

# SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI, and Canadian WHMIS Standards

## 1. PRODUCT IDENTIFICATION

**TRADE NAME (AS LABELED):** SR-6 SLURRY SEAL SET RETARDER  
**CHEMICAL NAME/CLASS:** Cationic Emulsifier Salt Slurry  
**MANUFACTURER'S NAME:** COBITCO, INC.  
**ADDRESS:** 5301 NORTH BANNOCK STREET  
DENVER, CO 80216-1623  
**CHEMTREC: 1-800-424-9300**

**EMERGENCY PHONE:**

**BUSINESS PHONE:** (303) 296-8575  
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**DATE OF PREPARATION:** June, 27 2018

## 2. HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW: Product Description:** This product is a clear, colorless to yellow, odorless, liquid. **Health Hazards:** The primary health hazards associated with this product under normal and recommended circumstances of use are from moderate to severe irritation of exposed tissues. **Flammability Hazards:** This product is not flammable. Thermal decomposition of this product can produce irritating vapors and toxic gases (e.g., carbon oxides, nitrogen oxides, and hydrogen chloride). **Reactivity Hazards:** This product is not normally reactive. **Environmental Hazards:** This product is harmful to contaminated terrestrial life. This product is toxic to contaminated aquatic life. **Emergency Response Considerations:** Emergency responders must wear proper personal protective equipment of for the situation to which they are responding.

**SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE:** The chief health hazard associated with end-use applications of this product would be irritation of contaminated skin and eyes. Other potential health effects, via route of exposure, are as follows:

**INHALATION:** Inhalation of mists or sprays of this product can moderately to severely irritate the nose throat, and lungs. Symptoms can include coughing, sneezing, difficulty breathing, and sore throat.

**CONTACT WITH SKIN or EYES:** Skin contact with this product can cause pain, severe irritation, redness, and discomfort. Repeated skin contact can cause dermatitis (dry, red skin). Splashes, mists, and sprays of this product can severely irritate the eyes and cause pain, redness, and tearing. Depending on the duration of exposure, eye contact may damage the eyes.

**SKIN ABSORPTION:** The components of this product are not currently known to be absorbed through the skin.

**INGESTION:** Though not anticipated to be a significant route of occupational exposure, ingestion of this product can irritate the mouth, throat, and other tissues of the gastrointestinal system. Symptoms of such overexposure can include nausea, vomiting, and diarrhea.

**INJECTION:** Though not anticipated to be a significant route of occupational exposure, injection of this material (via puncture with a contaminated object) would cause pain, irritation, and swelling in addition to the wound.

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

**ACUTE:** This product can moderately to severely irritate all contaminated tissues, causing pain and discomfort. Ingestion can cause nausea, vomiting, and diarrhea

**CHRONIC:** Repeated skin contact can cause dermatitis (dry, red skin). See Section 11 (Toxicological Information) for further information.

**TARGET ORGANS:** ACUTE: Skin, eyes. CHRONIC: Skin.



### HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

<b>HEALTH HAZARD</b>	(BLUE)	2
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<b>FLAMMABILITY HAZARD</b>	(RED)	0
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<b>PHYSICAL HAZARD</b>	(YELLOW)	0
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### 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

### 3. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% v/v
Proprietary C-21 Dicarboxylic Amido Alkyl Amine hydrochloride		20–30
Hydrochloric Acid	7647-01-0	0.1–0.9
Water and other components. Each of the other components are present in less than 1 percent concentration (or 0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).	None of the other components contribute significant, additional, hazards at the concentrations present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards and Canadian Workplace Hazardous Materials Identification System Standards (CPR 4).	Balance

NOTE: All Canadian WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.

### 4. FIRST-AID MEASURES

Victims of chemical exposure must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Immediate first-aid treatment is recommended for overexposures. Take copy of label and SDS to physician or health professional with victim.

**EYE EXPOSURE:** If this product enters the eyes, *immediately* open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have the victim "roll" eyes. The recommended minimum flushing time is 15 minutes. If any adverse effect, discomfort or sight changes occur after 15 minutes of rinsing, victim must seek immediate medical attention.

