>50</sub> Rat: > 5000 mg/kg. Dermal Toxicity LD<sub>50</sub> Rat or Rabbit: > 2000 mg/kg. Inhalation Toxicity 4-hrs LC<sub>50</sub> Rat: > 20 mg/L. 1 Slight Hazard:* Minor reversible injury may occur; may irritate the stomach if swallowed; may defat the skin and exacerbate existing dermatitis. *Skin Irritation:* Slightly or mildly irritating. *PII or Draize > 0 < 5. Eye Irritation:* Slightly to mildly irritating, but reversible within 7 days. *Draize > 0 ≤ 25. Oral Toxicity LD<sub>50</sub> Rat: > 500–5000 mg/kg. Dermal Toxicity LD<sub>50</sub> Rat or Rabbit: > 1000–2000 mg/kg. Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat: > 2–20 mg/L. 2 Moderate Hazard:* Temporary or transitory injury may occur; prolonged exposure may affect the CNS. *Skin Irritation:* Moderately irritating; primary irritant; sensitizer. *PII or Draize ≥ 5, with no destruction of dermal tissue. Eye Irritation:* Moderately to severely irritating; reversible corneal opacity; corneal involvement or irritation clearing in 8–21 days. *Draize = 26–100, with reversible effects. Oral Toxicity LD<sub>50</sub> Rat: > 50–500 mg/kg. Dermal Toxicity LD<sub>50</sub> Rat or Rabbit: > 200–1000 mg/kg. Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat: > 0.5–2 mg/L. 3 Serious Hazard:* Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation:* Severely irritating and/or corrosive; may cause destruction of dermal tissue, skin burns, and dermal necrosis. *PII or Draize > 5–8, with destruction of tissue.*

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):**

**HEALTH HAZARD (continued): 3 (continued):** *Eye Irritation:* Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. *Draize > 80 with effects irreversible in 21 days. Oral Toxicity LD<sub>50</sub> Rat: > 1–50 mg/kg. Dermal Toxicity LD<sub>50</sub> Rat or Rabbit: > 20–200 mg/kg. Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat: > 0.05–0.5 mg/L. 4 Severe Hazard:* Life-threatening; major or permanent damage may result from single or repeated exposure; extremely toxic; irreversible injury may result from brief contact. *Skin Irritation:* Not appropriate. Do not rate as a 4, based on skin irritation alone. *Eye Irritation:* Not appropriate. Do not rate as a 4, based on eye irritation alone. *Oral Toxicity LD<sub>50</sub> Rat: ≤ 1 mg/kg. Dermal Toxicity LD<sub>50</sub> Rat or Rabbit: ≤ 20 mg/kg. Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat: ≤ 0.05 mg/L.*

**FLAMMABILITY HAZARD: 0 Minimal Hazard:** Materials that will not burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes. **1 Slight Hazard:** Materials that must be pre-heated before ignition can occur. Material requires considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur. This usually includes the following: Materials that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C (200°F) (i.e. OSHA Class III B); and Most ordinary combustible materials (e.g. wood, paper, etc.). **2 Moderate Hazard:** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This usually includes the following: Liquids having a flash-point at or above 37.8°C (100°F); Solid materials in the form of course dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp); and Solids and semisolids (e.g. viscous and slow flowing as asphalt) that readily give off flammable vapors. **3 Serious Hazard:** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions. This usually includes the following: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 38°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. OSHA Class IB and IC); Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air (e.g., dusts of combustible solids, mists or droplets of flammable liquids); and Materials that burn extremely rapidly, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). **4 Severe Hazard:** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and that will burn readily. This usually includes the following: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. OSHA Class IA); and Materials that ignite spontaneously when exposed to air at a temperature of 54.4°C (130°F) or below (pyrophoric).

**PHYSICAL HAZARD: 0 Water Reactivity:** Materials that do not react with water. **Organic Peroxides:** Materials that are normally stable, even under fire conditions and will not react with water. **Explosives:** Substances that are Non-Explosive. **Compressed Gases:** No Rating. **Pyrophorics:** No Rating. **Oxidizers:** No 0 rating. **Unstable Reactives:** Substances that will not polymerize, decompose, condense, or self-react. **1 Water Reactivity:** Materials that change or decompose upon exposure to moisture. **Organic Peroxides:** Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy violently. **Explosives:** Division 1.5 & 1.6 explosives. Substances that are very insensitive explosives or that do not have a mass explosion hazard. **Compressed Gases:** Pressure below OSHA definition. **Pyrophorics:** No Rating. **Oxidizers:** Packaging Group III oxidizers; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)/cellulose mixture and the criteria for Packing Group I and II are not met. **Unstable Reactives:** Substances that may decompose, condense, or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosion hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors. **2 Water Reactivity:** Materials that may react violently with water. **Organic Peroxides:** Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. **Explosives:** Division 1.4 explosives. Explosive substances where the explosive effects are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. **Compressed Gases:** Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. **Pyrophorics:** No Rating. **Oxidizers:** Packing Group II oxidizers. Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 aqueous sodium chlorate solution (40%)/cellulose mixture and the criteria for Packing Group I are not met. **Reactives:** Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential (or low risk) for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature. **3 Water Reactivity:** Materials that may form explosive reactions with water. **Organic Peroxides:** Materials that are capable of detonation or explosive reaction, but require a strong initiating source or must be heated under confinement before initiation; or materials that react explosively with water. **Explosives:** Division 1.3 explosives. Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. **Compressed Gases:** Pressure ≥ 514.7 psi absolute at 21.1°C (70°F) [500 psig]. **Pyrophorics:** No Rating. **Oxidizers:** Packing Group I oxidizers. Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3:2 potassium bromate/cellulose mixture.



## DEFINITIONS OF TERMS (Continued)

## HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

**PHYSICAL HAZARD (continued): 3 (continued):** Liquids: any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)/cellulose mixture. *Unstable Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a moderate potential (or moderate risk) to cause significant heat generation or explosion. *4 Water Reactivity:* Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides:* Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives:* Division 1.1 & 1.2 explosives. Explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases:* No Rating. *Pyrophorics:* Add to the definition of Flammability 4. *Oxidizers:* No 4 rating. *Unstable Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a high potential (or high risk) to cause significant heat generation or explosion.

## NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

**HEALTH HAZARD: 0** Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 2000 mg/kg. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 2000 mg/kg. Materials essentially non-irritating to the respiratory tract, eyes, and skin. **1** Materials that, under emergency conditions, can cause significant irritation. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 10 mg/L but less than or equal to 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg. Materials that slightly to moderately irritate the respiratory tract, eyes and skin. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 500 mg/kg but less than or equal to 2000 mg/kg.

**2** Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 3,000 ppm but less than or equal to 5,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 200 mg/kg but less than or equal to 1000 mg/kg. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators. Materials that are primary skin irritants or sensitizers. Materials whose LD<sub>50</sub> for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. **3** Materials that, under emergency conditions, can cause serious or permanent injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 1,000 ppm but less than or equal to 3,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials corrosive to the skin. Cryogenic gases that cause frostbite and irreversible tissue damage. Compressed liquefied gases with boiling points below -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 5 mg/kg but less than or equal to 50 mg/kg.

**4** Materials that, under emergency conditions, can be lethal. Gases with an LC<sub>50</sub> for acute inhalation toxicity less than or equal to 1,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than ten times its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 1000 ppm. Dusts and mists whose LC<sub>50</sub> for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD<sub>50</sub> for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD<sub>50</sub> for acute oral toxicity is less than or equal to 5 mg/kg.

**FLAMMABILITY HAZARD: 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D of NFPA 704. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur: Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D of NFPA 704. Liquids, solids, and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the *Method of Testing for Sustained Combustibility*, per 49 CFR 173, Appendix H or the *UN Recommendations on the Transport of Dangerous Goods, Model Regulations* (current edition) and the related *Manual of Tests and Criteria* (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85% by weight. Liquids that have no fire point when tested by ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup*, up to the boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Most ordinary combustible materials. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.)

## NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

**FLAMMABILITY HAZARD (continued): 2 (continued):** Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures with air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal, and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily. Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air, Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

**INSTABILITY HAZARD: 0** Materials that in themselves are normally stable, even under fire conditions. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100 W/mL. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater.

## FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **Flash Point:** Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air near the surface of the liquid or within the test vessel used. **Autoignition Temperature:** Minimum temperature of a solid, liquid, or gas required to initiate or cause self-sustained combustion in air with no other source of ignition. **LEL:** Lowest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame. **UEL:** Highest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame.

## TOXICOLOGICAL INFORMATION:

**Human and Animal Toxicology:** Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. **LD<sub>50</sub>:** Lethal Dose (solids & liquids) that kills 50% of the exposed animals. **LC<sub>50</sub>:** Lethal Concentration (gases) that kills 50% of the exposed animals. **ppm:** Concentration expressed in parts of material per million parts of air or water. **mg/m<sup>3</sup>:** Concentration expressed in weight of substance per volume of air. **mg/kg:** Quantity of material, by weight, administered to a test subject, based on their body weight in kg. **TDLo:** Lowest dose to cause a symptom. **TCLo:** Lowest concentration to cause a symptom. **TD<sub>0</sub>, LDLo, and LD<sub>0</sub> or TC, TCo, LCLo, and LC<sub>0</sub>:** Lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** **IARC:** International Agency for Research on Cancer. **NTP:** National Toxicology Program. **RTECS:** Registry of Toxic Effects of Chemical Substances. **IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4.** Subrankings (2A, 2B, etc.) are also used. **Other Information:** **BEI:** ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

## REPRODUCTIVE TOXICITY INFORMATION:

A **mutagen** is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An **embryotoxin** is a chemical that causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A **teratogen** is a chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines. A **reproductive toxin** is any substance that interferes in any way with the reproductive process.

## ECOLOGICAL INFORMATION:

**EC:** Effect concentration in water. **BCF:** Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. **TLm:** Median threshold limit. **log K<sub>ow</sub> or log K<sub>oc</sub>:** Coefficient of Oil/Water Distribution is used to assess a substance's behavior in the environment.





## DEFINITIONS OF TERMS (Continued)

### REGULATORY INFORMATION:

#### U.S. and CANADA:

This section explains the impact of various laws and regulations on the material. EPA: U.S. Environmental Protection Agency. ACGIH: American Conference of Governmental Industrial Hygienists, a professional association that establishes exposure limits. OSHA: U.S. Occupational Safety and Health Administration. NIOSH: National Institute of Occupational Safety and Health, which is the research arm of OSHA. WHMIS: Canadian Workplace Hazardous Materials Information System. DOT: U.S. Department of Transportation. IC: Transport Canada. SARA: Superfund Amendments and Reauthorization Act. DSL/NDSL: Canadian Domestic/Non-Domestic Substances List. TSCA: U.S. Toxic Substance Control Act. CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act. Marine Pollutant status according to the DOT; CERCLA or Superfund; and various state regulations. This section also includes information on the precautionary warnings that appear on the material's package label.

### REGULATORY INFORMATION (continued):

#### EUROPE:

EU: European Union (formerly known as the EEC, European Economic Community). EINECS: European Inventory of Now-Existing Chemical Substances. ARD: European Agreement Concerning the International Carriage of Dangerous Goods by Road. RID: International Regulations Concerning the Carriage of Dangerous Goods by Rail.



# SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, Canadian WHMIS 2015 (HPR-GHS), European Union CLP EC 1272/2008, REACH, and the Global Harmonization Standard.

## 1. IDENTIFICATION of the SUBSTANCE or PREPARATION

### IDENTIFICATION of the SUBSTANCE or PREPARATION

Trade Name (as Labeled):

**EZCLEAR MILITARY HYDRATION SPRAY**  
(formerly Prep Polish)

Chemical Name/Class:

Silicon/Alcohol Polish

Synonyms:

None Allocated

Relevant Product Use:

Plastic Polish

Uses Advised Against:

Other than Relevant Use

Supplier/Manufacturer's Name:

**EZCLEAR** (formerly Plastek)

Address:

3300 Industry Drive; Signal Hill, CA 90755, USA

Business Phone:

+1-650-367-7075

Fax Phone:

+1 650-249-5163

European supplier/ distributor's name:

Address:

Business Phone:

Emergency Phone:

1-800-424-9300 (CHEMTREC) 24-hours [North America]

+1-703-527-3887 (CHEMTREC) 24-hours [International]

Email:

[info@ezclear.com](mailto:info@ezclear.com)

Website:

[www.ezclear.com](http://www.ezclear.com)

Date of Preparation:

August 19, 2014

Date of Revision:

October 19, 2017

NOTE: ALL United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, Canadian WHMIS 2015 [HPR-GHS], and European Union CLP EC 1272/2008, required information is included in appropriate sections based on the Global Harmonization Standard format.

## 2. HAZARD IDENTIFICATION

Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2008 Labeling and Classification:

**Classification:** Skin Irritation Cat. 2, Eye Irritation Cat. 2A, Acute Oral Toxicity Cat. 5, Acute Dermal Toxicity Cat. 5, Acute Inhalation Toxicity Cat. 5

**Signal Word:** Warning

**Hazard Statement Codes:** H315, H319, H303 + H313 + H333

**Precautionary Statement Codes:** P264, P280, P370 + P378, P302 + P352, P332 + P313, P305 + P351 + P338, P337 + P313, P321, P362 + P364, P403, P501

**Hazard Symbol/Pictogram:** GHS07



**EMERGENCY OVERVIEW: Product Description:** This product is a clear to slightly yellow liquid with a mild sweet to odor characteristic of the alcohol component. **Health Hazards:** May be harmful if ingested, in contact with skin or if inhaled. Contact with the eyes may cause irritation. Inhalation of high concentration for a prolonged period may adversely affect the central nervous system. Skin contact may cause irritation or cause systemic effects, especially if contact is prolonged. The Proprietary Glycol and Proprietary Aliphatic Alcohol components are suspect carcinogens. **Flammability Hazards:** This product may be combustible and may ignite if exposed to direct flame or if highly heated for a prolonged period. If exposed to extremely high temperatures, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., carbon and silicon oxides). **Reactivity Hazards:** This product is not known to be reactive. **Environmental Hazards:** This product may cause harm if released. **Emergency Response Procedures:** Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

## 3. COMPOSITION and INFORMATION ON INGREDIENTS

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Proprietary Silicon			1.0-5.0	Notified ECHA Classification - GHS, Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP 1272/2008: Classification: Eye Irritation Cat. 2A, Aquatic Chronic Toxicity Cat. 3 Hazard Classification Codes: H319, H413
Proprietary Aliphatic Alcohol			1.0-5.0	Harmonised Classification - Annex VI of Regulation (EC) NO 1272/2008 (CLP Regulation): Classification: Flammable Liquid Cat. 2, Eye Irritation Cat. 2A, STOT (Inhalation/Ingestion-Narcotic Effect) SE Cat. 3 Hazard Statement Codes: H225, H319, H336

See Section 16 for full text of Classification

### 3. COMPOSITION and INFORMATION ON INGREDIENTS (Continued)

Hazardous Ingredients:	CAS #	EINECS #	WT %	LABEL ELEMENTS GHS under U.S. OSHA, Canadian WHMIS HPR-GHS 2015 & EU Classification (1272/2008) Hazard Statement Codes
Proprietary Glycol			0.1-2.0	<i>Harmonised Classification - Annex VI of Regulation (EC) NO 1272/2008 (CLP Regulation):</i> Classification: Acute Oral Toxicity Cat. 4, Acute Dermal Toxicity Cat. 4, Acute Inhalation Toxicity Cat. 4, Skin Irritation Cat. 2, Eye Irritation Cat. 2A Hazard Classification Codes: H302 + H312 + H332, H319
Water and other trace constituents. Each of the other trace constituents is present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).			Balance	Classification: Not Applicable

Specific concentration of components is being withheld under confidential information. See Section 16 for full text of Classification

### 4. FIRST-AID MEASURES

**PROTECTION OF FIRST AID RESPONDERS:** Rescuers should not attempt to retrieve victims of exposure to this material without adequate personal protective equipment. Rescuers should be taken for medical attention, if necessary.

**DESCRIPTION OF FIRST AID MEASURES:** Remove victim(s) to fresh air, as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation, if necessary. Remove and isolate contaminated clothing and shoes. Seek immediate medical attention. Take copy of label and SDS to physician or other health professional with victim(s).

**Skin Exposure:** If this product contaminates the skin and irritation develops, immediately begin decontamination with soap and water. Remove exposed or contaminated clothing, taking care not to contaminate eyes. The contaminated individual must seek medical attention if adverse effects continue after flushing.

**Eye Exposure:** If this product enters the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. The contaminated individual must seek medical attention.

**Inhalation:** Although unlikely, if this product is inhaled or if fumes resulting from heating of product are inhaled, remove victim to fresh air. Seek medical attention if adverse symptoms continue after removal to fresh air.

**Ingestion:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. If professional advice is not available, do not induce vomiting. Victim should drink milk, egg whites, or large quantities of water. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing dermatitis, other skin conditions, and respiratory conditions may be aggravated by acute or chronic exposure to this product.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms and eliminate exposure.

### 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Not determined.

**AUTOIGNITION TEMPERATURE:** Not established.

**FLAMMABLE LIMITS (in air by volume, %):**

**Lower (LEL):** Not established. **Upper (UEL):** Not established.

**FIRE EXTINGUISHING MEDIA:** Fire extinguishing materials that can be used against fires of this product include carbon dioxide, dry chemical powder, halon, 'ABC' Class, or appropriate foam. Consideration for surrounding materials must be taken into account.

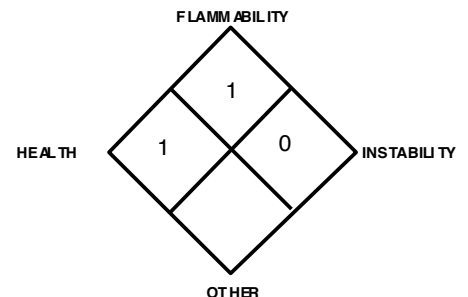
**UNSUITABLE FIRE EXTINGUISHING MEDIA:** None known.

**SPECIAL HAZARDS ARISING FROM THE PRODUCT:** This product may be combustible; it must be heated to a relatively high temperature before ignition can occur. When involved in a fire, the products of thermal decomposition may include irritating fumes and toxic gases (e.g., carbon and silicon oxides).

**Explosion Sensitivity to Mechanical Impact or Static Discharge:** Not applicable.

**SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS:** Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move containers from fire area if it can be done without risk to personnel. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

#### NFPA RATING



Hazard Scale: 0 = Minimal 1 = Slight  
2 = Moderate 3 = Serious 4 = Severe

### 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES:** Proper protective equipment should be used. In the event of a spill, clear the area and protect people. Eliminate all sources of ignition before cleanup begins. Use non-sparking tools. The atmosphere must have levels of components lower than those listed in Section 8, (Exposure Controls and Personal Protective Equipment) if applicable, and have at least 19.5 percent oxygen before personnel can be allowed into the area without Self-Contained Breathing Apparatus (SCBA).

---

## 6. ACCIDENTAL RELEASE MEASURES (Continued)

**PERSONAL PROTECTIVE EQUIPMENT:** Responders should wear the level of protection appropriate to the type of chemical released, the amount of the material spilled, and the location where the incident has occurred.

**Small Spills:** Wear rubber gloves, splash goggles, and appropriate body protection. Wipe up spilled paste with polypads or other suitable absorbent materials. Wash contaminated area with soap and water, absorb with paper towels, and rinse with water.

**Large Spills:** Trained personnel following pre-planned procedures should handle non-incident releases. Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield, and Tyvek suit. Minimum level of personal protective equipment for releases in which the level of oxygen is less than 19.5% or is unknown must be **Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus.** Wipe up spilled paste with polypads or other suitable absorbent materials. Prevent material from entering sewer or confined spaces, waterways, soil or public waters. Monitor area and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, before non-response personnel are allowed into the spill area.

**METHODS FOR CLEAN-UP AND CONTAINMENT:** Non sparking tools should be used.

**All Spills:** Access to the spill area should be restricted. Spread should be limited by gently covering the spill with polypads. Absorb spilled liquid with clay, sand, polypads, or other suitable inert absorbent materials. All contaminated absorbents and other materials should be placed in an appropriate container and seal. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). Dispose of recovered material and report spill per regulatory requirements. Remove all residue before decontamination of spill area. Clean spill area with soap and copious amounts of water. Monitor area for combustible vapor levels and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, and that levels are below applicable LELs (see Section 5 – Fire Fighting Measures) before non-response personnel are allowed into the spill area.

**ENVIRONMENTAL PRECAUTIONS:** Minimize use of water to prevent environmental contamination. Prevent spill or rinsate from contaminating storm drains, sewers, soil or groundwater. Place all spill residues in a suitable container and seal. Do not discharge effluent containing this product into streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

**OTHER INFORMATION:** U.S. regulations may require reporting of spills of this material that reach surface waters if a sheen is formed. If necessary, the toll-free phone number for the U.S. Coast Guard National Response Center is 1-800-424-8802.

**REFERENCE TO OTHER SECTIONS:** See information in Section 8 (Exposure Controls – Personal Protection) and Section 13 (Disposal Considerations) for additional information.

---

## 7. HANDLING and STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** All employees who handle this material should be trained to handle it safely. Use in a well ventilated location. Keep away from heat, sparks, and other sources of ignition. As with all chemicals, avoid getting this product ON YOU or IN YOU. Avoid breathing airborne fumes or vapors generated by this product. Wash thoroughly after using this product. Do not eat or drink while using this product. Remove contaminated clothing immediately. Open containers slowly on a stable surface. Do not expose containers to extreme temperatures.

**CONDITIONS FOR SAFE STORAGE:** Keep container tightly closed when not in use. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight or sources of intense heat. Containers should be separated from oxidizing materials by a minimum distance of 20 ft. or by a barrier of non-combustible material at least 5 ft. high having a fire-resistance rating of at least 0.5 hours. Storage areas should be made of fire resistant materials. Post warning and “NO SMOKING” signs in storage and use areas, as appropriate. Refer to NFPA 30, *Flammable and Combustible Liquids Code*, for additional information on storage. Have appropriate extinguishing equipment in the storage area (such as sprinkler systems or portable fire extinguishers). Keep away from heat, sparks, and other sources of ignition. Use non-sparking tools. Bond and ground containers during transfers of material. Store away from incompatible materials (see Section 10, Stability and Reactivity). Material should be stored in secondary containers, as appropriate. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged.

