SAFETY DATA SHEET

PECORA XL-Perm ULTRA VP

1. PRODUCT IDENTIFICATION

<table>
<thead>
<tr>
<th>IDENTIFICATION of the SUBSTANCE or PREPARATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRADE NAME (AS LABELED):</td>
</tr>
<tr>
<td>Pecora XL-Perm ULTRA VP</td>
</tr>
<tr>
<td>PRODUCT DESCRIPTION:</td>
</tr>
<tr>
<td>Coating</td>
</tr>
<tr>
<td>CHEMICAL NAME/CLASS:</td>
</tr>
<tr>
<td>Silyl Terminated Polyurethane</td>
</tr>
<tr>
<td>SYNONYMS:</td>
</tr>
<tr>
<td>STPU</td>
</tr>
<tr>
<td>RELEVANT USE:</td>
</tr>
<tr>
<td>Air/Vapor Barrier Coating</td>
</tr>
<tr>
<td>USES ADVISED AGAINST:</td>
</tr>
<tr>
<td>Other Than Relevant Use</td>
</tr>
<tr>
<td>COMPANY/UNDERTAKING IDENTIFICATION:</td>
</tr>
<tr>
<td>SUPPLIER/MANUFACTURER'S NAME:</td>
</tr>
<tr>
<td>Pecora Corporation</td>
</tr>
<tr>
<td>ADDRESS:</td>
</tr>
<tr>
<td>165 Wambold Road, Harleysville, PA 19438</td>
</tr>
<tr>
<td>EMERGENCY PHONE</td>
</tr>
<tr>
<td>800-424-9300 (CHEMTREC, 24-hours)</td>
</tr>
<tr>
<td>BUSINESS PHONE</td>
</tr>
<tr>
<td>215-723-6051 (Mon–Fri, 8 AM–5 PM ET)</td>
</tr>
<tr>
<td>PREPARATION DATE:</td>
</tr>
<tr>
<td>December 2, 2013</td>
</tr>
<tr>
<td>REVISION DATE:</td>
</tr>
<tr>
<td>March 19, 2014</td>
</tr>
</tbody>
</table>

This product is sold for commercial use. This MSDS has been developed to address safety concerns of those individuals working with bulk quantities of this material, as well as those of potential users of this product in industrial/occupational settings. All United States Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards, and Canadian WHMIS (Controlled Products Regulations) and the Global Harmonization Standard required information is included in appropriate sections based on the U.S. ANSI Z400.1-2008 format. This product has been classified in accordance with the hazard criteria of the countries listed above.

2. HAZARD IDENTIFICATION

GLOBAL HARMONIZATION LABELING AND CLASSIFICATION: This product has been classified per GHS Standards.

Classification:
- Acute Oral Toxicity Cat. 5, Eye Irritation Cat. 2B, Skin Irritation Cat. 3, Skin Sensitization Cat. 1, Respiratory Sensitization Cat. 1
- STOT (Inhalation-Respiratory Irritation) SE Cat. 3, Aquatic Chronic Toxicity Cat. 4

Signal Word: Warning

Hazard Statement Codes: H303, H316, H317, H334, H335, H413


Hazard Symbols/Pictogram: GHS07

EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: This product is a smooth paste with a slight odor and comes in various colors.

HEALTH HAZARDS: CAUTION! May cause eye, skin, and respiratory tract irritation, especially if exposure is prolonged. May be harmful if ingested. May cause skin and respiratory sensitization in susceptible individuals. Contains trace amounts of crystalline silica, a known human carcinogen by inhalation.

flammability HAZARD: This product is combustible and can ignite if exposed to high temperature or direct flame.

reactivity HAZARD: This product is not reactive.

ENVIRONMENTAL HAZARD: This product has not been tested for environmental impact. This product contains a trace compound that can cause chronic aquatic toxicity.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS®)

<table>
<thead>
<tr>
<th>Health</th>
<th>2*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>0</td>
</tr>
</tbody>
</table>

See Section 16 for definitions of ratings

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

HMIS® is a registered trademark of the National Paint and Coatings Association.

CANADIAN WHMIS CLASSIFICATION: Class D2B. See Section 15 (Regulatory Information) for all classification details.

