SAFETY DATA SHEET

PECORA P-75

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-75</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCT DESCRIPTION:</td>
<td>Primer</td>
</tr>
<tr>
<td>CHEMICAL NAME/CLASS:</td>
<td>Isocyanates in Solvent 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>September 8, 2011</td>
</tr>
<tr>
<td>REVISION DATE:</td>
<td>March 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, Carcinogenic Cat. 2, Reproductive Toxicity Cat. 2, Acute Inhalation Toxicity Cat. 2, Aspiration Hazard Cat. 1, STOT RE Cat. 2, Eye Irritation Cat. 2, STOT (Inhalation-Respiratory Irritation) SE Cat. 3, Skin Irritation Cat. 2, Respiratory Sensitizer Cat. 1, Skin Sensitization Cat. 1,STOT (Inhalation-Central Nervous System) SE Cat. 3, Aquatic Chronic Toxicity Cat. 3

Signal Word: Danger


Hazard Symbols/Pictograms: GHS02, GHS06, GHS08

EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: This product is a colorless to straw-colored, corrosive, highly flammable liquid with a solvent odor.

HEALTH HAZARDS: Danger! Inhalation of vapors may be harmful or fatal and cause adverse central nervous system effects. Harmful or fatal if swallowed. This compound can cause irritation by all routes of exposure. May cause toxic systemic effects by skin absorption. Can cause skin and respiratory sensitization and allergic reaction. Contain compounds that are suspect carcinogens and a compound that is a suspect reproductive toxin.

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

REACTIVITY HAZARD: This product may have some sensitivity to water and react to form toluenediamine and carbon dioxide. This reaction is not expected to be violent.

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

Contains a compound that can cause harm to aquatic organisms.

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS®)

<table>
<thead>
<tr>
<th>Health</th>
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<tr>
<td>Flammability</td>
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</tr>
<tr>
<td>Physical Hazard</td>
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</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 B2. Class D2A. Class D2B. 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

<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>Toluene</td>
<td>108-88-3</td>
<td>50.0</td>
<td>Classification: Flammability Cat. 2, Reproductive Toxicity Cat. 2, Aspiration Hazard Cat. 1, STOT RE Cat. 1, Skin Irritation Cat. 2, STOT (Inhalation-Central Nervous System) SE Cat. 3</td>
</tr>
</tbody>
</table>

Pecora P-75  Page 1 of 12  March 3, 2014
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>Proprietary Polysocyanate</td>
<td>100-41-4</td>
<td>0.5-3.0</td>
<td>Classification: Flammable Liquid Cat. 2, Acute Inhalation Toxicity Cat. 4, Eye Irritation Cat. 2, STOT (Inhalation-Respiratory Irritation) SE Cat. 3, Skin Irritation Cat. 2, Respiratory Sensitizer Cat. 1, Skin Sensitization Cat. 1, Aquatic Chronic Toxicity Cat. 3</td>
</tr>
<tr>
<td>Propylene Glycol Monomethyl Ether Acetate</td>
<td>108-65-6</td>
<td>5.0-10.0</td>
<td>Classification: Flammable Liquid Cat. 3</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>5.0-10.0</td>
<td>Classification: Flammable Liquid Cat. 3, Acute Inhalation Toxicity Cat. 4, Acute Dermal Toxicity Cat. 4</td>
</tr>
<tr>
<td>Ethyl Benzene</td>
<td>100-41-4</td>
<td>0.5-3.0</td>
<td>Classification: Flammable Liquid Cat. 2, Acute Inhalation Toxicity Cat. 4</td>
</tr>
<tr>
<td>Proprietary Polysocyanate</td>
<td>0.01-1.0</td>
<td></td>
<td>Classification: Flammable Liquid Cat. 2, Acute Inhalation Toxicity Cat. 2, Eye Irritation Cat. 2, STOT (Inhalation-Respiratory Irritation) SE Cat. 3, Skin Irritation Cat. 2, Respiratory Sensitizer Cat. 1, Skin Sensitization Cat. 1, Aquatic Chronic Toxicity Cat. 3</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 rinse mouth with water or give several cupfuls 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, liver, intestinal, heart, kidney and blood 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. Be observant for pulmonary edema. The following describes treatment recommendations available for Toluene. Check for signs of impending pulmonary edema. Because of the aspiration hazard, avoid emetic drugs, whenever practical. For ingestion over-exposures in which Toluene contains another toxic component and induction of emesis is advisable: If the patient is not drowsy, coma, or in coma, induced vomiting will reduce the effective plasma concentration. If necessary, as an alternative treatment, remove Toluene from the stomach via gastric lavage. One or two ounces of mineral oil may be instilled and left in the stomach at the completion of lavage. Avoid epinephrine because of its possible adverse effect on the sensitized myocardium. Avoid all digestive fats, oils and alcohol, which may promote the absorption of Toluene in the intestinal system. If eyes or skin are affected, wash thoroughly and apply a bland analgesic ointment. Because of the possibility of venous hemorrhage, monitor the ECG continuously and be prepared to administer external cardiac massage. In chronic solvent abusers, correct dehydration, acidosis, hypokalemia and hypophosphatemia. Usually toxic signs and symptoms (except those due to neuropathies and to cerebellar lesions) disappear within a few days after fluid and electrolyte abnormalities are corrected.

