SAFETY DATA SHEET

PECORA P-200 PART A

PART I

What is the material and what do I need to know in an emergency?

1. PRODUCT IDENTIFICATION

IDENTIFICATION of the SUBSTANCE or PREPARATION

<table>
<thead>
<tr>
<th>TRADE NAME (AS LABELED):</th>
<th>PECORA P-200 Part A</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT DESCRIPTION:</td>
<td>Low Viscosity, Special Purpose Primer</td>
</tr>
<tr>
<td>CHEMICAL NAME/CLASS:</td>
<td>Solvent Bisphenol Polymer Mixture</td>
</tr>
<tr>
<td>SYNONYMS:</td>
<td>None</td>
</tr>
</tbody>
</table>

COMPANY/UNDERTAKING IDENTIFICATION:

<table>
<thead>
<tr>
<th>SUPPLIER/MANUFACTURER’S NAME:</th>
<th>Pecora Corporation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDRESS:</td>
<td>165 Wambold Road, Harleysville, PA 19438</td>
</tr>
<tr>
<td>EMERGENCY PHONE:</td>
<td>800-424-9300 (CHEMTREC, 24-hours)</td>
</tr>
<tr>
<td>BUSINESS PHONE:</td>
<td>215-723-6051 (Mon–Fri, 8 AM–5 PM ET)</td>
</tr>
<tr>
<td>PREPARATION DATE:</td>
<td>January 2004</td>
</tr>
<tr>
<td>REVISION DATE:</td>
<td>July 3, 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: Flammable Liquid Cat. 2, Acute Inhalation Toxicity Cat. 3, Acute Oral Toxicity Cat. 5, Reproductive Toxicity Cat. 2, Aspiration Hazard Cat. 1, STOT RE Cat. 2, Skin Irritation Cat. 3, Eye Irritation Cat. 2A, STOT (Inhalation) Cat. 3, Skin Sensitization Cat. 1B

Signal Word: Danger

Hazard Statement Codes: H225, H332, H303, H361Id, H304, H373, H315, H319, H335, H336, H317


Hazard Symbols/Pictograms: GHS02, GHS07, GHS08

EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: This product is a colorless, highly flammable liquid with a sweet, aromatic odor.

HEALTH HAZARDS: DANGER! Flammable liquid. This product may cause respiratory, skin and eye irritation. Eye irritation may be severe, depending on duration and concentration of exposure. Growth of specific bacteria may cause toxic systemic effects by skin absorption. Exposure may cause adverse central nervous system effects. Can cause skin and respiratory sensitization and allergic reaction in susceptible individuals. Contains compounds that are suspect teratogens and carcinogens.

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

REACTIVITY HAZARD: This product may have some sensitivity to water. Closed containers may develop pressure and rupture on prolonged exposure to heat or if contaminated with water.

ENVIRONMENTAL HAZARD: This product has not been tested for environmental impact. All release to the environment should be avoided.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS®)

<table>
<thead>
<tr>
<th>Health</th>
<th>2*</th>
</tr>
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<tbody>
<tr>
<td>Flammability</td>
<td>3</td>
</tr>
<tr>
<td>Physical Hazard</td>
<td>1</td>
</tr>
</tbody>
</table>

See Section 16 for definitions of ratings

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

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

CANADIAN WHMIS CLASSIFICATION: Class D2B and Class B2. See Section 15 (Regulatory Information) for all classification details.

U.S. OSHA REGULATORY STATUS: This material is classified as hazardous under OSHA regulations.
3. COMPOSITION AND INFORMATION ON INGREDIENTS (Continued)

<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>Polymer of Epoxy Resin &amp; Bisphenol A</td>
<td>25036-25-3</td>
<td>40-70</td>
<td>SELF-Categorization</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Classification: Eye Irritation Cat. 2A, Skin Irritation Cat. 2, STOT (Inhalation-Respiratory Irritation) SE Cat. 3, Skin Sensitization Cat. 1 Hazard Statement Codes: H319, H315, H332, H317 Hazard Symbols/Pictograms: GHS07</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>108-10-1</td>
<td>10-20</td>
<td>Classification: Flammable Liquid Cat. 2, Acute Inhalation Toxicity Cat. 4, STOT (Inhalation-Respiratory Irritation) SE Cat. 3, Eye Irritation Cat. 2A Hazard Statement Codes: H225, H332, H319, H335</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>5-10</td>
<td>Classification: Flammable Liquid Cat. 2, Reproductive Toxicity Cat. 2, Aspiration Hazard Cat. 1, STOT RECat. 2, Skin Irritation Cat. 2, STOT (Inhalation-Central Nervous System) SE Cat. 3 Hazard Statement Codes: H225, H361df, H304, H373, H315, H336</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>2-8</td>
<td>Classification: Flammable Liquid Cat. 2, Acute Inhalation Toxicity Cat. 4 Hazard Statement Codes: H225, H332</td>
</tr>
<tr>
<td>Ethyl Benzene</td>
<td>100-41-4</td>
<td>1-5</td>
<td>Classification: Flammable Liquid Cat. 2, Acute Inhalation Toxicity Cat. 4 Hazard Statement Codes: H225, H332</td>
</tr>
</tbody>
</table>

See Section 16 for full text of Ingredient Hazard and Precautionary Statements

PART II What should I do if a hazardous situation occurs?

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. Fire protective gear may be 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 MSDS to physician or other health professional with victim(s).

INHALATION: If mists, sprays or fumes of this material are inhaled, remove victim to fresh air. If necessary, use artificial respiration to support vital functions.

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 under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 20 minutes. Do not interrupt flushing.

INGESTION: If this material is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT INDUCE VOMITING, unless directly 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.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Acute or chronic respiratory conditions, and central nervous system conditions or skin problems may be aggravated by overexposure to this product.