U.S. OSHA REGULATORY STATUS: This material has a classification under the Global Harmonization Standard, as applied under OSHA regulations, as given earlier in this Section.
3. MATERIAL IDENTIFICATION

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>W/W%</th>
<th>GHS Classification Hazard Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Carbonate, Synthetic</td>
<td>471-34-1</td>
<td>30.0-50.0</td>
<td>SELF CLASSIFICATION Classification: Not Applicable</td>
</tr>
<tr>
<td>Proprietary Polyoxymethylene Polymer</td>
<td>108-32-7</td>
<td>3.0-7.0</td>
<td>SELF CLASSIFICATION Classification: Not Applicable</td>
</tr>
<tr>
<td>Dibromonetyl Phthalate</td>
<td>503-19-7</td>
<td>0.0-20.0</td>
<td>SELF CLASSIFICATION Classification: Not Applicable</td>
</tr>
<tr>
<td>Diallyl Phthalate</td>
<td>68648-93-1</td>
<td>0.0-30.0</td>
<td>SELF CLASSIFICATION Classification: Not Applicable</td>
</tr>
<tr>
<td>Mineral Spirits</td>
<td>8052-41-3</td>
<td>3.0-7.0</td>
<td>Classification: Carcinogenic Cat. 1B, Mutagenic Cat. 1B, Aspiration Hazard Cat. 1 Hazard Statement Codes: H350, H330, H304</td>
</tr>
<tr>
<td>Propylene Carbonate</td>
<td>108-32-7</td>
<td>3.0-7.0</td>
<td>Classification: Acute Inhalation Toxicity Cat. 3, Eye Irritation Cat. 2, STOT (Inhalation-Respiratory Irritation) SE Cat. 3, Skin Irritation Cat. 2, Respiratory Sensitization Cat. 1, Skin Sensitization Cat. 1, Aquatic Chronic Toxicity Cat. 2 Hazard Statement Codes: H331, H339, H315, H334, H317, H411</td>
</tr>
<tr>
<td>Isophorone Diisocyanate</td>
<td>4098-71-9</td>
<td>1.0-5.0</td>
<td>Classification: Acute Inhalation Toxicity Cat. 3, Eye Irritation Cat. 2, STOT (Inhalation-Respiratory Irritation) SE Cat. 3, Skin Irritation Cat. 2, Respiratory Sensitization Cat. 1, Skin Sensitization Cat. 1, Aquatic Chronic Toxicity Cat. 2 Hazard Statement Codes: H331, H339, H315, H334, H317, H411</td>
</tr>
<tr>
<td>Proprietary White Pigment</td>
<td>108-32-7</td>
<td>1.0-5.0</td>
<td>SELF CLASSIFICATION Classification: Not Applicable</td>
</tr>
<tr>
<td>Proprietary Silica</td>
<td>108-32-7</td>
<td>1.0-5.0</td>
<td>SELF CLASSIFICATION Classification: Not Applicable</td>
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<tr>
<td>Vinyltrimethoxysilane</td>
<td>2768-02-7</td>
<td>1.0-3.0</td>
<td>SELF CLASSIFICATION Classification: Flammable Liquid Cat. 3, Acute Inhalation Toxicity Cat. 4 Hazard Statement Codes: H225, H332</td>
</tr>
<tr>
<td>Quartz</td>
<td>14808-00-7</td>
<td>Trace</td>
<td>SELF CLASSIFICATION Classification: Carcinogenic Cat. 1B Hazard Statement Codes: H350</td>
</tr>
<tr>
<td>Other components. Each of the other components is present in less than 1 percent concentration (0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).</td>
<td>Balance</td>
<td>Classification: Not Applicable</td>
<td></td>
</tr>
</tbody>
</table>

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 enter affected area. If breathing has stopped, begin artificial respiration. If the victim is unconscious, place in recovery position. Do not interrupt artificial respiration. If breathing has not started, begin cardiac massage. If breathing has started, continue artificial respiration and continue treatment for shock. Do not intubate. Replace clothing and shoes. Seek immediate medical attention.

Ingestion: If this material is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT INDUCE VOMITING, unless directed by medical personnel. Have victim rinse mouth with water or give several cupsfuls of water, if conscious. Never induce vomiting or give diluents (milk or 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.

Skin Exposure: If the material contaminates the skin, immediately begin decontamination with running water. Minimum flushing is for 20 minutes. Do not interrupt flushing. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek immediate medical attention.

Eye Exposure: If this product enters the eyes, open victim's eyes while using running water for 20 minutes. Do not interrupt flushing.