**SPECIFIC END USE(S):** This product is for use as a surface preparation for plastic polishing. Follow all industry standards for use of this product.

**PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT:** Follow practices indicated in Section 6 (Accidental Release Measures). If necessary, ensure that application equipment is locked and tagged-out safely. Collect all rinsates and dispose of according to applicable Federal, State, or local procedures.

---

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

**EXPOSURE LIMITS/CONTROL PARAMETERS:**

**Ventilation, Engineering, And Occupational Exposure Controls:** Use with adequate ventilation to ensure exposure levels are maintained below the limits provided in later in this Section. Use local exhaust ventilation. As with all products that contain chemicals, ensure proper decontamination equipment (e.g., eyewash/safety shower stations) are available near areas where this product is used as necessary.



**8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)**

**EXPOSURE LIMITS/CONTROL PARAMETERS (continued):**

**Occupational/Workplace Exposure Limits/Guidelines:**

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELs		NIOSH	OTHER
		TWA ppm	STEL ppm	TWA ppm	STEL ppm	TWA ppm	STEL ppm	IDLH ppm	
Proprietary Glycol		20 (skin)	NE	50 (skin) 25 (vacated 1989 PEL)	NE	5 (skin)	NE	700	DFG MAKs: TWA = 10 (sum of the concentration of EGBE and its acetate in air)/Skin PEAK: 2•MAK 15 min. average value, 4 per shift, 1-hr interval Pregnancy Risk Group: C Carcinogen: EPA-NL, IARC-3, MAK-4, TLV-A3
Proprietary Aliphatic Alcohol		200	400	200	500 (vacated 1989 PEL)	200	500	2000 (based on 10% of LEL)	DFG MAKs: TWA = 200 PEAK: 1•MAK 15 min. average value, 4 per shift, 1-hr interval Pregnancy Risk Group: C Carcinogen: IARC-3, TLV-A4
Proprietary Silicon		NE	NE	NE	NE	NE	NE	NE	NE

NE = Not Established. See Section 16 for Definitions of Terms Used

**International Occupational Exposure Limits:** Currently the following additional international exposure limits are in place for some components.

**PROPRIETARY GLYCOL:**

Australia: TWA = 20 ppm (96.9 mg/m<sup>3</sup>), STEL = 50 ppm (242 mg/m<sup>3</sup>), JUL 2008  
 Austria: MAK-TMW 20 ppm (98 mg/m<sup>3</sup>); KZW = 40 ppm (200 mg/m<sup>3</sup>), skin, 2007  
 Belgium: TWA = 20 ppm (98 mg/m<sup>3</sup>), MAR 2002  
 Belgium: STEL = 50 ppm (246 mg/m<sup>3</sup>), Skin, MAR 2002  
 Denmark: TWA = 20 ppm (98 mg/m<sup>3</sup>), skin, MAY 2011  
 EC: TWA = 98 mg/m<sup>3</sup> (20 ppm); STEL = 246 mg/m<sup>3</sup> (50 ppm), skin, JUN 2000  
 Finland: TWA = 20 ppm (98 mg/m<sup>3</sup>), STEL = 50 ppm (250 mg/m<sup>3</sup>), skin, NOV 2011  
 France: VME = 2 ppm (9.8 mg/m<sup>3</sup>), VLE = 30 ppm (147.6 mg/m<sup>3</sup>), Skin, FEB 2006  
 Germany: MAK = 10 ppm (49 mg/m<sup>3</sup>), skin, 2011  
 Hungary: TWA = 98 mg/m<sup>3</sup>, STEL = 246 mg/m<sup>3</sup>, Skin, SEP 2000  
 Iceland: TWA = 20 ppm (100 mg/m<sup>3</sup>), STEL = 50 ppm (246 mg/m<sup>3</sup>), skin, NOV 2011  
 Korea: TWA = 25 ppm (120 mg/m<sup>3</sup>), skin, 2006  
 Mexico: TWA = 26 ppm (120 mg/m<sup>3</sup>); STEL = 75 ppm (skin), 2004  
 The Netherlands: MAC-TGG = 100 mg/m<sup>3</sup>, Skin, 2003  
 New Zealand: TWA = 25 ppm (121 mg/m<sup>3</sup>), skin, JAN 2002  
 Norway: TWA = 20 ppm (100 mg/m<sup>3</sup>), JAN 1999  
 Peru: TWA = 20 ppm (97 mg/m<sup>3</sup>); STEL = 50 ppm (242 mg/m<sup>3</sup>), JUL 2005  
 The Philippines: TWA = 50 ppm (240 mg/m<sup>3</sup>), Skin, JAN 1993  
 Poland: MAC(TWA) = 100 mg/m<sup>3</sup>, MAC(STEL) = 360 mg/m<sup>3</sup>, JAN 1999  
 Russia: STEL = 5 mg/m<sup>3</sup>, JUN 2003  
 Sweden: TWA = 10 ppm (50 mg/m<sup>3</sup>); STEL = 20 ppm (100 mg/m<sup>3</sup>), Skin, JUN 2005  
 Switzerland: MAK-W = 10 ppm (49 mg/m<sup>3</sup>), KZG-W = 20 ppm (98 mg/m<sup>3</sup>), skin, JAN 2011  
 Turkey: TWA = 50 ppm (240 mg/m<sup>3</sup>), JAN 1993  
 United Kingdom: TWA = 25 ppm (123 mg/m<sup>3</sup>); STEL = 50 ppm (246 mg/m<sup>3</sup>), skin, OCT 2007

**PROPRIETARY GLYCOL (continued):**

In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV  
**PROPRIETARY ALIPHATIC ALCOHOL:**  
 Australia: TWA = 400 ppm (983 mg/m<sup>3</sup>), STEL = 500 ppm (1230 mg/m<sup>3</sup>), JUL 2008  
 Austria: MAK-TMW 200 ppm (500 mg/m<sup>3</sup>); KZW = 800 ppm (2000 mg/m<sup>3</sup>), 2007  
 Belgium: TWA = 400 ppm (997 mg/m<sup>3</sup>), MAR 2002  
 Belgium: STEL = 500 ppm (1248 mg/m<sup>3</sup>), MAR 2002  
 Denmark: TWA = 200 ppm (490 mg/m<sup>3</sup>), MAY 2011  
 France: VLE = 400 ppm (980 mg/m<sup>3</sup>), FEB 2006  
 Germany: MAK = 200 ppm (500 mg/m<sup>3</sup>), 2011  
 Hungary: TWA = 500 mg/m<sup>3</sup>, STEL = 2000 mg/m<sup>3</sup>, Skin, SEP 2000  
 Iceland: TWA = 200 ppm (490 mg/m<sup>3</sup>), skin, NOV 2011  
 Japan: CL = 400 ppm (980 mg/m<sup>3</sup>), MAY 2012  
 Korea: TWA = 400 ppm (980 mg/m<sup>3</sup>), STEL = 500 ppm (1225 mg/m<sup>3</sup>), 2006  
 Mexico: TWA = 400 ppm (980 mg/m<sup>3</sup>); STEL = 500 ppm (1225 mg/m<sup>3</sup>), 2004  
 The Netherlands: MAC-TGG = 650 mg/m<sup>3</sup>, 2003  
 New Zealand: TWA = 400 ppm (983 mg/m<sup>3</sup>); STEL = 500 ppm (1230 mg/m<sup>3</sup>), JAN 2002  
 Peru: TWA = 200 ppm (491 mg/m<sup>3</sup>); STEL = 400 ppm (983 mg/m<sup>3</sup>), JUL 2005  
 The Philippines: TWA = 400 ppm (980 mg/m<sup>3</sup>), JAN 1993  
 Poland: MAC(TWA) = 900 mg/m<sup>3</sup>, MAC(STEL) = 1200 mg/m<sup>3</sup>, JAN 1999  
 Russia: TWA = 10 mg/m<sup>3</sup>, STEL = 50 mg/m<sup>3</sup>, JUN 2003  
 Sweden: TWA = 150 ppm (350 mg/m<sup>3</sup>); STEL = 250 ppm (600 mg/m<sup>3</sup>), JUN 2005  
 Switzerland: MAK-W = 200 ppm (500 mg/m<sup>3</sup>), KZG-W = 400 ppm (1000 mg/m<sup>3</sup>), JAN 2011  
 Turkey: TWA = 200 ppm (500 mg/m<sup>3</sup>), JAN 1993  
 United Kingdom: TWA = 400 ppm (999 mg/m<sup>3</sup>); STEL = 500 ppm (1250 mg/m<sup>3</sup>), OCT 2007  
 In Argentina, Bulgaria, Colombia, Jordan, Singapore, Vietnam check ACGIH TLV

**ACGIH Biological Exposure Indices (BEIs):** Currently, the following ACGIH Biological Exposure Indices (BEIs) have been determined for some components of this product.

CHEMICAL: DETERMINANT	SAMPLING TIME	BEI
Proprietary Glycol • Sum of Butoxyacetic Acid (BAA) in Urine	• End of Shift	• 25 mg/L
Proprietary Aliphatic Alcohol • Acetone in urine	• End of Shift End of Workweek	• 40 mg/L

**PROTECTIVE EQUIPMENT:** The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132, including U.S. Federal OSHA Respiratory Protection (29 CFR 1910.134), OSHA Eye Protection 29 CFR 1910.133, OSHA Hand Protection 29 CFR 1910.138, OSHA Foot Protection 29 CFR 1910.136 and OSHA Body Protection 29 CFR 1910.132), equivalent standards of Canada (including CSA Respiratory Standard Z94.4-02, Z94.3-M1982, Industrial Eye and Face Protectors and CSA Standard Z195-02, Protective Footwear), or standards of EU member states (including EN 529:2005 for respiratory PPE, CEN/TR 15419:2006 for hand protection, and CR 13464:1999 for face/eye protection). Please reference applicable regulations and standards for relevant details.

**Respiratory Protection:** Maintain airborne contaminant concentrations below exposure limits listed above. For materials without listed exposure limits, minimize respiratory exposure. If necessary, use only respiratory protection authorized under appropriate regulations. Oxygen levels below 19.5% are considered IDLH by U.S. OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under U.S. OSHA's Respiratory Protection Standard (1910.134-1998).

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

### PROTECTIVE EQUIPMENT (continued):

**Respiratory Protection (continued):** The following are NIOSH respiratory protective equipment guidelines for Proprietary Aliphatic Alcohol and Proprietary Glycol, which can reach exposure limits in this product.

**Proprietary Glycol**

CONCENTRATION

RESPIRATORY PROTECTION

Up to 50 ppm:	Any Chemical Cartridge Respirator with organic vapor cartridge(s), or any Supplied-Air Respirator (SAR).
Up to 125 ppm:	Any SAR operated in a continuous-flow mode, or any Powered, Air-Purifying Respirator (PAPR) with organic vapor cartridge.
Up to 250 ppm:	Any Chemical Cartridge Respirator with a full facepiece and organic vapor cartridge(s), or any Air-Purifying, Full-Facepiece Respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister, or any PAPR with a tight-fitting facepiece and organic vapor cartridge(s), or any Self-Contained Breathing Apparatus (SCBA) with a full facepiece, or any SAR with a full facepiece.
Up to 700 ppm:	Any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.
Emergency or Planned Entry into Unknown Concentrations or IDLH Conditions:	Any SCBSA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive-pressure mode.
Escape:	Any Air-Purifying, Full-Facepiece Respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister, or any appropriate escape-type, SCBA.