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

5. FIRE-FIGHTING MEASURES

FLASH POINT (TCC): 3.9°C (39°F)

AUTOIGNITION: Not known for product. For Methyl Isobutyl Ketone: 445°C (833°F)

FLAMMABLE LIMITS IN AIR: Not known for product.

For Methyl Isobutyl Ketone @ 93°C: LEL: 1.2% UEL: 8.0%

EXTINGUISHING MEDIA:

SUITE EXTINGUISHING MEDIA: Use materials appropriate for surrounding materials.

UNSUITABLE EXTINGUISHING MEDIA: None known.

PROTECTION OF FIREFIGHTERS:

SPECIAL HAZARDS ARISING FROM THE SUBSTANCE: This is a highly flammable liquid. Not sensitive to mechanical impact under normal conditions. Vapors may form explosive mixtures in air. Vapors are heavier than air and can accumulate in confined spaces creating a toxicity and explosion hazard. Vapors can travel long distances and flashback to ignition source. Can undergo hazardous polymerization when exposed to aliphatic amines, with considerable release of heat; closed containers may rupture violently when heated. Closed containers may develop pressure and rupture in event of fire or if contaminated with water.

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. Uncontrolled releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. Eliminate any possible sources of ignition, and provide maximum explosion-proof ventilation. 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. Avoid contact with water.

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 poly pads. Absorb spilled liquid with clay, sand, poly pads, 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 confining this material. Monitoring area for combustible vapor levels and decontamination of spill area. Use water or an ammonium hydroxide solution to neutralize the material. Do not use water in areas where the use of water will increase the fire or vapor hazard in some situations, e.g. confined spaces; if so, do not use), water (balance of solution). Heat and CO₂ gas should be used for decontamination.

ENVIRONMENTAL PRECAUTIONS: Minimize use of water to prevent environmental contamination. Prevent spill or rinse water 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.

PART III

How can I prevent hazardous situations from occurring?

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. Contaminated clothing needs to be laundered prior to reuse. Keep away from heat and flame. In the event of a spill, follow practices indicated in Section 6: ACCIDENTAL RELEASE MEASURES.

EMPTY CONTAINERS: Empty containers may contain residual product; therefore, empty containers should be handled with care. Decontaminate empty containers by filling with water or a solution of ammonium hydroxide (0-10%), detergent (2-5%), isopropanol (0-20%): may create a fire or vapor hazard in some situations, e.g. confined spaces; if so, do not use), water (balance of solution). Heat and CO₂ gas are released when isocyanates react with water or solution. Let stand uncovered or loosely covered for at least 24 hours. Decontaminate (using above solution) and clean isocyanate handling equipment after use. Stand upwind of all opening, pouring and mixing operations. Keeping work areas clean is essential. Use work surfaces that can be easily decontaminated. Maintain good personal hygiene.

CONDITIONS FOR SAFE STORAGE: Keep container tightly closed when not in use. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. 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. Local Fire Departments should be notified of the storage of this product on site. Storage and processing areas of this product should be identified with a NFPA 704 placard (diamond) large enough to be seen from a distance. 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). Inspect all incoming containers before storage to ensure containers are properly labeled and not damaged.

PRODUCT USE: This product is used as a primer. Follow all industry standards for use of this product.
8. EXPOSURE CONTROLS - PERSONAL PROTECTION

EXPOSURE LIMITS/CONTROL PARAMETERS:

**OCCUPATIONAL/WORKPLACE EXPOSURE LIMITS/GUIDELINES:**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>DFG MAK TWA</th>
<th>DFG MAK PEAK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymer of Epoxy Resin &amp; Bisphenol A Exposure limits given are for Bisphenol A (CAS# 80-05-7)</td>
<td>25036-25-3</td>
<td>5 mg/m³ (unhalvable fraction)</td>
<td>MAK 15 minute average value, 1 hr interval 4 per shift (danger of photo-contact sensitization)</td>
</tr>
<tr>
<td>Ethyl Benzene</td>
<td>100-41-4</td>
<td>20 ppm</td>
<td>125 ppm</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>108-10-1</td>
<td>20 ppm</td>
<td>75 ppm</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>20 ppm</td>
<td>100 ppm (vacated 1989 PEL)</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>100 ppm</td>
<td>150 ppm</td>
</tr>
</tbody>
</table>

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

VENTILATION AND ENGINEERING CONTROLS: Use with adequate, explosion proof ventilation to ensure exposure levels are maintained below the limits provided above.


EYE/FACE PROTECTION: Use approved safety goggles or safety glasses. If necessary, refer to appropriate regulations.

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

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.

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. The following are NIOSH respiratory equipment guidelines are presented for additional assistance in respiratory protective equipment selection.

METHYL ISOBUTYL KETONE

CONCENTRATION RESPIRATORY PROTECTION

Up to 500 ppm: Any Chemical Cartridge Respirator with 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 a tight-fitting facepiece and organic vapor cartridge(s), or any Supplied-Air Respirator (SAR), or any Self-Contained Breathing Apparatus (SCBA) 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.
8. EXPOSURE CONTROLS - PERSONAL PROTECTION (Continued)

PERSONAL PROTECTIVE EQUIPMENT (PPE) [continued]; RESPIRATORY PROTECTION (continued):

<table>
<thead>
<tr>
<th>TOLENE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONCENTRATION</td>
</tr>
<tr>
<td>Up to 500 ppm:</td>
</tr>
</tbody>
</table>

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.