INDICATION OF IMMEDIATE MEDICAL atenção AND SPECIAL TREATMENT IF NEEDED: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: > 104°C (> 220°F)  AUTOIGNITION: Unknown.

FLAMMABLE LIMITS IN AIR: Unknown.

EXTINGUISHING MEDIA:

SURFACE EXTINGUISHING MEDIA: Use extinguishing material suitable to the surrounding fire, including foam, halon, carbon dioxide and dry chemical.

UNSUITABLE EXTINGUISHING MEDIA: None known.

PROTECTION OF FIREFIGHTERS:

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE: This product is combustible and can be ignited when exposed to its flashpoint. Not sensitive to mechanical impact under normal conditions. Not sensitive to static discharge under normal conditions. Closed containers may develop pressure and rupture in event of fire.

NFPA RATING

<table>
<thead>
<tr>
<th>FLAMMABILITY</th>
<th>HEALTH</th>
<th>INSTABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

OTHER

See Section 16 for Definitions of Ratings.
5. FIRE-FIGHTING MEASURES (Continued)
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.

6. ACCIDENTAL RELEASE MEASURES
PERSONAL PRECAUTIONS AND EMERGENCY PROCEDURES: An accidental release can result in a fire if exposed to ignition source. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Use only non-sparking tools and equipment during the response. The atmosphere must at least 19.5 percent Oxygen before non-emergency personnel can be allowed in the area without Self-Contained Breathing Apparatus and fire protection.
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: For releases of 1 drum or less, Level D Protective Equipment (gloves, chemical resistant apron, boots, and eye protection) should be worn.

Large Spills: 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, fire-retardant clothing and boots, hard hat, and Self-Contained Breathing Apparatus.

METHODS FOR CLEAN-UP AND CONTAINMENT:
- All Spills: Access to the spill area should be restricted. Spread should be limited by gently covering the spill with polypads. Scrape up or pick-up spilled material, placing in suitable containers. Absorb any residual on appropriate material, such as sand. 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.

ENVIRONMENTAL PRECAUTIONS: Minimize use of water to prevent environmental contamination. Prevent spill or rinseate 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 US 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: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat or drink while handling this material. Avoid contact with eyes, skin, and clothing. Avoid breathing fumes, dusts, vapors or mist. Do not taste or swallow. Use only with adequate ventilation. Keep away from heat and flame. In the event of a spill, follow practices indicated in Section 6: ACCIDENTAL RELEASE MEASURES.

CONDITIONS FOR SAFE STORAGE: This product is stable under ordinary conditions of handling, use and storage. 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). Keep container tightly closed when not in use. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. To prolong shelf life, store at temperatures below 26°C (80°F).

PRODUCT END USE: This product is used as a sealant. Follow all industry standards for use of this product.

8. EXPOSURE CONTROLS - PERSONAL PROTECTION
EXPOSURE LIMITS/CONTROL PARAMETERS:
Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided below. Occupational/Workplace Exposure Limits/Guidelines:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Guideline</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Carbonate, Synthetic</td>
<td>471-34-1</td>
<td>OSHA PEL TWA</td>
<td>15 mg/m³ total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH REL TWA</td>
<td>5 mg/m³ respirable fraction</td>
</tr>
<tr>
<td>Dalyl Phthalate</td>
<td>88648-93-3</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Dicycymyl Phthalate</td>
<td>68515-43-5</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Isophorone Disocyanate</td>
<td>4098-71-9</td>
<td>ACGIH TLV TWA</td>
<td>0.005 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL TWA</td>
<td>0.005 ppm (vacated 1989 PEL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL STEL</td>
<td>0.02 ppm (vacated 1989 PEL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH REL TWA</td>
<td>0.005 ppm [skin]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH REL STEL</td>
<td>0.02 ppm [skin]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAK TWA</td>
<td>0.005 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAK PEAK</td>
<td>1×MAK 15 minute average value, 1-hr interval, 4 per shift</td>
</tr>
</tbody>
</table>

NE = Not Established. See Section 16 for Definitions of Terms Used.
8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)


Eye/Face Protection: Use approved safety goggles or safety glasses. If necessary, refer to appropriate regulations and standards.

Skin Protection: Wear chemical impervious gloves (e.g., Nitrile or Neoprene). Use triple gloves for spill response. If necessary, refer to appropriate regulations and standards.