**Proprietary Aliphatic Alcohol**

CONCENTRATION

RESPIRATORY PROTECTION

Up to 2000 ppm:	Any Supplied-Air Respirator (SAR) operated in a continuous-flow mode, or any Chemical Cartridge Respirator with a full facepiece and organic vapor cartridge(s), or any Air-Purifying, Full-Facepiece Respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister, or any Powered, Air-Purifying Respirator (PAPR) with organic vapor cartridge(s), or any Self-Contained Breathing Apparatus (SCBA) with a full facepiece, or any SAR with a full facepiece.
Emergency or Planned Entry into Unknown Concentrations or IDLH Conditions:	Any SCBA that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any SAR that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary SCBA operated in pressure-demand or other positive-pressure mode.
Escape:	Any Air-Purifying, Full-Facepiece Respirator (gas mask) with a chin-style, front- or back-mounted organic vapor canister, or any appropriate escape-type, SCBA.

**Eye Protection:** Wear splash goggles or safety glasses as appropriate for the task. Face shields are recommended if solutions are made. If necessary, refer to appropriate regulations.

**Hand Protection:** Wash hands and wrists before putting on and after removing gloves. During manufacture or other similar operations, wear the appropriate hand protection for the process. Use double gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS. Because all gloves are to some extent permeable and their permeability increases with time, they should be changed regularly (hourly is preferable) or immediately if torn or punctured. If necessary refer to appropriate regulations.

**Skin Protection:** Use appropriate protective clothing for the task (e.g., lab coat, etc.). If necessary, refer to the U.S. OSHA Technical Manual (Section VII: Personal Protective Equipment) or other appropriate regulations. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in appropriate regulations.

## 9. PHYSICAL and CHEMICAL PROPERTIES

**FORM:** Liquid.

**COLOR:** Clear to pale yellow.

**ODOR:** Mildly sweet or characteristic of the alcohol component.

**VISCOSITY:** Not available.

**ODOR THRESHOLD:** For Proprietary Glycol: 0.10 ppm [0.5 mg/m<sup>3</sup>] (detection); 0.48 ppm (100% recognition)

**pH:** Not determined.

**EVAPORATION RATE:** Not available.

**BOILING POINT:** Not established.

**MELTING/FREEZING POINT:** Not established.

**FLASH POINT:** Not applicable.

**FLAMMABILITY:** Combustible.

**EXPLOSIVE PROPERTIES:** Not explosive

**OXIDIZING PROPERTIES:** Not an oxidizer.

**VAPOR PRESSURE:** Not applicable.

**SPECIFIC GRAVITY @ 25°C:** 0.995

**SOLUBILITY:** Not available.

**SOLUBILITY IN WATER:** Not available.

**RELATIVE VAPOR DENSITY (air = 1):** Not determined.

**AUTOIGNITION TEMPERATURE:** Not determined.

**COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT):** Not determined.

**HOW TO DETECT THIS SUBSTANCE (warning properties):** The appearance of this product can be a distinguishing characteristic to identify it in event of accidental release.

## 10. STABILITY and REACTIVITY

**CHEMICAL STABILITY:** Stable under conditions of normal temperature and pressure.

**DECOMPOSITION PRODUCTS:** **Combustion:** Carbon and silicon oxides). **Hydrolysis:** None known.

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** This product would be incompatible to materials incompatible with water. Due to the Proprietary Aliphatic Alcohol component, this product may be incompatible with strong oxidizers, strong bases, perchloric acid, crotonaldehyde, phosgene, potassium butoxide, trinitromethane. Due to solvent content, this product may attack some plastics and some types of stainless steel.

**POSSIBILITY OF HAZARDOUS REACTION/POLYMERIZATION:** If exposed to high temperatures, this product may polymerize and generate excessive heat. A buildup of heat can occur in closed containers and may present a serious danger of overpressure of containers.

**CONDITIONS TO AVOID:** Exposure or contact to extreme temperatures and incompatible chemicals.

## 11. TOXICOLOGICAL INFORMATION

**SYMPTOMS OF EXPOSURE BY ROUTE OF EXPOSURE:** The most significant routes of occupational exposure are inhalation of vapors and contact with skin and eyes. The symptoms of exposure to this product, via route of exposure, are as follows:

**Inhalation:** Inhalation of aerosols from this product can irritate the nose, throat, and other tissues of the respiratory system. Symptoms of such exposure may include headache and other adverse effects on the central nervous system.

**Contact with Skin or Eyes:** If this product enters the eyes, it may cause redness and pain. Depending on the duration and concentration of exposure, skin contact may be irritating. Chronic skin contact may cause dermatitis.

**Skin Absorption:** The Proprietary Aliphatic Alcohol and Proprietary Glycol components can be absorbed through the skin. Prolonged skin contact over a wide area may result in some systemic effects.

**Ingestion:** Ingestion is not anticipated to be a significant route of occupational exposure for this product. If this product is swallowed (i.e., through poor hygiene practices), it may cause nausea, vomiting, and diarrhea.

**Injection:** Though not anticipated to be a significant route of exposure for this product, injection (via punctures or lacerations by contaminated objects) may cause redness at the site of injection.

**HEALTH EFFECTS OR RISKS FROM EXPOSURE:** An Explanation in Lay Terms.

**Acute:** Inhalation exposure may cause central nervous system effects.

**Chronic:** Chronic skin contact may cause dermatitis.

**TARGET ORGANS:** **Acute:** Skin, eyes, respiratory system, central nervous system. **Chronic:** Skin.

**TOXICITY DATA:** The following toxicological data are available for components of this product in 1% or greater concentration. Due to the large amount of data available for the Proprietary Aliphatic Alcohol and Proprietary Glycol components, only human data, irritation data, LD50 Oral-Rat or Mouse, LD50 Skin-Rabbit or Rat, LC50 Inhalation-Rat or Mouse are presented in this SDS. Contact EZCLEAR for information on other data available for components.

**PROPRIETARY GLYCOL:**



Open Irritation Test (Skin-Rabbit) 500 mg: Mild  
 Standard Draize Test (Eye-Rabbit) 100 mg: Severe  
 Standard Draize Test (Eye-Rabbit) 100 mg/24 hours: Moderate  
 LDLo (Oral-Human) 143 mg/kg  
 TDLo (Oral-Woman) 600 mg/kg: Behavioral: coma; Lungs, Thorax, or Respiration: dyspnea; Nutritional and Gross Metabolic: metabolic acidosis  
 TDLo (Oral-Woman) 7813 µL/kg: Behavioral: coma; Vascular: BP lowering not characterized in autonomic section; Nutritional and Gross Metabolic: metabolic acidosis  
 TCLo (Inhalation-Human) 195 ppm/8 hours: Gastrointestinal: nausea or vomiting  
 TCLo (Inhalation-Human) 100 ppm: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified; Sense Organs and Special Senses (Eye): effect, not otherwise specified; Lungs, Thorax, or Respiration: other changes  
 TCLo (Inhalation-Human) 1500 mg/m<sup>3</sup>: Sense Organs and Special Senses (Eye): conjunctive irritation; Liver: other changes; Kidney/Ureter/Bladder: other changes  
 LC<sub>50</sub> (Inhalation-Rat) 450 ppm/4 hours: Behavioral: ataxia; Nutritional and Gross Metabolic: weight loss or decreased weight gain  
 LC<sub>50</sub> (Inhalation-Rat) 2900 mg/m<sup>3</sup>/7 hours: Liver: other changes; Kidney/Ureter/Bladder: other changes; Blood: other hemolysis with or without anemia  
 LC<sub>50</sub> (Inhalation-Mouse) 3380 mg/m<sup>3</sup>/7 hours: Liver: other changes; Kidney/Ureter/Bladder: other changes; Blood: other hemolysis with or without anemia  
 LC<sub>50</sub> (Inhalation-Mouse) 700 ppm/7 hours: Behavioral: analgesia; Lungs, Thorax, or Respiration: dyspnea; Kidney/Ureter/Bladder: hematuria  
 LD<sub>50</sub> (Oral-Rat) 470 mg/kg  
 LD<sub>50</sub> (Oral-Rat) 917 mg/kg: Liver: other changes; Kidney/Ureter/Bladder: other changes; Blood: other hemolysis with or without anemia  
 LD<sub>50</sub> (Oral-Mouse) 1230 mg/kg: Behavioral: altered sleep time (including change in righting reflex), somnolence (general depressed activity); Skin and Appendages: hair  
 LD<sub>50</sub> (Oral-Mouse) 1167 mg/kg: Liver: other changes; Kidney/Ureter/Bladder: other changes; Blood: other hemolysis with or without anemia  
 LD<sub>50</sub> (Skin-Rabbit) 220 mg/kg

**PROPRIETARY ALIPHATIC ALCOHOL:**

TDLo (Oral-Man) 14,432 mg/kg: Behavioral: coma; Vascular: BP lowering not characterized in autonomic section; Lungs, Thorax, or Respiration: dyspnea  
 TDLo (Oral-Human) 223 mg/kg: Behavioral: hallucinations, distorted perceptions; Cardiac: pulse rate; Vascular: BP lowering not characterized in autonomic section  
 TDLo (Oral-Human) 286 mg/kg: Cardiac: arrhythmias (including changes in conduction); Behavioral: coma; Kidney/Ureter/Bladder: other changes  
 TDLo (Oral-Infant) 13 gm/kg: Behavioral: somnolence (general depressed activity), irritability; Gastrointestinal: nausea or vomiting  
 TDLo (Unreported-Human) 1375 mg/kg: Sense Organs and Special Senses (Eye): effect, not otherwise specified; Behavioral: somnolence (general depressed activity), hallucinations, distorted perceptions