9. PHYSICAL and CHEMICAL PROPERTIES

| FORM: | Liquid. |
| MOLECULAR WEIGHT: | Mixture. |
| ODOR: | Sweet, aromatic. |
| ODOR THRESHOLD: | For Methyl Isobutyl Ketone: 0.10-7.8 ppm (detection); 0.27-16 ppm (recognition). |
| VAPOR DENSITY: (air = 1) | > 1 |
| FREEZING/MELTING POINT: | Not available. |
| SPECIFIC GRAVITY (water = 1): | 1.0 |
| SOLUBILITY IN WATER: | Not available. |
| VAPOR PRESSURE: | Not available. |
| COEFFICIENT WATER/OIL DISTRIBUTION: | Not available |
| VOC (less water and exempt): | 615 g/L |

HOW TO DETECT THIS SUBSTANCE (WARNING PROPERTIES): The odor of this product is not a good warning property in the event of an accidental release, as the odor threshold of Methyl Isobutyl Ketone is near its TLV.

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: Based upon component incompatibility, this product may be incompatible with oxidizers, amines, reducing agents, strong bases, potassium t-butoxide, strong mineral acids, Lewis acids, potassium chloride, nitrogen tetroxide, tetrinitromethane, sulfur perchlorate, sulfur dichloride, uranium hexafluoride, and 1,3-dichloro-5,5-dimethyl-2,4-imidazolidindione (dichlorohydrantoin). This product may attack some plastics.

HAZARDOUS DECOMPOSITION PRODUCTS: Combustion: Thermal decomposition of this product can generate carbon, nitrogen, carbon monoxide, carbon dioxide, reactive hydrocarbons, low molecular weight aldehydes, and explosive peroxides such as methyl isobutyl peroxide. Hydrolysis: None known.

POSSIBILITY OF HAZARDOUS REACTIONS: This product may undergo uncontrolled exothermic polymerization upon contact with amines or if heated. The resulting pressure build-up could rupture closed containers.

PART IV Is there any other useful information about this material?

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: Depending on the duration of skin contact, skin exposures can cause reddening, discomfort or irritation. Prolonged contact may cause inflammation, redness, rash, swelling and blistering. Repeated skin contact may cause defatting and dermatitis. Skin contact may result in sensitization and allergic reaction. Brief contact with the liquid or vapors from this product and the eyes can cause irritation, reddening and watering. Eye contact will cause moderate to severe irritation, depending on the duration and concentration of exposure.

SKIN ABSORPTION: Prolonged skin contact may cause adverse systemic toxicity by skin absorption as described under ingestion or inhalation.

INGESTION: If the product is swallowed, it can irritate the mouth, throat, and other tissues of the gastro-intestinal system and may cause nausea, vomiting, and diarrhea as well as adverse effects on the central nervous system. Symptoms can include dizziness, vomiting and incoordination. Ingestion of large amounts may be harmful and cause systemic toxicity. Aspiration into the lungs after ingestion can pose a serious hazard of chemical and pulmonary edema. Ingestion of large amount may be fatal.

INHALATION: Inhalation of vapors, mists, or sprays of this product can moderately irritate the tissues of the nose, mouth, throat, and upper respiratory system. Symptoms of overexposure may include coughing, sneezing, and difficulty breathing. Coughing with chest pain or tightness may also occur, frequently at night. These symptoms may occur during exposure or may be delayed several hours. Inhalation of high concentrations of this product (as may occur in a poorly ventilated area) may be fatal. Inhalation can also lead to adverse central nervous system effects, including dizziness, incoordination, nausea and vomiting. High aerosol concentrations could cause inflammation of the lungs (chemical pneumonitis), chemical bronchitis with severe asthma-like wheezing, severe coughing spasms and accumulation of fluid in the lungs (pulmonary edema), which could prove fatal. Symptoms of pulmonary edema may not appear until several hours after exposure and are aggravated by physical exertion.

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, respiratory system. Chronic: Skin, respiratory and central nervous systems.
11. TOXICOLOGICAL INFORMATION (Continued)

TOXICITY DATA: There are currently no toxicity data available for this product; the following toxicology data are available for components greater than 1% in concentration. Due to the large amount of data, only human data, LD50 Oral-Rat or Mouse, LD50 Skin-Rat or Mouse, LC50 Inhalation-Rat or Mouse and skin irritation data are provided in this SDS. Contact Pecora for more information.

ETHYL BENZENE:
Open Irritation Test (Skin-Rabbit) 15 mg/24 hours: Mild
Standard Draize Test (Eye-Rabbit) 500 mg: Severe
TClO (Inhalation-Human) 100 ppm/8 hours: Sense Organs and Special Senses (Eye): effect, not otherwise specified; Behavioral: sleep; Lungs, Thorax, or Respiration: other changes
TClO (Inhalation-Human) 21,700 mg/m³: Behavioral: antipsychotic
TClO (Inhalation-Human) 8700 mg/m³/6 minutes: Sense Organs and Special Senses (Eye): lacrimation
TClO (Inhalation-Human) 4350 mg/m³: Sense Organs and Special Senses (Eye): conjunctive irritation; Behavioral: tolerance
TClO (Inhalation-Human) 4350 mg/m³: Sense Organs and Special Senses (Eye): conjunctive irritation
TClO (Inhalation-Human) 10 ppm/4 hours: Cardiac: pulse rate; Lungs, Thorax, or Respiration: other changes
TClO (Inhalation-Human) 30 mg/m³/7 years intermittent: Behavioral: headache, irritability
LD₅₀ (Inhalation-Rat) 55,000 mg/m³/2 hours
LD₅₀ (Inhalation-Mouse) 35,500 mg/m³/2 hours
LD₅₀ (Inhalation-Mouse) 4000 ppm/4 hours
LD₅₀ (Oral-Rat) 3,500 mg/kg: Liver: other changes; Kidney/Ureter/Bladder: other changes
LD₅₀ (Oral-Rat) 3500 mg/kg
LD₅₀ (Skin-Rabbit) 17,800 µL/kg
LD₅₀ (Skin-Rabbit) > 5000 mg/kg