Body Protection: Use body protection appropriate for task (e.g., lab coat, coveralls, Tyvek suit). If necessary, refer to the OSHA Technical Manual (Section VII: Personal Protective Equipment) or appropriate Standards of Canada. 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 and standards.

Respiratory Protection: If mists or sprays from this product are created during use, use appropriate respiratory protection. If necessary, use only respiratory protection authorized in appropriate regulations. 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 appropriate regulations and standards. The following NIOSH respiratory equipment guidelines for components that present an inhalation hazard are presented for additional assistance in respiratory protective equipment selection.

9. PHYSICAL and CHEMICAL PROPERTIES

FORM: Smooth paste.

MOLECULAR WEIGHT: Mixture.

ODOR: Mild to moderate solvent-like

SPECIFIC GRAVITY: 1.15

RELATIVE VAPOR DENSITY (air = 1): Heavier than air.

SOLUBILITY IN WATER: Insoluble.

MELTING/FREEZING POINT: Not available.

VOC (less water and exempt): < 100 g/L

FLASH POINT: > 104°C (> 220°F)

pH: Not available.

FLAMMABLE LIMITS (in air by volume, %): Lower: Not established; Upper: Not established.

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

HOW TO DETECT THIS SUBSTANCE (IDENTIFYING PROPERTIES): The appearance of this product may act as an identifying property in the event of an accidental release.

10. STABILITY and REACTIVITY

CHEMICAL STABILITY: Stable under normal circumstances of use and handling.

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

INCOMPATIBLE MATERIALS: This product is not compatible with strong acids and oxidizers and may have some incompatibility with aluminum, ammonium salts and mercury/hydrogen mixtures.
10. STABILITY and REACTIVITY (Continued)

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion: Thermal decomposition of this product can generate formaldehyde, carbon and nitrogen oxides, hydrogen cyanide, isocyanates and isocyanic acid. Hydrolysis: Not known.

POSSIBILITY OF HAZARDOUS REACTIONS/POLYMERIZATION: This product is not expected to undergo hazardous polymerization, decomposition, condensation, or self-reactivity as this product contains stabilizers. Product slowly cures upon contact with moisture in air.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS: The most significant routes of occupational overexposure are inhalation and contact with skin and eyes. The symptoms of overexposure to this product are as follows:

Contact with Skin or Eyes: Contact may mildly irritate the skin and cause redness and discomfort. Prolonged or repeated skin contact may cause dermatitis (dry, red skin). Eye contact may cause redness, pain, and tearing.

Skin Absorption: The components of this product are not known to be absorbed through intact skin. Skin contact may cause sensitization and allergic reaction in susceptible individuals. Symptoms may include redness, itching and rash.

Ingestion: If the product is swallowed, it may mildly irritate the mouth, throat, and other tissues of the gastro-intestinal system and may cause nausea, vomiting, and diarrhea.

Inhalation: Overexposure to vapors of this product generated during curing, or dusts of this product generated during use after curing may mildly irritate the respiratory tract and cause coughing and sneezing. Vapors or fumes when used in an enclosed space, if heated or during curing may cause irritation of the respiratory system. Symptoms include nose irritation, dry or sore or burning throat, runny nose, shortness of breath, dizziness, incoordination. Inhalation may cause respiratory sensitization and allergic reaction.

Injection: Accidental injection of this product (e.g. puncture with a contaminated object) may cause burning, redness, and swelling in addition to the wound.

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

CHRONIC EFFECTS: Prolonged or repeated skin contact may cause dermatitis (dry, red skin), sensitization to the skin and respiratory system or adverse liver or kidney effects.

TOXICITY DATA: There are currently no toxicity data available for this product; the following toxicity information is available for components greater than 1% in concentration.