5. FIRE-FIGHTING MEASURES

FLASH POINT (calculated): 22°C (71.6°F)

AUTOIGNITION: Not known for product. For Toluene: 480°C (896°F)

FLAMMABLE LIMITS IN AIR: Not known for product.

For Toluene: LEL: 1.1%, UEL: 7.1%

EXTINGUISHING MEDIA: Suitable Extinguishing Media: Use materials appropriate for surrounding materials. Water should be used for cooling of containers only due to reaction with water.

UNSuitable Extinguishing Media: Water and halogenated media.

PROTECTION OF FIREFIGHTERS: Special hazards arising from the product: This is a highly flammable liquid which is also toxic by inhalation and so presents a contact hazard to fire-fighters. This compound reacts with water to form toluenediamine and carbon dioxide. Not sensitive to mechanical impact under normal conditions.

NFPA RATING

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>INSTABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

OTHER
See Section 16 for Definitions of Ratings
5. FIRE-FIGHTING MEASURES (Continued)
SPECIAL HAZARDS ARISING FROM THE PRODUCT (continued): 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. 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% 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 polypads. Absorb spilled liquid with clay, sand, polypads, or other suitable inert absorbent materials. All contaminated absorbents and other materials should be placed in an appropriate container and sealed. Do not mix with wastes from other materials. Dispose of in accordance with applicable Federal, State, and local procedures (see Section 13, Disposal Considerations). Dispose of recovered material and report spill per regulatory requirements. Remove all residue before decontamination of spill area. Clean spill area with soap and copious amounts of water. Monitor area for combustible vapor levels and confirm levels are below exposure limits given in Section 8 (Exposure Controls—Personal Protection), if applicable, and that levels are below applicable LELs (see Section 5 – Fire Fighting Measures) before non-response personnel are allowed into the spill area. Purge equipment with inert gas prior to reuse.
ENVIRONMENTAL PRECAUTIONS: Minimize use of water to prevent environmental contamination. Prevent spill or rinsate from contaminating storm drains, sewers, soil or groundwater. Place all spill residues in a suitable container and seal. Do not discharge effluent containing this product into streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.
OTHER INFORMATION: U.S. regulations may require reporting of spills of this material that reach surface waters if a sheen is formed. If necessary, the toll-free phone number for the 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.
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. Empty containers may contain residual product; therefore, empty containers should be handled with care.
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>Guideline</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edible Benzene</td>
<td>100-41-4</td>
<td>DFG MAK TWA</td>
<td>50 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DFG MAK PEAK</td>
<td>10 ppm</td>
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<td></td>
<td></td>
<td>AIHA WEEEL TWA</td>
<td>10 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proprietary Polysiocyanate</td>
<td>0.005 ppm (NIC: 0.001), Sensitizer</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>ACGIH TLY TWA</td>
<td>20 ppm</td>
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<td></td>
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<td>OSHA PEL TWA</td>
<td>200 ppm; 100 ppm (vacated 1989 PEL)</td>
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<tr>
<td></td>
<td></td>
<td>OSHA PEL STEL</td>
<td>300 ppm (ceiling) 10 minute peak per 8-hr shift; 150 (vacated 1989 PEL)</td>
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<tr>
<td></td>
<td></td>
<td>NIOSH REL TWA</td>
<td>100 ppm</td>
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<tr>
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<td>NIOSH REL STEL</td>
<td>150 ppm</td>
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<td>DFG MAK TWA</td>
<td>50 ppm</td>
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<tr>
<td></td>
<td></td>
<td>DFG MAK PEAK</td>
<td>10 ppm</td>
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</tbody>
</table>

**NOTE:** Not Established, **NIC = Notice of Intended Change**  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.

### PERSONAL PROTECTIVE EQUIPMENT (PPE):


### EYE/FACE PROTECTION:

Use approved safety glasses or safety goggles. 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 risks 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 NIOSH respiratory equipment guidelines for components that present an inhalation hazard are presented for additional assistance in respiratory protective equipment selection.