**PROPRIETARY ALIPHATIC ALCOHOL (continued):**

LDLo (Oral-Man) 5272 mg/kg: Behavioral: coma; Vascular: BP lowering not characterized in autonomic section; Lungs, Thorax, or Respiration: chronic pulmonary edema  
 LDLo (Oral-Human) 3570 mg/kg: Behavioral: coma; Lungs, Thorax, or Respiration: respiratory depression; Gastrointestinal: nausea or vomiting  
 LDLo (Oral-Human) 571 mL/kg  
 LDLo (Unreported-Human) 2 mL/kg  
 LDLo (Unreported-Human) 2770 mg/kg  
 TCLo (Inhalation-Human) 35 ppm/4 hours: Cardiac: pulse rate; Lungs, Thorax, or Respiration: other changes  
 TCLo (Inhalation-Human) 150 ppm/2 hours: Biochemical: Enzyme inhibition, induction, or change in blood or tissue levels: other Enzymes  
 Standard Draize Test (Skin-Rabbit) 500 mg: Mild  
 Standard Draize Test (Eye-Rabbit) 100 mg: Severe  
 Standard Draize Test (Eye-Rabbit) 10 mg: Moderate  
 Standard Draize Test (Eye-Rabbit) 100 mg/24 hours: Moderate  
 LD<sub>50</sub> (Oral-Rat) 5045 mg/kg: Behavioral: altered sleep time (including change in righting reflex), somnolence (general depressed activity)  
 LD<sub>50</sub> (Oral-Rat) 5000 mg/kg: Behavioral: general anesthetic  
 LD<sub>50</sub> (Oral-Mouse) 3600 mg/kg: Behavioral: altered sleep time (including change in righting reflex), somnolence (general depressed activity)  
 LD<sub>50</sub> (Oral-Mouse) 3600 mg/kg: Behavioral: general anesthetic  
 LD<sub>50</sub> (Oral-Rabbit) 6410 mg/kg  
 LD<sub>50</sub> (Skin-Rabbit) 12,800 mg/kg  
 LD<sub>50</sub> (Intraperitoneal-Rat) 2735 mg/kg  
 LD<sub>50</sub> (Intraperitoneal-Mouse) 3444 mg/kg  
 LD<sub>50</sub> (Intraperitoneal-Mouse) 4477 mg/kg  
 LD<sub>50</sub> (Intraperitoneal-Guinea Pig) 2560 mg/kg  
 LD<sub>50</sub> (Intraperitoneal-Rabbit) 667 mg/kg  
 LD<sub>50</sub> (Intravenous-Rat) 1088 mg/kg  
 LD<sub>50</sub> (Intravenous-Mouse) 1509 mg/kg  
 LD<sub>50</sub> (Intravenous-Rabbit) 1184 mg/kg  
 LC<sub>50</sub> (Inhalation-Rat) 16,000 ppm/8 hours  
 LC<sub>50</sub> (Inhalation-Mouse) 53,000 mg/m<sup>3</sup>: Behavioral: general anesthetic; Lungs, Thorax, or Respiration: other changes  
 LC<sub>50</sub> (Inhalation-Rat) 72,600 mg/m<sup>3</sup>: Behavioral: general anesthetic; Lungs, Thorax, or Respiration: other changes  
**PROPRIETARY SILICON:**  
 LD<sub>50</sub> (Intravenous-Dog) 900 mg/kg: Lungs, Thorax, or Respiration: dyspnea, respiratory stimulation  
 LD<sub>50</sub> (Parenteral-Dog) 20 mg/kg: Brain and Coverings: other degenerative changes

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM			
HEALTH HAZARD	(BLUE)	1	
FLAMMABILITY HAZARD	(RED)	1	
PHYSICAL HAZARD	(YELLOW)	0	
PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8
For Routine Industrial Use and Handling Applications			

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate  
 3 = Serious 4 = Severe \* = Chronic hazard

## 11. TOXICOLOGICAL INFORMATION (Continued)

**CARCINOGENIC POTENTIAL OF COMPONENTS:** Components are listed by agencies tracking the carcinogenic potential of chemical compounds as follows:

**Proprietary Glycol:** ACGIH TLV-A3 (Confirmed Animal Carcinogen); EPA-NL (Not Likely to Be Carcinogenic to Humans); IARC-3 (Unclassifiable as to Carcinogenicity in Humans); MAK-4 (Substances with Carcinogenic Potential for Which Genotoxicity Play No or at Most, a Minor Role. Not significant contribution to human cancer risk is expected, provided the MAK value is observed.)

**PROPRIETARY ALIPHATIC ALCOHOL:** ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen); IARC-3 (Unclassifiable as to Carcinogenicity in Humans)

The remaining components of this product are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

**IRRITANCY OF PRODUCT:** Contact with this product can irritate the nose, throat, eyes, skin and other contaminated tissues.

**SENSITIZATION TO THE PRODUCT:** No component is known to cause human skin or respiratory sensitization.

**REPRODUCTIVE TOXICITY INFORMATION:** This product has not been tested for reproductive toxicity effects; however, components are not known to cause human mutagenic, embryotoxic, teratogenic or reproductive toxicity effects.

## 12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

**MOBILITY:** This product has not been tested for mobility in soil. The following information is available for some components.

**PROPRIETARY GLYCOL:** The Koc is estimated as 67, using a log Kow of 0.83 and a regression-derived equation. According to a classification scheme, this estimated Koc value suggests that this compound is expected to have high mobility in soil.

**PROPRIETARY ALIPHATIC ALCOHOL:** The Koc of this compound is estimated as 25, using a measured log Kow of 0.05 and a regression-derived equation. According to a classification scheme, this estimated Koc value suggests that this material is expected to have very high mobility in soil.

**PERSISTENCE AND BIODEGRADABILITY:** This product has not been tested for persistence or biodegradability. It is expected that the components will slowly degrade in the environment and form a variety of organic and inorganic materials; however, no specific information is known. Data for components of this product are available as follows:

**PROPRIETARY GLYCOL:** If released to air, a vapor pressure of 0.88 mm Hg at 25°C indicates this compound will exist solely as a vapor in the ambient atmosphere. Vapor-phase material will be degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 16 hours. If released to soil, this compound is expected to have high mobility based upon an estimated Koc of 67. Volatilization from moist soil surfaces is expected to be an important fate process based upon a Henry's Law constant of 1.60X10<sup>-6</sup> atm-cu m/mole. If released into water, this material is not expected to adsorb to suspended solids and sediment based upon the estimated Koc. This compound reached 91% of its theoretical BOD in 14 days using an activated sludge inoculum. Therefore this compound has the potential to biodegrade rapidly in water. Based upon this compound's estimated Henry's Law constant it is concluded that the volatilization from water surfaces may be an important fate process. The estimated volatilization half-lives for a model river and model lake are 25 and 185 days, respectively. Hydrolysis is not expected to be an important environmental fate process since this compound lacks functional groups that hydrolyze under environmental conditions.

**PROPRIETARY ALIPHATIC ALCOHOL:** Based on a classification scheme, an estimated Koc value of 25, determined from a log Kow of 0.05 and a regression-derived equation, indicates that this material is expected to have very high mobility in soil. Volatilization of this material from moist soil surfaces is expected to be an important fate process given a Henry's Law constant of 8.10X10<sup>-6</sup> atm-cu m/mole. The potential for volatilization of this compound from dry soil surfaces may exist based upon a vapor pressure of 45.4 mmHg. This material is readily degraded in aerobic systems; the range of half-lives for aerobic degradation using a sewage sludge inoculum are < 1 day to 48 days. This compound has also been shown to be readily degraded under anaerobic conditions. Volatilization from water surfaces is expected based upon a Henry's Law constant of 8.10X10<sup>-6</sup> atm-cu m/mole. Using this Henry's Law constant and an estimation method, volatilization half-lives for a model river and model lake are 57 hours and 29 days, respectively. This material is readily degraded in aerobic systems; the range of half-lives for aerobic degradation using a sewage sludge inoculum are < 1 day to 48 days. This compound has also been shown to be readily degraded under anaerobic conditions. According to a model of gas/particle partitioning of semi-volatile organic compounds in the atmosphere, this material, which has a vapor pressure of 45.4 mm Hg at 25°C, is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase material is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals; the half-life for this reaction in air is estimated to be 3.2 days, calculated from its rate constant of 5.07X10<sup>-12</sup> cu cm/molecule-sec at 25°C.

**BIO-ACCUMULATION POTENTIAL:** This product has not been tested for bio-accumulation potential. The following information is available for some components.

**PROPRIETARY GLYCOL:** An estimated BCF of 3 was calculated, using an estimated log Kow of 0.83 and a regression-derived equation. According to a classification scheme, this BCF suggests the potential for bioconcentration in aquatic organisms is low.

**PROPRIETARY ALIPHATIC ALCOHOL:** An estimated BCF of 3 was calculated for this compound, using a log Kow of 0.05 and a regression-derived equation. According to a classification scheme, this BCF suggests the potential for bioconcentration in aquatic organisms is low.

**ECOTOXICITY:** This product has not been tested for aquatic or animal toxicity. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. All releases to terrestrial, atmospheric and aquatic environments should be avoided. Data for components of this product are available as follows:

**PROPRIETARY GLYCOL:**

LC<sub>50</sub> (*Menidia beryllina* Inland silverside) 96 hours = 1250 mg/L  
 LC<sub>50</sub> (*Crangon crangon* brown shrimp) 96 hours = 775 mg/L (range: 550-950 mg/L)  
 LC<sub>50</sub> (*Lepomis macrochirus* Bluegill) 96 hours = 1,490 mg/L  
 LC<sub>50</sub> (*Carassius auratus* Goldfish) 24 hours = 1,700 mg/L  
 LC<sub>50</sub> (*Pimephales promelas* Fathead minnow) 96 hours = 2137 mg/L  
 LC<sub>50</sub> (*Oncorhynchus mykiss* Rainbow trout) 96 hours = > 1000 mg/L  
 LC<sub>50</sub> (*Crassostrea virginica* Oyster) 96 hours = 89 mg/L  
 LC<sub>50</sub> (*Cyprinodon variegatus* Sheepshead minnow) 96 hours = 116 mg/L

**PROPRIETARY ALIPHATIC ALCOHOL:**

EC<sub>50</sub> (*Daphnia magna*) 3,010 mg/L  
 EC<sub>50</sub> (*Pseudomonas putida*) 16 hours = 1,050 mg/L  
 LC<sub>50</sub> (*Artemia salina*) 24 hours = 16,700 mg/L  
 LC<sub>50</sub> (*Daphnia magna*) 24 hours = 9,500 mg/L  
 LC<sub>50</sub> (*Brachionus calyciflorus*) 24 hours = 28,600 mg/L  
 LC<sub>50</sub> (fathead minnow) 96 hours = 11,130 mg/L  
 LC<sub>50</sub> (*Poecilia reticulata* guppy) 7 days = 7,060 mg/L  
 LC<sub>50</sub> (*Daphnia magna*) 4,600 mg/L

**RESULTS OF PBT AND vPvB ASSESSMENT:** No Data Available. PBT and vPvB assessments are part of the chemical safety report required for some substances in European Union Regulation (EC) 1907/2006, Article 14.

**OTHER ADVERSE EFFECTS:** The components of this product are not listed as having ozone depletion potential.

**ENVIRONMENTAL EXPOSURE CONTROLS:** Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHODS:** It is the responsibility of the generator to determine at the time of disposal whether the product meets the criteria of a hazardous waste per regulations of the area in which the waste is generated and/or disposed of. Waste disposal must be in accordance with appropriate Federal, State, and local regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Shipment of wastes must be done with appropriately permitted and registered transporters.



**13. DISPOSAL CONSIDERATIONS (Continued)**

**DISPOSAL CONTAINERS:** Waste materials must be placed in and shipped in appropriate 5-gallon or 55-gallon poly or metal waste pails or drums. Permeable cardboard containers are not appropriate and should not be used. Ensure that any required marking or labeling of the containers be done to all applicable regulations.

**PRECAUTIONS TO BE FOLLOWED DURING WASTE HANDLING:** Wear proper protective equipment when handling waste materials.

**U.S. EPA WASTE NUMBER:** Not applicable.

**EWC WASTE CODE:** Wastes from shaping and physical and mechanical surface treatment of metals and plastics, not otherwise specified: 12 01 99

**14. TRANSPORTATION INFORMATION**

**U.S. DEPARTMENT OF TRANSPORTATION REGULATIONS:** This product is not classified as dangerous goods, per U.S. DOT regulations, under 49 CFR 172.101.

**TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** This product is not classified as Dangerous Goods, per regulations of Transport Canada.

**INTERNATIONAL AIR TRANSPORT ASSOCIATION/ICAO (IATA/ICAO):** This product is not classified as dangerous goods, per rules of IATA.