CALCIUM CARBONATE, SYNTHETIC:
- **TDLo (Intravenous-Rat)** 30 mg/kg: Vascular: BP lowering not characterized in autonomic section
- **Lungs, Thorax, or Respiration:** changes in lung weight
- **Blood:** other changes

ISOPHORONE DIISOCYANATE:
- **Standard Draize Test (Skin-Rabbit)** 1/5/5 days-continuous
- **LDLo (Oral-Rat)** 6250 mg/kg
- **LDLo (Oral-Cat)** 1 mL/kg
- **LCLo (Inhalation-Rat)** 125 mg/m³/4 hours
- **LCLo (Inhalation-Induction (Skin-Rabbit)** 118 mg/m³/1 hour: Behavioral: somnolence (general depressed activity)
- **Lungs, Thorax, or Respiration:** dyspnea; Nutritional and Gross Metabolic: weight loss or decreased weight gain
- **Skin and Appendages:** dermatitis, other (after topical exposure)

MINERAL SPIRITS (continued):

**Standard Draize Test (Eye-Human)** 100 ppm: Mild
- **Standard Draize Test (Eye-Rabbit)** 500 mg/24 hours: Moderate
- **LCLo (Inhalation-Rat)** > 1400 ppm/8 hours
- **LDLo (Inhalation-Rat)** > 60 mg/m³
- **LDLo (Oral-Rat)** > 5 gm/kg: Behavioral: somnolence (general depressed activity)
- **LCLo (Inhalation-Dog)** > 6 gm/m³/6 hours: Behavioral: tremor, convulsions or effect on seizure threshold
- **LCLo (Inhalation-Dog)** 300 ppm/65 days: Kidney/Urinary Bladder: changes in tubules (including acute renal failure, acute tubular necrosis)
- **LCLo (Inhalation-Dog)** 1600 mg/m³/65 days: Behavioral: normocytic anemia
- **LCLo (Inhalation-Rat)** 1330 ppm/24 hours: Kidney/Urinary Bladder: changes in tubules (including acute renal failure, acute tubular necrosis)

**PROPYLENE CARBONATE**

**Standard Draize Test (Skin-Rabbit)** 100 mg/m³/4 days-continuous: Moderate
- **Standard Draize Test (Skin-Rabbit)** 500 mg/24 hours: Moderate
- **Standard Draize Test (Skin-Rabbit)** 60 mg/24 hours: Moderate
- **LCLo (Oral-Rat)** 330 mg/kg: Behavioral: somnolence (general depressed activity)
- **LDLo (Oral-Rat)** 60 mg: Moderate
- **LDLo (Oral-Rat)** 2773 ppm: Sense Organs and Special Senses (Eye): lacrimation: Behavioral: somnolence (general depressed activity) Skin and Appendages: hair loss

**DISISONYL PHthalATE**

**Standard Draize Test (Skin-Rabbit)** 30 mg/kg/6 hours: Slight
- **Skin and Appendages:** dermatitis, other (after systemic exposure)

**CARCINOGENIC POTENTIAL:** The following table summarizes the carcinogenicity listing for the components of this product.

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>EPA</th>
<th>IARC</th>
<th>NTP</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>PROP 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Carbonate (Synthetic)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Diisononyl Phthalate</td>
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<td>No</td>
<td>No</td>
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<td>No</td>
</tr>
<tr>
<td>Diakyl Phthalate</td>
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</tr>
</tbody>
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Pecora XL-Pern ULTRA VP
Page 5 of 9
March 19, 2014
11. TOXICOLOGICAL INFORMATION (Continued)

CARCINOGENIC POTENTIAL (continued):

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>EPA</th>
<th>IARC</th>
<th>NTP</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>PROP 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isophorone Diisocyanate</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<td>No</td>
<td>No</td>
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<tr>
<td>Mineral Spirits</td>
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<tr>
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</tr>
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<td>Proprietary White Pigment</td>
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<td>Propylene Carbonate</td>
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<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Proprietary Silica</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Vinyltrimethoxysilane</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Quartz</td>
<td>No</td>
<td>1</td>
<td>K</td>
<td>Ca</td>
<td>A2</td>
<td>No</td>
<td>Yes (airborne, unbound particles of respirable size)</td>
</tr>
</tbody>
</table>


IRRITANTITY OF PRODUCT: This product may mildly irritate contaminated tissue, especially if contact is prolonged. Eye irritation may be more pronounced.

SENSITIZATION TO THE PRODUCT: This product contains diisocyanate compounds, which are known human skin and respiratory sensitizers. Exposure can cause allergic reactions. Cross-sensitization between different isocyanates may occur.