**SKIN EXPOSURE:** If this product contaminates the skin, decontaminate with running water for at least 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victims must seek medical attention if adverse effects occur.

**INHALATION:** If mists or sprays of this product are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Victims must seek medical attention if adverse effects occur.

**INGESTION:** If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT INDUCE VOMITING. Have victim rinse mouth with water if conscious. Never induce vomiting or give a diluent (e.g., water) to someone who is unconscious, having convulsions, or unable to swallow. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing dermatitis and other skin conditions may be aggravated by overexposure to this product.

**RECOMMENDATIONS TO PHYSICIANS:** Treat symptoms. Eliminate overexposure.

### 5. FIRE-FIGHTING MEASURES

**FLASH POINT:** Not flammable.

**AUTOIGNITION TEMPERATURE:** Not applicable.

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

Lower (LEL): Not applicable.

Upper (UEL): Not applicable.

**FIRE EXTINGUISHING MATERIALS:**

Water Spray: YES (for cooling)

Foam: YES

Halon: YES

Carbon Dioxide: YES

Dry Chemical: YES

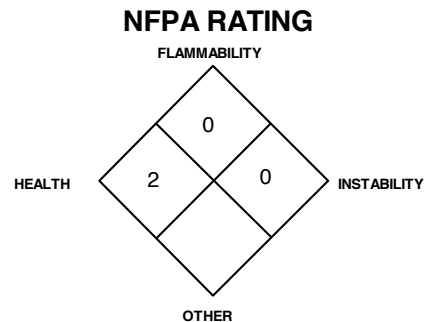
Other: Any "ABC" Class.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** This product can moderately to severely irritate contaminated tissue. When involved in a fire, this material may decompose and produce irritating vapors and toxic gases (e.g., carbon oxides, nitrogen oxides, and hydrogen chloride). Containers of this product can rupture in a fire situation due to internal water vapor (steam) pressure.

**Explosion Sensitivity to Mechanical Impact:** Not sensitive.

**Explosion Sensitivity to Static Discharge:** Not sensitive.

**SPECIAL FIRE-FIGHTING PROCEDURES:** Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Chemical resistant clothing may be necessary. Move fire-exposed containers if it can be done without risk to firefighters. If possible, firefighters should control runoff water to prevent environmental contamination. Rinse contaminated equipment with soapy water before returning such equipment to service.



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

## 6. ACCIDENTAL RELEASE MEASURES

**SPILL AND LEAK RESPONSE:** Trained personnel using pre-planned procedures should respond to uncontrolled releases. Proper protective equipment should be used. In case of a spill, clear the affected area and protect people. Monitor the area for levels of this product's components and the level of oxygen. Monitoring must indicate that exposure levels are below those provided in Section 8 (Exposure Controls-Personal Protection) and that oxygen levels are above 19.5% before anyone is permitted in the area without Self-Contained Breathing Apparatus. For small releases, clean up spilled liquid wearing gloves, goggles, faceshield, and suitable body protection. The minimum Personal Protective Equipment recommended for response to non-incident releases should be **triple-gloves (neoprene gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, and hard-hat. Self-Contained Breathing Apparatus must be selected if releases that occur in confined or poorly ventilated areas or in situations in which the level of oxygen is below 19.5%.** Absorb spilled liquid with polypads or other suitable absorbent materials. Decontaminate the area thoroughly. Place all spill residue in a suitable container. Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations or the applicable regulations of Canada and its Provinces (see Section 13, Disposal Considerations).

## 7. HANDLING and STORAGE

**WORK AND HYGIENE PRACTICES:** As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing mists or sprays generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately. Eyewash stations and safety showers should be in areas of use of this material.

**STORAGE AND HANDLING PRACTICES:** All employees who handle this material should be trained to handle it safely. Open containers slowly on a stable surface. Keep container tightly closed when not in use. Containers of this product must be properly labeled. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible materials (see Section 10, Stability and Reactivity). Material should be stored in secondary containers or in a diked area as appropriate. Floors should be sealed to prevent absorption of this material. If appropriate, post warning signs in storage and use areas. Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged. Empty containers may contain residual liquid or vapors; therefore, empty containers should be handled with care. Never store food, feed, or drinking water in containers that held this product.