**INTERNATIONAL MARITIME ORGANIZATION (IMO):** This product is not classified as Dangerous Goods, per rules of IMO.

**EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR):** This product is not classified by the United Nations Economic Commission for Europe to be dangerous goods.

**TRANSPORT IN BULK ACCORDING TO THE IBC CODE:** Not applicable.

**ENVIRONMENTAL HAZARDS:** This product does not meet the criteria of environmentally hazardous according to the criteria of the UN Model Regulations (as reflected in the IMDG Code, ADR, RID, and ADN) and is not specifically listed in Annex III under MARPOL 73/78.

**15. REGULATORY INFORMATION**

**UNITED STATES REGULATIONS:**

**U.S. SARA Reporting Requirements:** The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

COMPONENT	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
Proprietary Glycol (as a glycol ether compound)	No	No	Yes
Proprietary Aliphatic Alcohol (mfg of strong acid process only)	No	No	Yes

**U.S. SARA Threshold Planning Quantity (TPQ):** There are no specific Threshold Planning Quantities for this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

**U.S. CERCLA Reportable Quantity (RQ):** The Proprietary Glycol component, as a glycol ether has no specific CERCLA RQ, although the class is a CERCLA hazardous substance. The Proprietary Glycol component, as a glycol ether has no specific CERCLA RQ, although the class is a CERCLA hazardous substance.

**U.S. TSCA Inventory Status:** The components of this product are listed on the TSCA Inventory.

**Other U.S. Federal Regulations:** Not applicable.

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):** The components of this product are not on the California Proposition 65 Lists.

**CANADIAN REGULATIONS:**

**Canadian DSL/NDL Status:** The components of this product are listed on the DSL inventory.

**Other Canadian Regulations:** Not applicable.

**Canadian Environmental Protection Agency (CEPA) Priorities Substances List:** The Proprietary Aliphatic Alcohol component is a Substance with Greatest Potential for Human Exposure Substance on Environment Canada/Health Canada Pilot Project List (CEPA 1999, Section 73). Meets categorization criteria: \*may present, to individuals in Canada, the greatest potential for exposure; or \*are persistent or bioaccumulative in accordance with the regulations, and inherently toxic to human beings or to non-human organisms, as determined by laboratory or other studies.

**Canadian WHMIS HPR 2015 Classification and Symbols:** See the following section for classification and symbols under WHMIS.

**EUROPEAN REGULATIONS:**

**Safety, Health, and Environmental Regulations/Legislation Specific for the Product:** None known.

**Chemical Safety Assessment:** No Data Available. The chemical safety assessment is required for some substances according to European Union Regulation (EC) 1907/2006, Article 14.

**16. OTHER INFORMATION**

**U.S. ANSI STANDARD LABELING (Precautionary Statements):** CAUTION! COMBUSTIBLE LIQUID. MAY CAUSE EYE AND SKIN IRRITATION. MAY BE HARMFUL IF INHALED, IN CONTACT WITH SKIN OR IF INGESTED. Avoid contact with eyes, skin and clothing. Avoid breathing mists or sprays. Keep container closed. Keep away from heat, sparks and flame.

## 16. OTHER INFORMATION (Continued)

**U.S. ANSI STANDARD LABELING (continued):** Use only with adequate ventilation. Wash thoroughly after use. Wear gloves, eye protection, respiratory protection, and appropriate body protection. **FIRST-AID:** In case of contact, immediately flush skin and eyes with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops or persists. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, foam, dry chemical, or CO<sub>2</sub>. **IN CASE OF SPILL:** Absorb spilled product with polypads or other suitable absorbing material. Place all spill residue in an appropriate container and seal. Dispose of in accordance with International, National, State, and local hazardous waste disposal regulations. Consult Safety Data Sheet for additional information.

**Global Harmonization under U.S. OSHA Hazard Communication Standard, Canadian WHMIS (HPR-GHS 2015), and EU CLP Regulation (EC) 1272/2208 Labeling and Classification:**

**Classification:** Skin Irritation Category 2, Eye Irritation Category 2A, Acute Oral Toxicity Category 5, Acute Dermal Toxicity Category 5, Acute Inhalation Toxicity Category 5

**Signal Word:** Warning

**Hazard Statement Codes:** H315: Causes skin irritation. H319: Causes serious eye irritation. H303 + H313 + H333: May be harmful if swallowed, in contact with skin or if inhaled.

**Precautionary Statements:**

**Prevention:** P264: Wash thoroughly after handling. P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response:** P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P332 + P313: If skin irritation occurs, get medical attention. P362 + P364: Take off contaminated clothing and wash it before reuse. P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. P337 + P313: If eye irritation persists: Get medical advice/attention. P321: Specific treatment (remove from exposure and treat symptoms). Refer to other portions of precautionary text on this label, SDS or other product information sheets, as appropriate.

**Storage:** None.

**Disposal:** P501: Dispose of contents/containers in accordance with all local, regional, national and international regulations.

**Hazard Symbol/Pictograms:** GHS07

### CLASSIFICATION FOR COMPONENTS:

**Full Text Global Harmonization Under Canadian WHMIS 2015, U.S. OSHA HazCom and EU CLP Regulation (EC) 1272/2008:**

**Proprietary Glycol:** Harmonized, published classification.

**Classification:** Acute Oral Toxicity Category 4, Acute Dermal Toxicity Category 4, Acute Inhalation Toxicity Category 4, Skin Irritation Category 2, Eye Irritation Category 2A

**Hazard Statements:** H312 + H332: Harmful in contact with skin or if inhaled. H315: Causes skin irritation. H319: Causes serious eye irritation.

**Proprietary Aliphatic Alcohol:** Harmonized published classification.

**Classification:** Flammable Liquid Category 2, Eye Irritation Category 2A, Specific Target Organ Toxicity (Inhalation/Ingestion-Narcotic Effect) Single Exposure Category 3

**Hazard Statements:** H225: Highly flammable liquid and vapour. H315: Causes skin irritation. H319: Causes serious eye irritation. H336: May cause drowsiness or dizziness.

**Proprietary Silicon:** Harmonized, published classification.

**Classification:** Eye Irritation Category 2A, Aquatic Chronic Toxicity Category 3

**Hazard Statements:** H319: Causes serious eye irritation. H413: May cause long-lasting harmful effects to aquatic life.

**All Other Components:** No classification has been published or is applicable.

**REVISION DETAILS:** August 2014: Add Global Harmonization Standard compliance and up-date of entire SDS for current compliance. October 2017: Update SDS to the most current U.S., Canadian and European GHS classification. Remove old EU DPD classification.

**REFERENCES AND DATA SOURCES:** Contact the supplier for information.

**METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION:** Criteria of the GHS and CLP 1272: 2008 were used for classification.

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, HI 96721-1961 • (800) 441-3365

**DATE OF PRINTING:** October 21, 2019

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc. • PO Box 1961, Hilo, CA 96721 • (800) 441-3365 • (808) 969-4648 • info@msdsprep-csa.com

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. EZCLEAR assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, EZCLEAR assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

## DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a SDS. Some of these, which are commonly used, include the following:

**CAS #:** This is the Chemical Abstract Service Number that uniquely identifies each constituent.

### EXPOSURE LIMITS IN AIR:

**CEILING LEVEL:** The concentration that shall not be exceeded during any part of the working exposure.

**DFG MAKs:** Federal Republic of Germany Maximum Concentration Values in the workplace. Exposure limits are given as TWA (Time-Weighted Average) or PEAK (short-term exposure) values.

**DFG MAK Germ Cell Mutagen Categories:** 1: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed humans. 2: Germ cell mutagens that have been shown to increase the mutant frequency in the progeny of exposed mammals. 3A: Substances that have been shown to induce genetic damage in germ cells of human of animals, or which produce mutagenic effects in somatic cells of mammals *in vivo* and have been shown to reach the germ cells in an active form.

### EXPOSURE LIMITS IN AIR (continued):

**DFG MAK Germ Cell Mutagen Categories (continued): 3B:** Substances that are suspected of being germ cell mutagens because of their genotoxic effects in mammalian somatic cell *in vivo*; in exceptional cases, substances for which there are no *in vivo* data, but that are clearly mutagenic in vitro and structurally related to known *in vivo* mutagens. 4: Not applicable (Category 4 carcinogenic substances are those with non-genotoxic mechanisms of action. By definition, germ cell mutagens are genotoxic. Therefore, a Category 4 for germ cell mutagens cannot apply. At some time in the future, it is conceivable that a Category 4 could be established for genotoxic substances with primary targets other than DNA [e.g. purely aneugenic substances] if research results make this seem sensible.) 5: Germ cell mutagens, the potency of which is considered to be so low that, provided the MAK value is observed, their contribution to genetic risk for humans is expected not to be significant.

## DEFINITIONS OF TERMS (Continued)

### EXPOSURE LIMITS IN AIR (continued):

**DFG MAK Pregnancy Risk Group Classification:** **Group A:** A risk of damage to the developing embryo or fetus has been unequivocally demonstrated. Exposure of pregnant women can lead to damage of the developing organism, even when MAK and BAT (Biological Tolerance Value for Working Materials) values are observed. **Group B:** Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. **Group C:** There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. **Group D:** Classification in one of the groups A–C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation.

**IDLH:** Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury.

**LOQ:** Limit of Quantitation.

**NE:** Not Established. When no exposure guidelines are established, an entry of NE is made for reference.

**NIC:** Notice of Intended Change.

**NIOSH CEILING:** The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday.

**NIOSH RELS:** NIOSH's Recommended Exposure Limits.

**PEL:** OSHA's Permissible Exposure Limits. This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL" is placed next to the PEL that was vacated by Court Order.

**SKIN:** Used when there is a danger of cutaneous absorption.

**STEL:** Short Term Exposure Limit, usually a 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a workday, even if the 8-hr TWA is within the TLV-TWA, PEL-TWA or REL-TWA.

**TLV:** Threshold Limit Value. An airborne concentration of a substance that represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour.

**TWA:** Time Weighted Average exposure concentration for a conventional 8-hr (TLV, PEL) or up to a 10-hr (REL) workday and a 40-hr workweek.

**WEEL:** Workplace Environmental Exposure Limits from the AIHA.

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:** This rating system was developed by the National Paint and Coating Association and has been adopted by industry to identify the degree of chemical hazards.