Respiratory Sensitization: Initial symptoms of respiratory reactions may appear to be a cold or mild hay fever. However, severe asthmatic symptoms can develop and include wheezing, chest tightness, shortness of breath, difficulty breathing and/or coughing. Fever, chills, general feelings of discomfort, headache, and fatigue can also occur. Symptoms may occur immediately upon exposure (within an hour), several hours after exposure or both, and/or at night. Typically, the asthma improves with removal from exposure (e.g. weekends or vacations) and returns, in some cases, in the form of an “acute attack”, on renewed exposure. Sensitized people who continue to work with toluene diisocyanates may develop symptoms sooner after each exposure. The number and severity of symptoms may increase. Death has occurred in sensitized individuals accidentally exposed to relatively low concentrations of toluene diisocyanate. Following removal from exposure, some sensitized workers may continue to show a slow decline in lung function and have persistent respiratory problems such as asthmatic symptoms, chronic bronchitis and hypersensitivity for months or years. Exposure to isocyanates is likely to aggravate existing respiratory disease, such as chronic bronchitis, and emphysema.

Skin Sensitization: Repeated skin contact with toluene diisocyanates has caused skin sensitization in humans, although the condition is not common. Once a person is sensitized, contact with even a small amount can cause outbreaks of dermatitis with symptoms such as redness, rash, itching and swelling. This can spread from the hands or arms to the face and body. Some people who inhaled toluene diisocyanate developed extensive skin rashes can last weeks.

TOXICOLOGICAL SYNERGISTIC PRODUCTS: None known.

REPRODUCTIVE TOXICITY INFORMATION: This product has not been tested for reproductive toxicity.

MUTAGENICITY/EMBRYOTOXICITY/TERATOGENICITY/REPRODUCTIVE TOXICITY: No information available.

BIOLOGICAL EXPOSURES INDICES (BEIs): There are no BEIs established for any component of this product at this time.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: This product has not been tested for mobility in soil.

PERSISTENCE AND BIODEGRADABILITY: This product has not been tested for persistence or biodegradability.

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. Although no data are not available, under the Global Harmonization Standard, the Isophorone Diisocyanate component is classified as having chronic aquatic toxicity.

OTHER ADVERSE EFFECTS: This material is not expected to have any 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

PREPARING WASTES FOR DISPOSAL: As supplied, this product would not be a hazardous waste as defined by U.S. federal regulation (40 CFR 261) if discarded or disposed. State and local regulations may differ from federal regulations. The generator of the waste is responsible for proper waste determination and management.

U.S. EPA WASTE NUMBER: Not applicable.

14. TRANSPORTATION INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: 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 SHIPPING INFORMATION (IATA): This product is NOT classified as dangerous goods, per the International Air Transport Association.

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): This product is not classified as dangerous goods, per the International Maritime Organization.
15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA Reporting Requirements: The following 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.

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>SECTION 302 EHS (TPQ)</th>
<th>SECTION 304 RQ</th>
<th>SECTION 313 TRI (threshold)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isophorone Diisocyanate</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

- U.S. SARA 302 Extremely Hazardous Threshold Planning Quantity (TPQ): Isophorone Diisocyanate: 500 lb (227 kg)
- U.S. SARA 304 Extremely Hazardous Reportable Quantity (RQ): Isophorone Diisocyanate: 500 lb (227 kg)
- U.S. SARA Hazard Categories (Section 311/312, 40 CFR 370-21): ACUTE: Yes; CHRONIC: Yes; FIRE: No; REACTIVE: No; SUDDEN RELEASE: No

ADDITIONAL CANADIAN REGULATIONS:

Canadian DSL/NDSSL Inventory Status: The components of this product are listed on the DSL Inventory.

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists: No component of this product is on the CEPA Priorities Substances Lists.

Canadian WHMIS REGULATIONS: This product is classified as a Controlled Product, Hazard Class D2B (Immediate Acute Toxicity/Irritation & Sensitization) as per the Controlled Product Regulations.

ADDITIONAL MEXICAN REGULATIONS:

Mexican Workplace Regulations (NOM-018-STPS-2000): This product is not classified as hazardous.

16. OTHER INFORMATION

WARNINGS (per ANSI Z129.1): CAUTION! MAY CAUSE EYE, SKIN, AND RESPIRATORY TRACT IRRITATION, ESPECIALLY IF EXPOSURE IS PROLONGED. MAY CAUSE SKIN AND RESPIRATORY SENSITIZATION AND ALLERGIC REACTION IN SUSCEPTIBLE INDIVIDUALS. CONTAINS TRACE COMPOUND THAT MAY CAUSE CHRONIC AQUATIC ADVERSE EFFECTS. COMBUSTIBLE – CAN IGNITE IF EXPOSED TO DIRECT FLAME. Avoid contact with eyes, skin, and clothing. Avoid breathing fumes, dusts, vapors or mist. Do not taste or swallow. Wash thoroughly after handling. Keep container tightly closed. Use only with adequate ventilation. Keep away from heat and flame. Wear protective gloves, protective clothing, respiratory protection, and appropriate body protection. FIRST-AID: In case of contact, immediately flush skin and eyes with plenty of water. 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 CO2. 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 U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada.