**BULK SHIPMENTS:** Bulk shipments of this product should be loaded and unloaded in strict accordance with truck manufacturer recommendation and all established onsite safety procedures. Appropriate personal protective equipment must be used (see Section 8, Exposure Controls-Personal Protection). All loading and unloading equipment must be inspected, prior to each use. Loading and unloading operations must be attended at all times. Trucks must be level and wheels must be locked or blocked prior to loading or unloading. Truck and material-handling equipment must be verified to be correct for receiving this product and be properly prepared prior to starting the transfer operations. Hoses must be verified to be free of incompatible chemicals prior to connection to the truck. Valves and hoses must be verified to be in the correct positions before starting transfer operations.

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

## 8. EXPOSURE CONTROLS - PERSONAL PROTECTION

**VENTILATION AND ENGINEERING CONTROLS:** This product is normally used and applied outdoors; mechanical or other type of ventilation should not be needed. If this product is used in an area which does lead to inhalation hazard, use adequate ventilation to ensure exposure levels are maintained below the limits provided in Section 2 (Composition and Information on Ingredients), if applicable. A source of water should be nearby use for rinsing of contaminated skin or eyes.

**EXPOSURE LIMITS/GUIDELINES:**

CHEMICAL NAME	CAS #	EXPOSURE LIMITS IN AIR							
		ACGIH-TLVs		OSHA-PELs		NIOSH-RELS		NIOSH	OTHER
		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>	IDLH mg/m <sup>3</sup>	mg/m <sup>3</sup>
Proprietary C-21 Dicarboxylic Amido Alkyl Amine		NE	NE	NE	NE	NE	NE	NE	NE
Hydrochloric Acid	7647-01-0	NE	2.98 (ceiling)	NE	7 (ceiling)	NE	7 (ceiling)	74.5	DFG MAK: TWA = 3 PEAK = 2*MAK 15 min, average value Pregnancy Risk Group C Carcinogen: IARC-3: TLV-A4

NE = Not Established.

NIC (Notice of Intended Change)

See Section 16 for Definitions of Terms Used.

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

**RESPIRATORY PROTECTION:** None normally required for routine industrial use. If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, the Canadian CSA Standard Z94.4-02, or applicable standards of Canadian Provinces. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

**EYE PROTECTION:** Splash goggles or safety glasses. Wear a face shield when using more than 1 gallon of this product. If necessary, refer to U.S. OSHA 29 CFR 1910.133 or the Canadian CSA Standard Z94.3-02, *Industrial Eye and Face Protectors*.

**HAND PROTECTION:** Wear rubber gloves for routine industrial use. Resistance of specific materials can vary from product to product. Evaluate resistance under conditions of use and maintain clothing carefully. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this SDS. If necessary, refer to U.S. OSHA 29 CFR 1910.138.

**BODY PROTECTION:** Use body protection appropriate for task. Clothing such as protective coveralls with long sleeves and full-length legs is suggested. Full-body chemical protective clothing is recommended for emergency response procedures. If necessary, refer to the OSHA Technical Manual (Section VII: Personal Protective Equipment). If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136 and the Canadian CSA Standard Z195-02, *Protective Footwear*.

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## 9. PHYSICAL and CHEMICAL PROPERTIES

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

**pH:** 2.1–2.6

**SPECIFIC GRAVITY (water = 1):** Not determined.

**MELTING POINT:** Not determined.

**SOLUBILITY IN WATER:** Not determined.

**BOILING POINT:** Not determined.

**VAPOR PRESSURE:** Not determined.

**VISCOSITY:** Not determined.

**PARTITION COEFFICIENT (n-octanol/water):** Not determined

**EVAPORATION RATE (n-BuAc = 1):** Not determined.

**APPEARANCE, ODOR and COLOR:** This product is a clear, colorless to yellow, odorless, liquid.

**HOW TO DETECT THIS SUBSTANCE (warning properties):** The appearance may act as a warning property associated with this product.