**HEALTH HAZARD: 0 Minimal Hazard:** No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation:* Essentially non-irritating. Mechanical irritation may occur. PII or Draize = 0. *Eye Irritation:* Essentially non-irritating, minimal effects clearing in < 24 hours. Mechanical irritation may occur. Draize = 0. *Oral Toxicity LD<sub>50</sub> Rat:* > 5000 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 2000 mg/kg. *Inhalation Toxicity 4-hrs LC<sub>50</sub> Rat:* > 20 mg/L. **1 Slight Hazard:** Minor reversible injury may occur; may irritate the stomach if swallowed; may defat the skin and exacerbate existing dermatitis. *Skin Irritation:* Slightly or mildly irritating. PII or Draize > 0 < 5. *Eye Irritation:* Slightly to mildly irritating, but reversible within 7 days. Draize > 0 ≤ 25. *Oral Toxicity LD<sub>50</sub> Rat:* > 500–5000 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 1000–2000 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 2–20 mg/L. **2 Moderate Hazard:** Temporary or transitory injury may occur; prolonged exposure may affect the CNS. *Skin Irritation:* Moderately irritating; primary irritant; sensitizer. PII or Draize ≥ 5, with no destruction of dermal tissue. *Eye Irritation:* Moderately to severely irritating; reversible corneal opacity; corneal involvement or irritation clearing in 8–21 days. Draize = 26–100, with reversible effects. *Oral Toxicity LD<sub>50</sub> Rat:* > 50–500 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 200–1000 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 0.5–2 mg/L. **3 Serious Hazard:** Major injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; corrosive. *Skin Irritation:* Severely irritating and/or corrosive; may cause destruction of dermal tissue, skin burns, and dermal necrosis. PII or Draize > 5–8, with destruction of tissue. *Eye Irritation:* Corrosive, irreversible destruction of ocular tissue; corneal involvement or irritation persisting for more than 21 days. Draize > 80 with effects irreversible in 21 days. *Oral Toxicity LD<sub>50</sub> Rat:* > 1–50 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* > 20–200 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* > 0.05–0.5 mg/L. **4 Severe Hazard:** Life-threatening; major or permanent damage may result from single or repeated exposure; extremely toxic; irreversible injury may result from brief contact. *Skin Irritation:* Not appropriate. Do not rate as a 4, based on skin irritation alone. *Eye Irritation:* Not appropriate. Do not rate as a 4, based on eye irritation alone. *Oral Toxicity LD<sub>50</sub> Rat:* ≤ 1 mg/kg. *Dermal Toxicity LD<sub>50</sub> Rat or Rabbit:* ≤ 20 mg/kg. *Inhalation Toxicity LC<sub>50</sub> 4-hrs Rat:* ≤ 0.05 mg/L.

**FLAMMABILITY HAZARD: 0 Minimal Hazard:** Materials that will not burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes. **1 Slight Hazard:** Materials that must be pre-heated before ignition can occur. Material requires considerable pre-heating, under all ambient temperature conditions before ignition and combustion can occur. This usually includes the following: Liquids that will burn in air when exposed to a temperature of 815.5°C (1500°F) for a period of 5 minutes or less; Liquids, solids and semisolids having a flash point at or above 93.3°C (200°F) (i.e. OSHA Class IIIB); and Most ordinary combustible materials (e.g. wood, paper, etc.). **2 Moderate Hazard:** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not, under normal conditions, form hazardous atmospheres in air, but under high ambient temperatures or moderate heating may release vapor in sufficient quantities to produce hazardous atmospheres with air. This usually includes the following: Liquids having a flash-point at or above 37.8°C (100°F); Solid materials in the form of coarse dusts that may burn rapidly but that generally do not form explosive atmospheres; Solid materials in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g. cotton, sisal, hemp); and Solids and semisolids (e.g. viscous and slow flowing as asphalt) that readily give off flammable vapors.

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued):

**FLAMMABILITY HAZARD (continued): 3 Serious Hazard:** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures, or, unaffected by ambient temperature, are readily ignited under almost all conditions. This usually includes the following: Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 38°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. OSHA Class IB and IC); Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air (e.g., dusts of combustible solids, mists or droplets of flammable liquids); and Materials that burn extremely rapidly, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). **4 Severe Hazard:** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air, and that will burn readily. This usually includes the following: Flammable gases; Flammable cryogenic materials; Any liquid or gaseous material that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. OSHA Class IA); and Materials that ignite spontaneously when exposed to air at a temperature of 54.4°C (130°F) or below (pyrophoric).

**PHYSICAL HAZARD: 0 Water Reactivity:** Materials that do not react with water. *Organic Peroxides:* Materials that are normally stable, even under fire conditions and will not react with water. *Explosives:* Substances that are Non-Explosive. *Compressed Gases:* No Rating. *Pyrophorics:* No Rating. *Oxidizers:* No 0 rating. *Unstable Reactives:* Substances that will not polymerize, decompose, condense, or self-react. **1 Water Reactivity:** Materials that change or decompose upon exposure to moisture. *Organic Peroxides:* Materials that are normally stable, but can become unstable at high temperatures and pressures. These materials may react with water, but will not release energy violently. *Explosives:* Division 1.5 & 1.6 explosives. Substances that are very insensitive explosives or that do not have a mass explosion hazard. *Compressed Gases:* Pressure below OSHA definition. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group III oxidizers; Solids: any material that in either concentration tested, exhibits a mean burning time less than or equal to the mean burning time of a 3:7 potassium bromate/cellulose mixture and the criteria for Packing Group I and II are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise time of a 1:1 nitric acid (65%)cellulose mixture and the criteria for Packing Group I and II are not met. *Unstable Reactives:* Substances that may decompose, condense, or self-react, but only under conditions of high temperature and/or pressure and have little or no potential to cause significant heat generation or explosion hazard. Substances that readily undergo hazardous polymerization in the absence of inhibitors. **2 Water Reactivity:** Materials that may react violently with water. *Organic Peroxides:* Materials that, in themselves, are normally unstable and will readily undergo violent chemical change, but will not detonate. These materials may also react violently with water. *Explosives:* Division 1.4 explosives. Explosive substances where the explosive effects are largely confined to the package and no projection of fragments of appreciable size or range are expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package. *Compressed Gases:* Pressurized and meet OSHA definition but < 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group II oxidizers. Solids: any material that, either in concentration tested, exhibits a mean burning time of less than or equal to the mean burning time of a 2:3 potassium bromate/cellulose mixture and the criteria for Packing Group I are not met. Liquids: any material that exhibits a mean pressure rise time less than or equal to the pressure rise of a 1:1 aqueous sodium chlorate solution (40%)cellulose mixture and the criteria for Packing Group I are not met. *Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure, but have a low potential (or low risk) for significant heat generation or explosion. Substances that readily form peroxides upon exposure to air or oxygen at room temperature. **3 Water Reactivity:** Materials that may form explosive reactions with water. *Organic Peroxides:* Materials that are capable of detonation or explosive reaction, but require a strong initiating source or must be heated under confinement before initiation; or materials that react explosively with water. *Explosives:* Division 1.3 explosives. Explosive substances that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but do not have a mass explosion hazard. *Compressed Gases:* Pressure ≥ 514.7 psi absolute at 21.1°C (70°F) [500 psig]. *Pyrophorics:* No Rating. *Oxidizers:* Packaging Group I oxidizers. Solids: any material that, in either concentration tested, exhibits a mean burning time less than the mean burning time of a 3:2 potassium bromate/cellulose mixture. Liquids: any material that spontaneously ignites when mixed with cellulose in a 1:1 ratio, or which exhibits a mean pressure rise time less than the pressure rise time of a 1:1 perchloric acid (50%)cellulose mixture. *Unstable Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a moderate potential (or moderate risk) to cause significant heat generation or explosion. **4 Water Reactivity:** Materials that react explosively with water without requiring heat or confinement. *Organic Peroxides:* Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressures. *Explosives:* Division 1.1 & 1.2 explosives. Explosive substances that have a mass explosion hazard or have a projection hazard. A mass explosion is one that affects almost the entire load instantaneously. *Compressed Gases:* No Rating. *Pyrophorics:* Add to the definition of Flammability 4. *Oxidizers:* No 4 rating. *Unstable Reactives:* Substances that may polymerize, decompose, condense, or self-react at ambient temperature and/or pressure and have a high potential (or high risk) to cause significant heat generation or explosion.

### NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS:

**HEALTH HAZARD: 0** Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 2000 mg/kg. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 2000 mg/kg. Materials essentially non-irritating to the respiratory tract, eyes, and skin. **1** Materials that, under emergency conditions, can cause significant irritation. Gases and vapors with an LC<sub>50</sub> for acute inhalation toxicity greater than 5,000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 10 mg/L but less than or equal to 200 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg.



## DEFINITIONS OF TERMS (Continued)

### NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

**HEALTH HAZARD (continued): 1 (continued):** Materials that slightly to moderately irritate the respiratory tract, eyes and skin. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 500 mg/kg but less than or equal to 2000 mg/kg. **2** Materials that, under emergency conditions, can cause temporary incapacitation or residual injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 3,000 ppm but less than or equal to 5,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 5000 ppm and that does not meet the criteria for either degree of hazard 3 or degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 2 mg/L but less than or equal to 10 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 200 mg/kg but less than or equal to 1000 mg/kg. Compressed liquefied gases with boiling points between -30°C (-22°F) and -55°C (-66.5°F) that cause severe tissue damage, depending on duration of exposure. Materials that are respiratory irritants. Materials that cause severe, but reversible irritation to the eyes or are lachrymators. Materials that are primary skin irritants or sensitizers. Materials whose LD<sub>50</sub> for acute oral toxicity is greater than 50 mg/kg but less than or equal to 500 mg/kg. **3** Materials that, under emergency conditions, can cause serious or permanent injury. Gases with an LC<sub>50</sub> for acute inhalation toxicity greater than 1,000 ppm but less than or equal to 3,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 3000 ppm and that does not meet the criteria for degree of hazard 4. Dusts and mists with an LC<sub>50</sub> for acute inhalation toxicity greater than 0.5 mg/L but less than or equal to 2 mg/L. Materials with an LD<sub>50</sub> for acute dermal toxicity greater than 40 mg/kg but less than or equal to 200 mg/kg. Materials that are corrosive to the respiratory tract. Materials that are corrosive to the eyes or cause irreversible corneal opacity. Materials corrosive to the skin. Cryogenic gases that cause frostbite and irreversible tissue damage. Compressed liquefied gases with boiling points below -55°C (-66.5°F) that cause frostbite and irreversible tissue damage. Materials with an LD<sub>50</sub> for acute oral toxicity greater than 5 mg/kg but less than or equal to 50 mg/kg. **4** Materials that, under emergency conditions, can be lethal. Gases with an LC<sub>50</sub> for acute inhalation toxicity less than or equal to 1,000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than ten times its LC<sub>50</sub> for acute inhalation toxicity, if its LC<sub>50</sub> is less than or equal to 1000 ppm. Dusts and mists whose LC<sub>50</sub> for acute inhalation toxicity is less than or equal to 0.5 mg/L. Materials whose LD<sub>50</sub> for acute dermal toxicity is less than or equal to 40 mg/kg. Materials whose LD<sub>50</sub> for acute oral toxicity is less than or equal to 5 mg/kg.

**FLAMMABILITY HAZARD: 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D of NFPA 704. **1** Materials that must be preheated before ignition can occur. Materials in this degree require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Materials that will burn in air when exposed to a temperature of 816°C (1500°F) for a period of 5 minutes in according with Annex D of NFPA 704. Liquids, solids, and semisolids having a flash point at or above 93.4°C (200°F) (i.e. Class IIIB liquids). Liquids with a flash point greater than 35°C (95°F) that do not sustain combustion when tested using the *Method of Testing for Sustained Combustibility*, per 49 CFR 173, Appendix H or the UN *Recommendations on the Transport of Dangerous Goods, Model Regulations* (current edition) and the related *Manual of Tests and Criteria* (current edition). Liquids with a flash point greater than 35°C (95°F) in a water-miscible solution or dispersion with a water non-combustible liquid/solid content of more than 85% by weight. Liquids that have no fire point when tested by ASTM D 92, *Standard Test Method for Flash and Fire Points by Cleveland Open Cup*, up to the boiling point of the liquid or up to a temperature at which the sample being tested shows an obvious physical change. Combustible pellets with a representative diameter of greater than 2 mm (10 mesh). Most ordinary combustible materials. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **2** Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and Class IIIA liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures with air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal, and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **3** Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class IB and IC liquids). Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. **4** Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or that are readily dispersed in air and will burn readily. Flammable gases. Flammable cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that ignite when exposed to air, Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent.