METHYL ETHYL KETONE:
Standard Draize Test (Eye-Human) 200 ppm
Standard Draize Test (Eye-Mouse) 200 ppm
Standard Draize Test (Skin-Human) 200 ppm
Standard Draize Test (Skin-Rabbit) 200 ppm
Standard Draize Test (Oral-Human) 50 mg/kg
TClO (Inhalation-Human) 10,000 ppm/6 hours: Behavioral: general anesthetic; Lungs, Thorax, or Respiration: cyanosis; Blood: other changes
TClO (Inhalation-Human) 200 ppm: Sense Organs and Special Senses (Olfaction): effect, not otherwise specified; Sense Organs and Special Senses (Eye): conjunctive irritation; Lungs, Thorax, or Respiration: other changes
Standard Draize Test (Skin-Rabbit) 100%: Moderate
Standard Draize Test (Skin-Rabbit) 500 mg/24 hours: Moderate
Standard Draize Test (Eye-Rabbit) 87 mg/L: Mild
Standard Draize Test (Eye-Rabbit) 5 mg/24 hours: Severe
Open Irritation Test (Skin-Rat) 60 µL/8 hours: Mild
TClO (Inhalation-Rat) 5000 ppm/4 hours
LD₅₀ (Oral-Rat) 4300 mg/kg: Liver: other changes; Kidney/Ureter/Bladder: other changes
LD₅₀ (Oral-Mouse) 2119 mg/kg
LD₅₀ (Skin-Rabbit) > 1700 mg/kg

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

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>IARC</th>
<th>EPA</th>
<th>NTP</th>
<th>NIOSH</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>PROP 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymer of Epoxy Resin &amp; Bisphenol A</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>Ethyl Benzene</td>
<td>2B</td>
<td>D</td>
<td>No</td>
<td>No</td>
<td>A3</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>2B</td>
<td>I</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Toluene</td>
<td>3</td>
<td>II</td>
<td>No</td>
<td>No</td>
<td>A4</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Xylene</td>
<td>3</td>
<td>II</td>
<td>No</td>
<td>No</td>
<td>A4</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>


IRRITATION OF PRODUCT: This product is irritating by all routes of exposure.

SENSITIZATION TO THE PRODUCT: This product may cause skin sensitivity and allergic reaction in susceptible individuals. Symptoms can include itching, redness, swelling, welts and rash.

TOXICOLOGICAL SYNERGISTIC PRODUCTS: There have been several studies in humans and animals on the interaction of Xylenes with drugs, alcohol and other solvents. Xylene has a high potential to interact with other compounds because it increases metabolic enzymes in the liver and decreases metabolic enzymes in the lungs. In general, exposure to related solvents, such as benzene, toluene and ethanol (alcohol) slows the rate of clearance of Xylenes from the body, thus enhancing its toxic effects. In studies with mice, Methyl Isobutyl Ketone prolonged the loss of righting reflex induced by ethanol. In animal studies, Methyl Isobutyl Ketone has been shown to potentiate the hepatotoxicity of haloalkanes, such as chloroform, carbon tetrachloride and 1,2-dichlorobenzene. Combined exposure to methyl ethyl ketone and Methyl Isobutyl Ketone caused increased behavioral responses in baboons. Combined exposure to toluene and noise, Toluene and n-hexane, Toluene and aspirin or toluene, ethyl benzene and noise has caused a synergistic loss of hearing in animal studies. Increased hearing loss has also been observed in workers in some studies following long-term exposure to Toluene and noise. The toxicity of Ethyl Benzene can probably be increased by exposure to alcohols or other chemicals which inhibit its breakdown in the liver.

REPRODUCTIVE TOXICITY INFORMATION: This product has not been tested for reproductive toxicity. The following information is available for some components.

Mutagenicity: Both positive and negative results have been obtained in studies for various mutagenic effects in peripheral blood lymphocytes of workers exposed to Toluene; mutagenicity cannot be determined.
11. TOXICOLOGICAL INFORMATION (Continued)

REPRODUCTIVE TOXICITY INFORMATION (continued):

Embryotoxicity/Teratogenicity: Toluene is a developmental toxicity hazard, based on information obtained from animal studies. Fetotoxicity (reduced fetal weight), behavioral effects (effects on learning and memory) and hearing loss (in males) have been observed in the offspring of rats exposed by inhalation to 1200 or 1800 ppm toluene. These effects were observed in the absence of maternal toxicity. Xylene (mixed isomers) are considered fetotoxic in humans, based on observations of reduced fetal weight, delayed ossification and persistent behavioral effects in animal studies in the absence of maternal toxicity. Other developmental effects have been observed in animal studies in the presence of maternal toxicity. Several human population studies have suggested a link between exposure to organic solvents (including xylene) and increased occurrence of miscarriages or birth defects in children. However, in the majority of cases, there was exposure to a variety of solvents at the same time, exposures were ill-defined, and the number of cases examined was small.

Reproductive Toxicity: A possible reduction in fertility was observed in rats exposed at 100 or 1000 ppm for 3 weeks prior to mating when exposed to Ethyl Benzene.

BIOLICAL EXPOSURES INDICES (BEIs): Currently, the following BEI’s have been established for some components.