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## 10. STABILITY and REACTIVITY

**STABILITY:** Stable.

**DECOMPOSITION PRODUCTS:** The products of thermal decomposition from this product include irritating vapors and toxic gases (e.g., carbon oxides, nitrogen oxides, and hydrogen chloride).

**MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE:** This product is not compatible with strong oxidizers and water-reactive materials.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Avoid exposure to and contact with extreme temperatures and incompatible materials.

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## 11. TOXICOLOGICAL INFORMATION

**TOXICITY DATA:** The following toxicological data are available for the Proprietary C-21 Dicarboxylic Amido Alkyl Amine component.

**PROPRIETARY C-21 DICARBOXYLIC AMIDO ALKYL AMINE:**  
LD<sub>50</sub> (Oral-Rat) 459 mg/kg

**GENERAL TOXICOLOGICAL INFORMATION:** Ingestion can cause nausea, vomiting, and diarrhea

**SUSPECTED CANCER AGENT:** The components of this product are listed as follows:

**HYDROCHLORIC ACID:** ACGIH TLV-A4 (Not Classifiable as a Human Carcinogen); IARC-3 (Confirmed Animal Carcinogen).

The other components of this product are not found on the following lists: FEDERAL OSHA Z LIST, NTP, CAL/OSHA, and therefore are neither considered to be nor suspected to be cancer causing agents by these agencies.

**IRRITANCY OF PRODUCT:** This product can moderately to severely irritate all contaminated tissues, causing pain and discomfort.

**SENSITIZATION TO THE PRODUCT:** The components of this product are not known to be skin sensitizers with prolonged or repeated use.

**REPRODUCTIVE TOXICITY INFORMATION:** Listed below is information concerning the effects of this product and its components on the human reproductive system.

**Mutagenicity:** The components of this product are not reported to cause mutagenic effects in humans. Animal mutation data are available for the Hydrogen Chloride component of this product; these data were obtained during clinical studies on specific animal tissues exposed to high doses of this compound.

**Embryotoxicity:** The components of this product are not reported to produce embryotoxic effects in humans.

**Teratogenicity:** The components of this product are not reported to cause teratogenic effects in humans. Clinical studies on test animals exposed to relatively high doses of the Hydrogen Chloride component of this product provided teratogenic data.

## 11. TOXICOLOGICAL INFORMATION (Continued)

### REPRODUCTIVE TOXICITY INFORMATION (continued):

Reproductive Toxicity: The components of this product are not reported to cause adverse reproductive effects in humans.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which 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 which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

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

## 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL STABILITY: This product is not readily biodegradable.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: Not tested. This product is expected to be acutely harmful to contaminated plant and animal life, especially if large quantities are released.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product is toxic to aquatic life if released into an aquatic environment. If high concentrations of the product are released to an aquatic environment, death of fish, animals and invertebrates may occur. Additional aquatic toxicity data are available as follows:

**PROPRIETARY C-21 DICARBOXYLIC AMIDO ALKYL AMINE:**

Pimephales promelas (Fathead Minnow): LC<sub>50</sub> = 1–10 mg/L

Daphnia magna: (Water flea): EC<sub>50</sub> = 1–10 mg/L

Algae: EC<sub>50</sub> = 1–10 mg/L

## 13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or with regulations of Canada. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

EPA WASTE NUMBER: Not applicable for wastes consisting only of this product.

## 14. TRANSPORTATION INFORMATION

THIS PRODUCT IS NOT HAZARDOUS AS DEFINED BY 49 CFR 172.101 BY THE U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME:

Not applicable.

HAZARD CLASS NUMBER and DESCRIPTION:

Not applicable.

UN IDENTIFICATION NUMBER:

Not applicable.

PACKING GROUP:

Not applicable.

DOT LABEL(S) REQUIRED:

Not applicable.

EMERGENCY RESPONSE GUIDEBOOK NUMBER (2004): Not applicable.

MARINE POLLUTANT: This product is not designated by the DOT to be a Marine Pollutant (49 CFR 172.101, Appendix B).

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This product is not considered as dangerous good, per regulations of Transport Canada.

INTERNATIONAL AIR TRANSPORT ASSOCIATION: This product is not considered as dangerous good, per rules of International Air Transport Association (IATA).