GLOBAL HARMONIZATION LABELING AND CLASSIFICATION: Classified in accordance with the Global Harmonization Standard.

Classification: Acute Oral Toxicity Category 5, Eye Irritation Category 2B, Skin Irritation Category 3, Skin Sensitization Category 1, Respiratory Sensitization Category 1, Aquatic Chronic Toxicity Category 4

Signal Word: Warning

Hazard Statements: H303: May be harmful if ingested. H316: Causes mild skin irritation. H320: Causes eye irritation. H317: May cause an allergic skin reaction. H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. H413: May be harmful to aquatic life with long-lasting effects.

Precautionary Statements:


Response: P332 + P313: If skin irritation occurs, get medical attention. 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. P302 + P352: IF ON SKIN: Wash with plenty of soap and water. P333 + P313: If skin irritation or rash occurs: Get medical advice/attention. P362 + P364: Take off contaminated clothing and wash it before reuse. P304 + P340: If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. P342 + P311: If experiencing respiratory symptoms: Call a POISON CENTER or doctor. P321: Specific treatment (remove from exposure and treat symptoms).

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

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

Hazard Symbols/Pictogram: GH507

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information presented in this Material Safety Data Sheet is provided in good faith based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE. THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. IN no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale.

All materials may present hazards and should be used with caution. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices or applicable federal, state, or local laws or regulations. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.
DEFINITIONS OF TERMS

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

**KEY ACRONYMS**

CHMTREC: Chemical Transportation Emergency Center, a 24-hour emergency information and emergency medical response center.

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 frequency or probability of germ cell abnormalities in vivo. 2: Germ cell mutagens that have been shown to increase the frequency of the progeny of exposed mammals. 3A: Substances that have been shown to induce genetic damage in germ cells of human or 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 after exposure. 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 germ cell substances other than DNA [e.g. purely aneuploidy 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 considered to be insignificant.

DFG 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 adverse effect. The duration must be considered, including the 8-hour workday. Group B: A risk of damage to the developing embryo or fetus is considered probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. Group C: No significant health risk, irritation of skin or eyes not always unequivocally demonstrated. Exposure of pregnant women can lead to adverse effects (e.g. viscous and slow flowing as asphalt) that readily decompose, condense, or self-ignite in air and are readily dispersible in air (e.g., dusts of combustible solids, mists or droplets of flammable 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 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 liquids; Flammable solids. These materials can burn with a flash point below 22.8°C (73°F) and have a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) ([i.e. OSHA Class IB and IC]). One chemical that has a low flash point and a boiling point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) ([i.e. OSHA Class IA]) and that ignite spontaneously when exposed to air at a temperature of 54.4°C (130°F) or below is (1-2-3) trinitroxybenzene.

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: 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. Explosives: Division 1.5.4 & 1.6 explosives. Substances 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. Explosives: Division 1.5.1 & 1.6 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. Compounds: No Rating. Peroxides: Add to the definition of Flammability 4.

REFERENCES AND DATA SOURCES: Contact the supplier for information.

METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION:

REVISION DETAILS: New.

DATE OF PRINTING: March 19, 2014

Hazardous Materials Identification System Hazard Ratings (continued):

1. Reactivity Hazard 0 Minimal Hazard: Materials that will not burn in air when exposed to a temperature of 815°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 it can ignite. 2 Moderate Hazard: Materials that can ignite under all ambient temperature conditions, but moderate heating must be applied. 3 Severe Hazard: Materials that will burn in air when exposed to a temperature of 815°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 IB]); and Most ordinary combustible materials (e.g. wood, paper, etc.). 4 Moderate Heat: Materials that must be moderated by a temperature change before ignition can occur. Materials in this degree will not, under normal conditions, form hazardous atmospheres in air; but, under high ambient temperatures or moderate heating may release flames in sufficient quantity to produce hazardous atmospheres with air. This usually includes the following: Liquids having a flash-point at or above 73.8°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 shred form that may burn rapidly and create flash 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 at or above 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]). One material in this category is (1-2-3) trinitroxybenzene. 2 Severe Hazard: Materials that have a low flash point and a boiling 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 is (1-2-3) trinitroxybenzene.