<table>
<thead>
<tr>
<th>CHEMICAL</th>
<th>DETERMINANT</th>
<th>SAMPLING TIME</th>
<th>BEI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Benzene</td>
<td>• Sum of mandelic acid in urine and phenylglyoxylic acid in urine</td>
<td>• End of shift at end of workweek</td>
<td>• 0.7 g/g creatine</td>
</tr>
<tr>
<td>Ethyl benzene in exhaled air</td>
<td>• Not critical</td>
<td>• 0.7 g/g creatine</td>
<td></td>
</tr>
<tr>
<td>Toluene</td>
<td>• Toluene in Blood</td>
<td>• Prior to Last Shift of Workweek</td>
<td>• 0.02 mg/L</td>
</tr>
<tr>
<td></td>
<td>• Toluene in Urine</td>
<td>• End of shift</td>
<td>• 0.03 mg/L</td>
</tr>
<tr>
<td></td>
<td>• o-Cresol in urine</td>
<td>• End of shift</td>
<td>• 0.3 mg/L creatine</td>
</tr>
<tr>
<td>Xylenes</td>
<td>• Methylhippuric Acid in Urine</td>
<td>• End of Shift</td>
<td>• 1.5 g/g Creatinine</td>
</tr>
</tbody>
</table>

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 the main solvent components.

METHYL ISOBUTYL KETONE: The Koc of Methyl Isobutyl Ketone is estimated as approximately 123, using an experimental log Kow of 1.31 and a regression-derived equation. According to a recommended classification scheme, this estimated Koc value suggests that Methyl Isobutyl Ketone is expected to have high mobility in soil.

TOLUENE: In association with clay minerals, Toluene's adsorption is inversely proportional to the pH of the soil. The reported Kocs are 178 in a sandy soil and as 37 (Wendover silty loam), 160 (Grimby silt loam), 160 (Van Ville sandy loam) and 46 (sandy soil), 166 in lake sediment. According to a classification scheme, this Koc data suggests that Toluene is expected to have high to moderate mobility in soil. Also, based on a classification scheme, Koc values of 37-178 measured in soil indicates that Toluene is expected to have high to moderate mobility in soil.

XYLENE: Several experimental Koc values for this compound have been reported depending upon the pH and organic carbon content of the soil. Batch experiments conducted with five low organic carbon content (0.04-1.12%), field contaminated soils (3 silty clay and two sandy loams) yielded Koc values ranging from 39-365. This compound in Norwegian forest soil at pH 5.6 and organic carbon content of 0.2 percent has a reported experimental Koc of 129; in Norwegian agricultural soil at pH 7.4 and organic carbon content of 2.2 percent has a reported experimental Koc of 158; in Norwegian forest soil at pH 4.2 and organic carbon content of 3.7 percent has a reported experimental Koc of 289. Based on a recommended classification scheme and the experimentally determined Koc values, this material is expected to have moderate to high mobility in soils. Xylene isomers have been observed to pass through soil at a dune-infiltration site on the Rhine River and to leach into groundwater under a rapid infiltration site.

PERSISTENCE AND BIODEGRADABILITY: This product has not been tested for persistence or biodegradability. The following information is available for the main solvent components.

METHYL ISOBUTYL KETONE: Based on an experimental vapor pressure of 19.9 mm Hg at 25°C, Methyl Isobutyl Ketone is expected to exist solely as a vapor in the ambient atmosphere. Vapor-phase Methyl Isobutyl Ketone is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals with an estimated atmospheric half-life of about 27 hours. Volatilization from dry soil surfaces is expected based upon the vapor pressure of this compound. Volatilization from moist soil surfaces is also expected based upon an estimated Henry's Law constant of 1.38X10-4 atm-cu m/mole. This compound is expected to biodegrade under aerobic and anaerobic conditions. In water, Methyl Isobutyl Ketone is not expected to adsorb to suspended solids or sediment based upon an estimated Koc value of 123. Volatilization from dry soil surfaces is expected based upon the vapor pressure of this compound. Volatilization from moist soil surfaces is expected to be an important fate process given its estimated Henry's Law constant. Estimated half-lives for a model river and model lake are 9 and 141 hours, respectively.

TOLUENE: Volatilization of Toluene from moist soil surfaces is expected to be an important fate process given a Henry's Law constant of 6.64X10-2 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 1 hour and 4 days, respectively. The half-life of Toluene this material in aerobic and anaerobic water was reported as 4 and 56 days, respectively. According to a model of gas/particle partitioning of semi-volatile organic compounds in the atmosphere, Toluene, which has a vapor pressure of 28.4 mm Hg at 25°C, is expected to exist solely as a vapor in the atmosphere. Vapor-phase material is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals, nitrate radicals and ozone molecules. The half-life for the reaction with hydroxyl radicals is estimated to be 3 days, calculated from its rate constant of 5.96X10-12 cu/molecule-sec at 25°C. The half-life for the nighttime reaction with nitrate radicals is estimated as 491 days calculated from its rate constant of 6.8X10-17 cu/molecule-sec at 25°C. The half-life for the reaction with ozone is estimated as 27.950 days calculated from its rate constant of 4.1X10-22 cu/molecule-sec at 25°C.

XYLENE: Based upon an experimental vapor pressure of 7.99 mm Hg at 25°C, this compound is expected to exist entirely in the vapor phase in the ambient atmosphere. Vapor-phase material is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals with an estimated atmospheric lifetime of about 1-2 days. This compound is expected to degrade to moderate to high mobility in soils based upon experimental Koc values obtained with a variety of soils at differing pH values and organic carbon content. Volatilization from moist soil surfaces is expected based upon an experimental Henry's Law constant of 7.0X10-3 atm-cu m/mole. Biodegradation is an important environmental fate process for this compound. In general, it has been found that this material is biodegraded in soil and groundwater samples under aerobic conditions and may be degraded under anaerobic denitrifying conditions. In water, this compound is expected to adsorb somewhat to sediment or particulate matter based upon its measured Koc values. This compound is expected to volatilize from water surfaces given its experimental Henry's Law constant. Estimated half-lives for a model river and model lake are 3 and 99 hours, respectively. Log Kow = 3.5-68.
12. ECOLOGICAL INFORMATION (Continued)

**BIO-ACCUMULATION POTENTIAL:** This product has not been tested for bio-accumulation potential. The BCFs of the Toluene component in eels is 13 and in golden ide 90. The estimated BCF for Xylene is 20. The calculated value for Methyl Isobutyl Ketone is 6. These values indicate low bioconcentration potential.