### PROPRIETARY POLYSIOCNATE

**CONCENTRATION**

Based on NIOSH REL at Concentrations Above the NIOSH REL, or Where There is No REL, at Any Detectable Concentration: Any Self-Contained Breathing Apparatus (SCBA) that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode, or any Supplied-Air Respirator (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.

### TOLUENE

**CONCENTRATION**

Up to 500 ppm:

Any Chemical Cartridge Respirator with organic vapor cartridge(s), or any Powered, Air-Purifying Respirator (PAPR) 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 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.
9. PHYSICAL and CHEMICAL PROPERTIES

The following information is available for the product.

**FORM:** Liquid.

**MOLECULAR WEIGHT:** Mixture.

**ODOR:** Solvent.

**VOC (less water and exempt):** 692 g/L

**HOW TO DETECT THIS SUBSTANCE (WARNING PROPERTIES):** The appearance and odor of this product may act as warning properties in the event of an accidental release.

The following information is available for the Toluen component.

**MOLECULAR FORMULA:** C₆H₅

**ODOR:** Gasoline-like.

**VAPOR DENSITY:** (air = 1) = 3.1

**FREEZING/MELTING POINT:** -95°C (-139°F)

**SPECIFIC GRAVITY @ 20°C (water = 1):** 0.86

**SOLUBILITY IN WATER @ 25°C:** 56-58 mg/100 mL

**VAPOR PRESSURE @ 20°C:** 22 mm Hg or 2.93 kPa

**COEFFICIENT WATER/OIL DISTRIBUTION:** Log P (oct) = 2.11-2.80

The following information is available for the Proprietary Polyisocyanate component.

**MOLECULAR FORMULA:** Mixture

**ODOR:** Solvent-like.

**SPECIFIC GRAVITY @ 20°C (water = 1):** ~1.15

**VAPOR DENSITY (air = 1):** > 1

**pH:** Not available.

**BOILING POINT:** ~ 145.7°C (~ 293°F)

**SOLUBILITY IN WATER:** Reacts.

**FLASH POINT:** ~ 40°C (~ 104°F)

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 on components, this product may be incompatible with amines, bases, metal compounds, amides, phenols, mercaptans, urethanes, urea, surface active agents, potassium chloride, tetranitromethane, silver perchlorate, sulfur dichloride, nitrogen tetroxide, uranium hexafluoride, oxidizers, acids, alcohols, water and moisture. Due to Toluen content, this product can attack some plastics, elastomers and coatings, such as polyvinyl chloride (PVC), chlorinated polyvinyl chloride (CPVC), polypropylene, acrylonitrile-butadiene-styrene (ABS), styrene-acrylonitrile (SAN), polyethersulfone, polyurethane (rigid), polybutylene terephthalate, polysulfone, high-density polyethylene (HDPE), ultra high molecular weight polyethylene (UHMWPE), cross-linked polyethylene (XLPE), polyphenylene oxide (Noryl), thermoset polyester, polystyrene and ethylene vinyl acetate (EVA), (nitrile rubber (Nitrile Buna N; NBR), ethylene propylene (EP), ethylene propylene diene (EPDM), ethylene propylene terpolymer (EPT), chloroprene, styrene-butadiene (SBR), polyurethane, butyl rubber (isobutylene isoprene), natural rubber, isoprene, neoprene, flexible polyvinyl chloride (PVC), chlorosulfonyl polyethylene (Hypalon), low density polyethylene (LDPE), silicone, ethylene vinyl acetate (EVA) and Fluoraz, coal tar epoxy and epoxy chemical resistant.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Combustion: Thermal decomposition of this product can generate carbon oxides, nitrogen oxides, aldehydes, reactive hydrocarbons and organic acid vapors. Hydrolysis: Toluenediamine and carbon dioxide.

**POSSIBILITY OF HAZARDOUS REACTIONS:** This product may undergo hazardous polymerization in contact with water or materials to which it is incompatible. The reaction may produce heat and carbon dioxide. Containers may rupture. Due to the Proprietary Polyisocyanate, this product may react with water to produce tolunediamine.

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 overexposures can cause reddening, discomfort and moderate to severe irritation. Prolonged or further contact can cause severe inflammation, redness, rash, swelling and blistering. Repeated skin exposure to low concentration can cause dermatitis. Skin contact can cause allergic reaction. Brief contact with the liquid or vapors from this product and the eyes can cause irritation, reddening and watering. Direct eye contact may cause severe eye irritation.