16. OTHER INFORMATION (Continued)

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March 19, 2014

Pecora XL-Perl
DEFINITIONS OF TERMS (Continued)

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS (continued): PHYSICAL HAZARD (continued): 4 (continued): 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 a significant heat generation or explosion. 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 a 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 LCLo for acute inhalation toxicity greater than 200 mg/L. Materials with an LDo for acute dermal toxicity greater than 2000 mg/kg. Materials with an LDo for acute oral toxicity greater than 2000 mg/kg. Materials essentially non-inflammable to the respiratory tract, eyes, and skin.

1 Materials that, under emergency conditions, can cause significant irritation. Gases and vapors with an LCLo for acute inhalation toxicity greater than 5000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LCLo for acute inhalation toxicity greater than 100,000 ppm but less than or equal to 1000 ppm. Materials with an LDo 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 LDo 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 LCLo for acute inhalation toxicity greater than 3000 ppm but less than or equal to 5000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fifth its LCLo for acute inhalation toxicity, if its LCLo is less than or equal to 2000 mg/L. 3 Materials that, under emergency conditions, can cause serious or permanent injury. Gases with an LCLo for acute inhalation toxicity greater than 5000 ppm but less than or equal to 10,000 ppm. Dusts and mists with an LCLo for acute inhalation toxicity greater than 100,000 ppm but less than or equal to 1000 ppm. Materials with an LDo for acute dermal toxicity greater than 1000 mg/kg but less than or equal to 2000 mg/kg. 4 Materials that, under emergency conditions, can 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 LCLo is less than or equal to 5000 ppm but less than or equal to 50 mg/kg. Materials that, under emergency conditions, can cause serious or permanent injury. Gases with an LCLo for acute inhalation toxicity greater than 1000 ppm but less than or equal to 3000 ppm. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than one-fiftieth of its LCLo for acute inhalation toxicity, if its LCLo is less than or equal to 2000 mg/L. Dusts and mists with an LCLo for acute inhalation toxicity greater than 5000 ppm but less than or equal to 10,000 ppm. Materials with an LDo for acute oral toxicity greater than 50 mg/kg but less than or equal to 500 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. Cyanogenic gases that cause frothy and irreversible tissue damage. Compressed liquefied gases with a flash point greater than 35°C (95°F) that can form flammable mixtures with air near the surface of the liquid or within the test vessel used. Materials with an LDo for acute oral toxicity greater than 5 mg/kg but less than or equal to 50 mg/kg. Materials that, under emergency conditions, can be lethal. Gases with an LCLo for acute inhalation toxicity less than 5000 ppm but equal to or less than 2 mg/L. Materials with an LDo for acute dermal toxicity greater than 0.5% but less than or equal to 2% by weight. Materials with an LDo for acute oral toxicity greater than 0.5% by weight. Any liquid whose saturated vapor concentration at 20°C (68°F) is equal to or greater than ten times its LCLo for acute inhalation toxicity, if its LCLo is less than or equal to 2000 mg/L. 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. Materials that are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that propagate across generational lines. 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. Materials that are toxic or lethal if inhaled. Materials that are toxic or lethal if ingested.

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. EI: Lowest concentration of a vapor or gas 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. LCLo: Lethal Concentration (gas) that kills 50% of the exposed animals. LCL: Lowest Concentration (gas) that kills 50% of the exposed animals. ppm: Concentration expressed in parts per million of parts of air or water. mg/L: Concentration expressed in weight of substance per volume of air or water. mg/kg: Concentration expressed in weight of substance per body weight of a test animal. mg/kg: Concentration expressed in weight of substance per body weight of a test animal. mg/kg: Concentration expressed in weight of substance per body weight of a test animal. 

REPRODUCTIVE 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: Biocorrosion Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal material. Median threshold limit: lxd-50 or lxd-90: Coefficient of Oil/Water Distribution is used to assess a substance’s potential to concentrate in plant or animal material. REGENERATORY INFORMATION: This section explains the impact of various laws and regulations on the material.


DNL/NDSL: Canadian Domestic/Non-Domestic Substances List.