**ECOTOXICITY:** This product has not been tested for aquatic or animal toxicity. All release to terrestrial, atmospheric and aquatic environments should be avoided. The following aquatic toxicity data are available for some components. Only select data are given due to the large amount of data available. Contact Pecora for more information.

**ETHYL BENZENE:**
- EC50 (Salmo gairdneri) 4 days = 4.2 mg/L
- EC50 (Selenastrum capricornutum) 3 days = 4.6 mg/L
- LC50 (Daphnia magna) 24 hours = 2.2 mg/L

**TOLUENE:**
- LC50 (Daphnia magna) 48 hours = 11.5 mg/L
- LC50 (Mysidopsis bahia) 96 hours = 56 mg/L
- LC50 (goldfish) 24 hours = 58 mg/L
- LC50 (fathead) 24-96 hours = 56–34 mg/L
- LC50 (bluegill) 24-96 hours = 24 mg/L
- LC50 (mosquito fish) 24-96 hours = 1,340–1,280 mg/L
- LC50 (Pimephales promelas) 30 days 96 hours = 18–30, 34–42 mg/L
- LC50 (Lepomis macrochirus) 96 hours = 13 mg/L
- LC50 (Oncorhynchus kisutch) 96 hours = 5.5 mg/L
- EC50 (Daphnia magna) 48 hours = 15 mg/L
- EC50 (Oncorhynchus kisutch) 40 days = 2.8 mg/L (growth inhibition)
- EC50 (Cyprinodon variegatus) 28 days = 7.7 mg/L (growth inhibition)
- EC50 (Salmo gairdneri) 4 days = 5.8 mg/L (growth inhibition)
- EC50 (Selenastrum capricornutum) 3 days = 12 mg/L (growth inhibition)
- EC50 (Pocillia reticulata guppy) 14 days = 2.87 mmol/L

**XYLENES:**
- LD50 (goldfish) 24 hours = 13 mg/L (conditions of bioassay not specified, no specific isomer)
- LC50 (rainbow trout) 96 hours = 13.5 mg/L (conditions of bioassay not specified, no specific isomer)
- LC50 (fathead minnow) 1 hour = 42 mg/L at 18-22°C, in a static bioassay (No specific isomer)
- LC50 (fathead minnow) 24-96 hours = 46 mg/L at 18-22°C, in a static bioassay (No specific isomer)
- LC50 (Carassius auratus goldfish) 96 hours = 16.9 ppm (conditions of bioassay not specified, no specific isomer)

**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 be a hazardous waste as defined by U.S. federal regulation (40 CFR 261) if discarded or disposed. It has the characteristic of Ignitibility. 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:** D001.

14. TRANSPORTATION INFORMATION

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

- **UN IDENTIFICATION NUMBER:** UN 1866
- **PROPER SHIPPING NAME:** Resin solution, flammable
- **HAZARD CLASS NUMBER and DESCRIPTION:** 3 (Flammable)
- **PACKING GROUP:** PG II
- **DOT LABEL(S) REQUIRED:** Class 3 (Flammable)
- **NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2008):** 127
- **MARIINE POLLUTANT:** The components of this product not classified by the DOT as a Marine Pollutant (as defined by 49 CFR 172.101).

**TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS:** This product is classified as Dangerous Goods, per regulations of Transport Canada.

- **UN IDENTIFICATION NUMBER:** UN 1866
- **PROPER SHIPPING NAME:** Resin solution, flammable
- **HAZARD CLASS NUMBER and DESCRIPTION:** 3 (Flammable)
- **PACKING GROUP:** PG II
- **HAZARD SHIPPING LABEL(S) REQUIRED:** Class 3 (Flammable)
- **SPECIAL PROVISIONS:** 83
- **EXPLOSIVE LIMIT & LIMITED QUANTITY INDEX:** 5
- **ERAP INDEX:** None
- **PASSENGER CARRYING SHIP INDEX:** None
- **PASSENGER CARRYING ROAD OR RAIL VEHICLE INDEX:** 60

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

- **UN IDENTIFICATION NUMBER:** UN 1866
- **PROPER SHIPPING NAME:** Resin solution, flammable
- **HAZARD CLASS or DIVISION:** 3 (Flammable)
- **HAZARD LABEL(S) REQUIRED:** Class 3 (Flammable)
- **PACKING GROUP:** II
- **EXCEPTED QUANTITIES:** E2
- **PASSENGER and CARGO AIRCRAFT PACKING INSTRUCTION:** 353
- **PASSENGER and CARGO AIRCRAFT MAXIMUM NET QUANTITY PER PKG:** 5 L

Pecora P-200 Part A  Page 8 of 12  July 3, 2014
INTERNATIONAL AIR TRANSPORT ASSOCIATION SHIPPING INFORMATION (IATA) [continued]:

14. TRANSPORTATION INFORMATION (Continued)

INTRODUCTION: This product is classified as dangerous goods, per the International Maritime Organization.

UN No.: 1866
PROPER SHIPPING NAME: Resin solution, flammable
HAZARD CLASS NUMBER: 3 (Flammable)
LABELS: Class 3 (Flammable)
Packing GROUP: II
SPECIAL PROVISIONS: None
LIMITED QUANTITIES: 5 L
EXCEPTED QUANTITIES: E2
PACKING: Instructions: P001; Provisions: PP1
IBCs: Instructions: IBC02; Provisions: None
TANKS: Instructions: T4; Provisions: T1, TP8
EmS: F-E, S-E
STOWAGE CATEGORY: Category B.
MARINE POLLUTANT: No component of this product is designated by the IMO to be a Marine Pollutant.