- **SKIN ABSORPTION:** Prolonged skin contact may cause adverse systemic toxicity by skin absorption as described under ingestion or inhalation, as well as sensitization and allergic reaction to the skin.

- **INGESTION:** If the product is swallowed, it can irritate the mouth, throat, and other tissues of the gastro-intestinal system or cause burns 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 may be fatal.

- **INHALATION:** Inhalation of vapors, mists, or sprays of this product can moderately to severely irritate or burn the tissues of the nose, mouth, throat, and upper respiratory system. Symptoms of overexposure may include coughing, sneezing, and difficulty breathing. Severe overexposure via inhalation may result in a potentially fatal respiratory disorder (e.g., pulmonary edema, chemical pneumonitis); symptoms may be delayed by hours or even days. Inhalation of high concentrations of this product (as may occur in a poorly ventilated area) may be fatal. Repeated inhalation of mists of this product may cause respiratory disorders (e.g., bronchitis). Inhalation can also lead to adverse central nervous system effects, including dizziness, incoordination, nausea and vomiting.
11. TOXICOLOGICAL INFORMATION (Continued)

**POTENTIAL HEALTH EFFECTS (continued):**

**INHALATION (continued):** Chronic inhalation of low concentration may cause permanent damage to the lungs and reduced lung function. Liver and kidney damage as well as disturbances to the heart have been reported from over-exposure to high concentrations of vapors of Toluene. Effects such as euphoria, muscle incoordination and loss of consciousness have been reported after severe exposure to proprietary polyisocyanate.

Inhalation can cause respiratory sensitization and allergic reaction as described further in this Section.

**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, liver and kidneys.

**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.

**PROPYLENE GLYCOL MONOMETHYL ACETATE:**
- LD50 (Oral-Rat) 8532 mg/kg
- LD50 (Oral-Rat) 9000 mg/kg: Behavioral; coma
- LD50 (Oral-Mouse) > 5000 mg/kg: Behavioral; coma
- LD50 (Skin-Rabbit) > 5 gm/kg

**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
- 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
- LD5 (Skin-Rabbit) 17,800 µL/kg
- LD5 (Skin-Rabbit) > 5000 mg/kg

**TOLUENE:**
- LD50 (Oral, Rat) 50 mg/kg
- LD50 (Inhalation-Human) 10,000 ppm/6 hours: Behavioral: general anesthetic; Lungs, Thorax, or Respiration: cyanosis; Blood: other changes
- LD50 (Inhalation-Human) 200 ppm
- LD5 (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>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>Toluene</td>
<td>3</td>
<td>No</td>
<td>No</td>
<td>A4</td>
<td>A4</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Proprietary Polyisocyanate</td>
<td>2B</td>
<td>No</td>
<td>R</td>
<td>Ca</td>
<td>A4</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Xylene</td>
<td>3</td>
<td>No</td>
<td>No</td>
<td>A4</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>


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

**SENSITIZATION TO THE PRODUCT:** This product contains proprietary polyisocyanate 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 proprietary polyisocyanate 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 proprietary polyisocyanate. 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 proprietary polyisocyanates have 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 proprietary polyisocyanate developed extensive skin rashes can last weeks.
10. TOXICOLOGICAL INFORMATION (Continued)

TOXICOLOGICAL SYNERGISTIC PRODUCTS: 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. 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.

REPRODUCTIVE TOXICITY INFORMATION: This product has not yet 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.

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: No information is available.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

MOBILITY: This product has not yet been tested for mobility in soil. The following information is available for the main solvents components.

TOLUENE: In association with clay minerals, Toluene's adsorption is inversely proportional to the pH of the soil. The reported Koc values range from 178 to 249. Toluene is expected to have high to moderate mobility in soils. Also, based on a classification scheme, this Koc value 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 moderate to high mobility based upon experimental Koc values. This compound is expected to have 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 to be an important fate process given its Henry's Law constant of 6.64X10^3 atm-cm/mole. This compound may volatilize from dry soil surfaces based on a vapor pressure of 28.4 mm Hg at 25°C. Complete biodegradation of Toluene was observed in lab microcosm tests during a 40 hour incubation period using soils previously exposed to this material. The biodegradation half-life in various soils was reported as several hours to 71 days. Volatilization from water surfaces is expected based upon Henry's Law constant of 6.64X10^3 atm-cm/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 halflife 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 ambient atmosphere. Vapor-phase material is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals, with the half-life of 3.1 hours. Although direct photo-degradation is not expected, this compound in air decomposes and disappears by photolytic reactions with photochemically generated hydroxyl radicals. The indirect photochemical hydroxyl radical photolysis has an estimated half-life of 32 hours with an estimated rate constant of 1.19X10^-11 cm^3/mol sec and an assumed hydroxyl radical concentration 0.5x10^-6 OH/cm^3. For these reasons, there is little potential for accumulation of the compound in air.