## 15. REGULATORY INFORMATION

### ADDITIONAL UNITED STATES REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The constituents in this product's components of are subject to Sections 302, 304, and 313 reporting requirements under the Superfund Amendment 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)
Hydrochloric Acid	No	Yes	Yes (Aerosol Form Only)

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for the components of this product. The default Federal SDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) applies, per 40 CFR 370.20.

U.S. SARA SECTIONS 311/312 HAZARDOUS CHEMICAL REPORTING: This product has requirements of hazardous chemical reporting, as per 40 CFR, Part 370:

IMMEDIATE HEALTH (Acute Health Hazard)	DELAYED HEALTH (Chronic Health Hazard)	FIRE	SUDDEN RELEASE	REACTIVE
Yes	No	No	No	No

U.S. SARA SECTION 313 HAZARDOUS CHEMICAL REPORTING: No component of this product has reporting requirements under SARA Title III (CERCLA and EPCRA), 40 CFR, Part 372.

U.S. TSCA INVENTORY STATUS: The chemicals in this product are listed on the TSCA Inventory.

## 15. REGULATORY INFORMATION (Continued)

### ADDITIONAL UNITED STATES REGULATIONS (continued):

U.S. CERCLA REPORTABLE QUANTITY (RQ): Hydrochloric Acid = 5000 lb (2268 kg).

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of this product is on the California Proposition 65 lists.

ANSI LABELING (Z129.1): **WARNING!** CAUSES MODERATE TO SEVERE SKIN, EYE, AND RESPIRATORY TRACT IRRITATION. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor, mists, or sprays. Wash thoroughly after handling. Use only with adequate ventilation. Do not taste or swallow. Keep container tightly closed. Wear gloves, goggles, and appropriate body protection. **FIRST-AID:** In case of contact with skin or eyes, flush with plenty of water for 15 minutes. 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 if adverse effects develop. **IN CASE OF FIRE:** Use water fog, dry chemical, CO<sub>2</sub>, or "alcohol" foam. **IN CASE OF SPILL:** Absorb spill with inert material (sand, poly pads, or other absorbent). For large spills, dike area. Consult Safety Data Sheet for additional information.

### ADDITIONAL CANADIAN REGULATIONS:

CANADIAN WHMIS CLASSIFICATION AND SYMBOLS: **Class D2B** (Material Causing Other Toxic Effects, Moderate to severe irritant).



## 16. OTHER INFORMATION

**PREPARED BY:** CHEMICAL SAFETY ASSOCIATES, Inc.  
PO Box 3519, La Mesa, CA 91944-3519  
800/441-3365

**DATE of PRINTING:** June 27, 2018

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. COBITCO, INC. 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, COBITCO, INC. 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 MAK Germ Cell Mutagen Categories:** **1:** Germ cell mutagens which have been shown to increase the mutant frequency in the progeny of exposed humans. **2:** Germ cell mutagens which have been shown to increase the mutant frequency in the progeny of exposed mammals. **3A:** Substances which 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 which 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 which 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 aenogenic 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 cause 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.

**MAK:** Federal Republic of Germany Maximum Concentration Values in the workplace.

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

### EXPOSURE LIMITS IN AIR (continued):

**NIC:** Notice of Intended Change.

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

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

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

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

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

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

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

### HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS:

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

### HEALTH HAZARD:

**0 (Minimal Hazard):** No significant health risk, irritation of skin or eyes not anticipated. *Skin Irritation:* Essentially non-irritating. PII or Draize = "0". *Eye Irritation:* Essentially non-irritating, or minimal effects which clear in < 24 hours [e.g. mechanical irritation]. Draize = "0". *Oral Toxicity LD<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; slightly or mildly irritating. *Skin Irritation:* Slightly or mildly irritating. *Eye Irritation:* Slightly or mildly irritating. *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. *Skin Irritation:* Moderately irritating; primary irritant; sensitizer. PII or Draize > 0, < 5. *Eye Irritation:* Moderately to severely irritating and/or corrosive; reversible corneal opacity; corneal involvement or irritation clearing in 8-21 days.