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 EHHS (TPQ)</th>
<th>SECTION 304 RQ</th>
<th>SECTION 313 TRI (threshold)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Benzene</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Methyl Isobutyl Ketone</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Toluene</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Xylene</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

U.S. SARA HAZARD CATEGORIES (SECTION 311/312, 40 CFR 370-21): ACUTE: Yes; CHRONIC: Yes; FIRE: Yes; REACTIVE: No; SUDDEN RELEASE: No

U.S. TSCA INVENTORY STATUS: All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

U.S. CERCLA REPORTABLE QUANTITY (RQ): Ethyl Benzene = 1000 (454 kg); Methyl Isobutyl Ketone = 5000 lb (2270 kg); Toluene = 1000 lb (454 kg); Xylene = 100 lb (45.4 kg)

U.S. CLEAN AIR ACT (CA 112(b)) THRESHOLD QUANTITY (TO): The Ethyl Benzene, Methyl Isobutyl Ketone and Xylene components are listed as a Hazardous Air Pollutant (HAP) generally known or suspected to cause serious health problems. The Clean Air Act, as amended in 1990, directs EPA to set standards requiring major sources to sharply reduce routine emissions of toxic pollutants. EPA is required to establish and phase in specific performance based standards for all air emission sources that emit one or more of the listed pollutants. These chemicals are included on this list.

U.S. CLEAN WATER ACT REQUIREMENTS: Ethyl Benzene, Toluene and Xylene (mixed) are designated as hazardous substances under section 311(b)(2)(A) of the Federal Water Pollution Control Act and further regulated by the Clean Water Act Amendments of 1977 and 1978. These regulations apply to discharges of these substances. This designation includes any isomers and hydrates, as well as any solutions and mixtures containing these substances. Ethyl Benzene and Toluene are Toxic Pollutants designated pursuant to section 307(a)(1) of the Federal Water Pollution Control Act and are subject to effluent limitations.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): The Toluene, Methyl Isobutyl Ketone and Ethyl Benzene components are on the California Proposition 65 lists. WARNING: This product contains chemicals known to the State of California to cause cancer or developmental harm.

ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are on the DSL Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LIST: The Xylene and Toluene components are on the CEPA Priority Substances 1 list, not considered as “TOXIC” under Section 64 of CEPA.

Ethyl Benzene and Methyl Isobutyl Ketone are Substances With Greatest Potential For Human Exposure Substance on Environment Canada/Health Canada Pilot Project List (CEPA 1999, Section 73). Meets the categorization criteria: *may present, to individuals in Canada, the greatest potential for exposure; or *are persistent or bio-accumulative 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 REGULATIONS: This product is classified as a Controlled Product, Hazard Classes B2 (Flammable Liquid); D1A (Poisonous and Infectious Material, Acute Lethality, Very Toxic); D2A (Poisonous and Infectious Material, Other Effects, Very Toxic, Teratogenicity and Embryotoxicity), and D2B (Poisonous and Infectious Material, Other effects/Toxic: Eye Irritation, Skin Irritation, Respiratory Tract and Skin Sensitization) as per the Controlled Product Regulations.
15. REGULATORY INFORMATION (Continued)

ADDITIONAL MEXICAN REGULATIONS:
MEXICAN WORKPLACE REGULATIONS (NOM-018-STPS-2000): This product is classified as hazardous.

16. OTHER INFORMATION

U.S. ANSI STANDARD LABELING (Precautionary Statements): DANGER! FLAMMABLE LIQUID. MAY BE HARMFUL IF INHALED OR INGESTED. MAY CAUSE EYE, SKIN AND RESPIRATORY IRRITATION; EYE IRRITATION MAY BE SEVERE. VAPORS MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS. CONTAINS COMPOUNDS THAT ARE SUSPECT CARCINOGENS AND REPRODUCTIVE TOXINS. POSES ASPIRATION HAZARD IF SWALLOWED. MAY CAUSE SKIN SENSITIZATION AND RESPIRATORY SENSITIZATION. Avoid contact with eyes, skin, and clothing. Avoid breathing mist, vapors or fume. 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 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 CO2. IN CASE OF SPILL: Absorb spilled product with poly pads 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 SYSTEM CLASSIFICATION:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Flammable Liquid Category 2, Acute Inhalation Toxicity Category 3, Acute Oral Toxicity Category 5, Reproductive Toxicity Category 2, Aspiration Hazard Category 1, Specific Target Organ Toxicity Repeated Exposure Category 2, Skin Irritation Category 3, Eye Irritation Category 2A, Specific Target Organ Toxicity (Inhalation-Central Nervous System, Respiratory Irritation) Single Exposure Category 3, Skin Sensitization Category 1B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal Word:</td>
<td>Danger</td>
</tr>
</tbody>
</table>

Precautionary Statements:


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

Hazard Symbols/Pictograms: GHS02, GHS07, GHS08

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

The information presented in this Material Safety Data Sheet is presented 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.

REFERENCES AND DATA SOURCES: Contact the supplier for information.

METHODS OF EVALUATING INFORMATION FOR THE PURPOSE OF CLASSIFICATION: Bridging principles were used to classify this product.

REVISION DETAILS: May 2012: Up-date and revise entire MSDS to include current GHS requirements; change in formulation.

DATE OF PRINTING: July 3, 2014
A large number of abbreviations and acronyms appear on a MSDS. Some of these, which are commonly used, include the following:

**KEY ACRONYMS:**

CHEMTREC: Chemical Transportation Emergency Center, a 24-hour emergency information and/or emergency assistance to emergency responders.

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

**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 Categories:** 1: Immediate Danger to Life and Health; 2: Slight Hazard; 3: Slightly to mildly irritating, but irritation may occur. Draize ≤ 25. 4: Not applicable.