### NATIONAL FIRE PROTECTION ASSOCIATION HAZARD RATINGS (continued):

**INSTABILITY HAZARD: 0** Materials that in themselves are normally stable, even under fire conditions. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) below 0.01 W/mL. Materials that do not exhibit an exotherm at temperatures less than or equal to 500°C (932°F) when tested by differential scanning calorimetry. **1** Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 0.01 W/mL and below 10 W/mL. **2** Materials that readily undergo violent chemical change at elevated temperatures and pressures. Materials that have an instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 10 W/mL and below 100 W/mL. **3** Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) at or above 100 W/mL and below 1000 W/mL. Materials that are sensitive to thermal or mechanical shock at elevated temperatures and pressures. **4** Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures. Materials that have an estimated instantaneous power density (product of heat of reaction and reaction rate) at 250°C (482°F) of 1000 W/mL or greater.

### FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (NFPA). **Flash Point:** Minimum temperature at which a liquid gives off sufficient vapor to form an ignitable mixture with air near the surface of the liquid or within the test vessel used. **Autoignition Temperature:** Minimum temperature of a solid, liquid, or gas required to initiate or cause self-sustained combustion in air with no other source of ignition. **LEL:** Lowest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame. **UEL:** Highest concentration of a flammable vapor or gas/air mixture that will ignite and burn with a flame.

### TOXICOLOGICAL INFORMATION:

**Human and Animal Toxicology:** Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. **LD<sub>50</sub>:** Lethal Dose (solids & liquids) that kills 50% of the exposed animals. **LC<sub>50</sub>:** Lethal Concentration (gases) that kills 50% of the exposed animals. **ppm:** Concentration expressed in parts of material per million parts of air or water. **mg/m<sup>3</sup>:** Concentration expressed in weight of substance per volume of air. **mg/kg:** Quantity of material, by weight, administered to a test subject, based on their body weight in kg. **TDLo:** Lowest dose to cause a symptom. **TCLo:** Lowest concentration to cause a symptom. **TD<sub>0</sub>, LDLo, and LD<sub>0</sub> or IC, IC<sub>0</sub>, LCLo, and LC<sub>0</sub>:** Lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** **IARC:** International Agency for Research on Cancer. **NTP:** National Toxicology Program. **RTECS:** Registry of Toxic Effects of Chemical Substances. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information:** **BEI:** ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV.

### REPRODUCTIVE TOXICITY INFORMATION:

A **mutagen** is a chemical that causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An **embryotoxin** is a chemical that causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A **teratogen** is a chemical that causes damage to a developing fetus, but the damage does not propagate across generational lines. A **reproductive toxin** is any substance that interferes in any way with the reproductive process.

### ECOLOGICAL INFORMATION:

**EC:** Effect concentration in water. **BCE:** Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. **TLM:** Median threshold limit. **log K<sub>ow</sub> or log K<sub>oc</sub>:** Coefficient of Oil/Water Distribution is used to assess a substance's behavior in the environment.

### REGULATORY INFORMATION:

#### U.S. and CANADA:

This section explains the impact of various laws and regulations on the material. **EPA:** U.S. Environmental Protection Agency. **ACGIH:** American Conference of Governmental Industrial Hygienists, a professional association that establishes exposure limits. **OSHA:** U.S. Occupational Safety and Health Administration. **NIOSH:** National Institute of Occupational Safety and Health, which is the research arm of OSHA. **WHMIS:** Canadian Workplace Hazardous Materials Information System. **DOT:** U.S. Department of Transportation. **IC:** Transport Canada. **SARA:** Superfund Amendments and Reauthorization Act. **DSL/NDSL:** Canadian Domestic/Non-Domestic Substances List. **TSCA:** U.S. Toxic Substance Control Act. **CERCLA:** Comprehensive Environmental Response, Compensation, and Liability Act. Marine Pollutant status according to the DOT; CERCLA or Superfund; and various state regulations. This section also includes information on the precautionary warnings that appear on the material's package label.

#### EUROPE:

**EU:** European Union (formerly known as the EEC, European Economic Community). **EINECS:** European Inventory of Now-Existing Chemical Substances. **ARD:** European Agreement Concerning the International Carriage of Dangerous Goods by Road. **RID:** International Regulations Concerning the Carriage of Dangerous Goods by Rail.





# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY

**Product Name:** EZCLEAR Acrylic Cleaner

Identified uses: Cleaner for all hard shiny surfaces. Glass, plastic and metal.  
Uses advised against: None known.

Manufacturer or supplier's details

Company name of supplier: EZCLEAR  
Address: 3300 Industry Drive  
Signal Hill, CA90755  
Telephone: (650) 367-7075  
Emergency Phone: (650) 367-7075  
Email address (SDS): info@ezclear.com

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Based on evaluation of currently available data, this mixture is not classifiable as hazardous.

**Signal word:** N/A

**Hazard phrases:** No phrases apply.

**Precaution phrases:** No phrases apply.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

GHS Classification: Mixture Chemical  
characterization: Polysiloxane  
emulsion

Name	CAS-No.	Conc. (% w/w)
Water	7732-18-5	99.1%
Proprietary Ingredient 1	Proprietary	<1.0%
Proprietary Ingredient 2	Proprietary	<1.0%

Proprietary formulation: No hazardous ingredients above 1% or carcinogens above 0.1%. See section 11.

## 4. FIRST AID MEASURES

Eyes: Flush with water for 15 minutes.

Skin: No first aid should be needed.

Inhalation: No first aid should be needed. Remove to fresh air. Ingestion:  
Non-toxic. Give several glasses of water to dilute.

Comments: Treat according to person's condition and specifics of exposure.

## 5. FIRE-FIGHTING AND EXPLOSION DATA

Extinguisher media: Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.

Flammable limits in air % by volume: Lower N/A, Upper N/A Auto  
ignition temperature: N/A

Unusual fire and explosion hazards: None known

Special fire fighting measures: As with all fires, evacuate personnel to a safe area. Fire fighters should use self-contained breathing equipment and protective clothing.



---

## 6 ACCIDENTAL RELEASE MEASURES

Containment/clean up: Clean up remaining materials with a suitable absorbent. 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. You will need to determine which federal, state and local laws and regulations are applicable. Section 15 of this MSDS provides information regarding certain federal and state requirements. See section 8 for personal protective equipment for spills.

---

## 7. HANDLING AND STORAGE

Protect from freezing. Use with adequate ventilation. Avoid eye contact. Keep container closed. Internal consumption not recommended. Avoid spills on hard surfaces, spilled material, even in small quantities, may present a slip hazard.

Use reasonable care and store away from oxidizing materials.

---

## 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Respiratory Protection: None required.

Ventilation: Ventilation should be used to maintain exposure below the PEL and TLV.

Protective Gloves: Not required, rubber or vinyl gloves can be used if employees experience skin irritation. Polyvinylchloride. Silver Shield®. 4H®.

Eye Protection: Safety goggles should be worn when splash hazards are present.

Note: These precautions are for room temperature handling. Use at elevated temperature or aerosol/spray applications may require added precautions. For further information regarding aerosol inhalation toxicity, please refer to the guidance document regarding the use of silicone-based materials in aerosol applications that has been developed by the silicone industry ([www.SEHSC.com](http://www.SEHSC.com)).

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Liquid

Color: White Odor:

Some odor

pH: 7

Specific gravity@ 25° C: 1

Viscosity: Not determined

Freezing/Melting Point: 0° C (32° F)

Boiling point: > 65°C

Flash point: >100°C (closed cup) Vapor

pressure @ 25° C: Not determined

Solubility in water: Highly soluble

Reactivity in water: N/A

---



---

## 10. STABILITY AND REACTIVITY

Chemical Stability: Stable  
Hazardous polymerization: Hazardous polymerization will not occur.  
Conditions to avoid: None  
Hazardous decomposition products: Silicone dioxide, carbon dioxide and traces of incompletely burned carbon products.  
Incompatible Materials to avoid: Oxidizing agents.

---

## 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure.  
Inhalation, skin contact, ingestion, eye contact

Acute oral toxicity:	LD50: [rat] – Route: oral; dose: >90ml/kg
Acute inhalation toxicity:	LC50: Not available
Acute dermal toxicity:	Assessment: The substance or mixture has no acute dermal toxicity
Carcinogenicity:	Not classified based on available information
IARC:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

---

## 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.

---

## 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 of local laws may impose additional regulatory requirements regarding disposal.

---



---

## 14. TRANSPORTATION INFORMATION

### Domestic regulation

**DOT Road Shipment Information ( 49 CFR 172 . 101 )** Not regulated as dangerous good.

### International regulation Ocean

#### Shipment ( IMDG)

Not regulated as dangerous good.

### Air Shipment ( IATA- DGR)

Not regulated as dangerous good.

### UNRTDG

Not regulated as a dangerous good.

---

## 15. REGULATORY INFORMATION

### EPA SARA Title III Chemical Listings

#### Section 302 Extremely Hazardous Substances ( 40 CFR 355 )

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### Section 304 CERCLA Hazardous Substances ( 40 CFR 302 )

Calculated reportable quantity does not exceed reasonably attainable upper limit.

#### Section 313 Toxic Chemicals ( 40 CFR 370)

None present or none present in regulated quantities. 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.

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

NZIoC :	All ingredients listed or exempt.
AICS :	All ingredients listed or exempt.
IECSC :	All ingredients listed or exempt.
ENCS/ISHL :	All components are listed on ENCS/ISHL or exempted from inventory listing.
PICCS :	All ingredients listed or exempt.
TSCA :	All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.
KECI :	All ingredients listed, exempt or notified.

### Inventories

AICS (Australia), IECSC (China), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

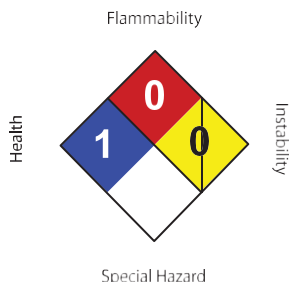
---





## 16. OTHER INFORMATION - SPECIAL PRECAUTIONS

NFPA:



HMIS III:

Health	1
Fire	0
Physical Hazard	0
Personal Protection	A

0 = Not significant, 1 = Slight,  
2 = Moderate, 3 = High,  
4 = Extreme, \* = Chronic  
A = Safety glasses

California Proposition 65:

None of the chemicals used in manufacturing the mixture are listed in the 'Chemicals Considered or Listed Under Proposition 65' database. This mixture contains no isopropyl alcohol.

IPA free:

Handling and Storage:

Keep from freezing. This material should be handled and stored per label and other instructions to ensure product integrity. Do not take internally.

Other precautions:

Exercise care in using this material with any pressurized systems offering potential for eye or skin injection. Avoid spills on hard surfaces, spilled material, even in small quantities, may present a slip hazard.

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.

N/A = Not Applicable

N/R = Not Regulated N/E

= Not Established

PEL = Permissible Exposure Level.

TLV = Threshold Limit Values

® indicates Registered Trademark.

Date: 13 Jul 2018