**10** Materials that are readily capable of detonation or explosive decomposition at normal temperature and pressure. These materials may react with water, but will not release energy violently. Explosives: Division 1.5 and 1.6 explosives. Substances that are very insensitive explosives (i.e., Category 1.4C explosives) are no longer classified as explosives. Substances that do not meet the criteria for Explosives: Division 1.5 and 1.6 explosives.

**Pyrophorics:** No Rating. Oxidizers: Packaging Group III oxidizers; Solids: any material that is nonflammable but will react violently when introduced in suspension or mixture with water or other nonflammable substance(s). Oxidizers: Division 4.1 oxides. Substances that do not meet the criteria for Pyrophorics: No Rating. Oxidizers: Packaging Group III oxidizers.

**Compressed Gases:** Substances that will not polymerize, decompose, sublimate, or condense, or self-ignite at ambient temperature and/or pressure and have a high potential (or high risk) for fire or explosion. Substances that will not polymerize, decompose, sublimate, or condense, or self-ignite at ambient temperature and/or pressure and have a moderate potential (or moderate risk) for fire or explosion. Substances that will not polymerize, decompose, sublimate, or condense, or self-ignite at ambient temperature and/or pressure and have a low potential (or low risk) for fire or explosion.

**Water Reactivity Rating:** No 0 rating. Substances that release at least 0.5 mg/L of oxygen per minute in the presence of water at 20°C (68°F) under pressure.

**1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338 and 58: 35351 and 58: 40191):** There are no reasons to fear a risk of damage to the developing embryo or fetus before the 15th week of pregnancy.

**Slight Hazard:** Minor injury likely unless prompt action is taken and medical treatment is given; high level of toxicity; toxicity: Severe irritation and/or corrosive; may not be generally recognized; slight skin and eye irritation may occur; minor damage may occur from single or repeated exposures; extremely toxic; irreversible injury may result from short contact. Skin Irritation: Slight irritation; Corrosion: Not defined; Toxicity: Not defined; Sensitivity: No appropriate. Do not rate as a 4, based on eye irritation alone. Oral LD₅₀: Rat ≤ 1 mg/kg. Oral LD₅₀: Rat ≤ 20 mg/kg. Inhalation LC₅₀: 4-hr Rat ≤ 0.05 mg/L.

**Hazardous Materials Identification System Hazard Ratings:**

**FLAMMABILITY HAZARD:** 0 Minimal Hazard. Materials that will not burn in air when exposure to a temperature of 815°C (1500°F) for a period of 5 minutes. 1 Slight Hazard. Materials that must be handled with care. Exposure to different conditions can cause a flammable vapor to be produced. 2 Slight to moderate hazard. Materials that must be handled with care at all ambient temperatures. Exposure to different conditions can cause a flammable vapor to be produced. 3 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 vapors in air, but under high ambient temperature 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 dust or powder. Solids that may release flammable vapors. Solids that are dispersed in air in a fibrous or shredded form that may burn rapidly and create flash fires hazards (e.g., cotton, sisal, hemp); and Solids and semisolids (e.g. viscous and slow flowing as asphalt) that readily may form flammable vapors. 4 Severe Hazard. Materials that will readily or continually form flammable 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 IB and IC); Materials that on account of their physical form or environmental conditions can form explosive mixtures with air, and that are readily dispersed in air; Substances that are readily dispersed in air (e.g., dusts of combustible solids, mats or droplets of flammable liquids); and Materials that burn extremely rapidly, usually by reason of self-oxidized (e.g. dry nitrocellulose and many organic peroxides). 5 Extreme Hazard. Materials that, in the form of dust or powder, or that are dispersed in air in a fibrous or shredded form that may burn rapidly and create flash fire hazards (e.g., cotton, sisal, hemp).
DEFINITIONS OF TERMS (Continued)

FLAMMABILITY HAZARD (continued): 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 ignite in air at normal atmospheric pressure and have a flash point at or below 37.8°C (100°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 test.

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. 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 at normal temperatures and pressures. Materials that are sensitive to localized thermal or mechanical shock at normal temperatures and pressures. 4 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. Lower Flammable Limit: Minimum concentration below which a flammable mixture will not be sustained but less than or equal to 10,000 ppm. Upper Flammable Limit: Maximum concentration at which a flammable mixture will be sustained but less than or equal to 1000 ppm. 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. 100°C (212°F) or above.

The following limits are for 1 atm or normal atmospheric pressure. The lower flammable limit of a liquid is the lowest concentration of a liquid that will burn in air. The upper flammable limit of a liquid is the highest concentration of a liquid that will burn in air. A flammable liquid is one that forms a flammable vapor mixture or atmosphere with air 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. LD₅₀: Lethal Dose (solids & liquids) that kills 50% of the exposed animals. ppm: Concentration expressed in parts per million of air or water. LCLₐ: Lowest Concentration to cause a symptom. TCLₐ: Lowest concentration to cause a symptom. LCLₐ: Lowest Concentration to cause lethal or toxic effects. Cancer Information: IARC, International Agency for Research on Cancer. NTP, National Toxicology Program. RTÉCS 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. Substances (2A, 2B, etc.) are also used. Other Information: BCF: Bioconcentration Factor, which is used to determine if a chemical will bioaccumulate in aquatic systems. BCF Values: The number of milliliters of water per milligram of material. The highest value that a chemical has is 1.0. This means that the chemical is not bioaccumulative.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material.

U.S.:

EPA: U.S. Environmental Protection Agency. ACGIH: American Conference of Governmental Industrial Hygienists, an international 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. DOT: U.S. Department of Transportation. TC: Transport Canada. SARA: Superfund Amendments and Reauthorization Act. TSCA: U.S. Toxic Substances Control Act. RCRA: Resource Conservation and Recovery Act. SARA Title III: Comprehensive Environmental Response, Compensation, and Liability Act. Marine Pollution 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.