TOLUENE: Volatilization of Toluene from moist soil surfaces is expected to be an important fate process given a Henry's Law constant of 6.64X10^3 atm-cm/mole. This compound may volatilize from dry soil surfaces based on a vapor pressure of 28.4 mm Hg at 25°C. Complete biodegradation of Toluene was observed in lab microcosm tests during a 40 hour incubation period using soils previously exposed to this material. The biodegradation half-life in various soils was reported as several hours to 71 days. Volatilization from water surfaces is expected based upon Henry's Law constant of 6.64X10^3 atm-cm/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 halflife 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 ambient 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 cm^3/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 cm^3/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 cm^3/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 have 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-cm/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 on 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 estimated value for Propylene Glycol Monomethyl Ether Acetate is 0.36. 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 major components. Only select data are given due to the large amount of data available. Contact Pecora for more information.

**PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE:**
EC₅₀ (Streptococcus aureus); 15 minutes = 5625 mg/L (Microtox test)
EC₅₀ (Solenostomus capricornutum green alga); 0.72 hours = >1000 mg/L; calculated based on nominal concentrations, because measured concentrations were >80% of nominal concentrations
EC₅₀ (Daphnia magna Water flea) 48 hours = 373 mg/L, open system, static
EC₅₀ (Daphnia sp. Water flea) 48 hours = > 408 mg/L
LC₅₀ (Oryzias latipes Medaka) 96 hours = 100 mg/L; calculated based on nominal concentrations, because measured concentrations were >80% of nominal concentrations
LC₅₀ (Pimephales promelas Fathead Minnow) 96 hours = 2600 mg/L; Flow-through bioassay
LC₅₀ (Pimephales promelas Fathead Minnow) 96 hours = 161 mg/L, static
LC₅₀ (Bluegill/Sunfish) 96 hours = >10000 mg/L; Static bioassay
LC₅₀ (Salmo gairdneri Rainbow trout) 96 hours = 12,900-13,300 mg/L; Flow-through & 24-24°C
LC₅₀ (Oryzias latipes Medaka) 96 hours = >100 mg/L; calculated based on nominal concentrations, because measured concentrations were >80% of nominal concentrations

**TOLUENE:**
LC₅₀ (Fathead minnow) 1 hour = 42 mg/L at 22°C, in a static bioassay
LC₅₀ (Fathead minnow) 24 hours = 270 mg/L
LC₅₀ (Fathead minnow) 48 hours = 15 mg/L
LC₅₀ (Pimephales promelas) 32 days = 6 mg/L (growth inhibition)
LC₅₀ (Oncorhynchus kisutch) 40 days = 2.8 mg/L (growth inhibition)
EC₅₀ (Grenzodov variegatus) 28 days = 7.7 mg/L (growth inhibition)
EC₅₀ (Salvelinus namaycush) 70 days = 25 mg/L
LC₅₀ (Salmo gairdneri) 4 days = 5.8 mg/L (growth inhibition)
LC₅₀ (Solenostomus capricornutum) 3 days = 12 mg/L (growth inhibition)
EC₅₀ (Pecilia reticulata gypsum) 14 days = 2.87 mmol/L

**XYLENE:**
LC₅₀ (rainbow trout) 96 hours = 13.5 mg/L (conditions of bioassay not specified, no specific isomer)
LD₅₀ (goldfish) 24 hours = 13 mg/l (conditions of bioassay not specified, no specific isomer)
LD₅₀ (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

MARINE 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 |
| SPECIAL PROVISIONS | Class 3 (Flammable) |
| EXPLOSIVE LIMIT & LIMITED QUANTITY INDEX | 83 |
| ERAP INDEX | None |
| PASSENGER CARRYING SHIP INDEX | None |
| PASSENGER CARRYING ROAD OR RAIL VEHICLE INDEX | 60 |

INFORMATION 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 |
| SPECIAL QUANTITIES | E2 |
| PASSENGER and CARGO AIRCRAFT PACKING INSTRUCTION | 353 |
| PASSENGER and CARGO AIRCRAFT MAXIMUM NET QUANTITY PER PKG | 5 L |
| PASSENGER and CARGO AIRCRAFT LIMITED QUANTITY PACKING INSTRUCTION | Y341 |
| PASSENGER and CARGO AIRCRAFT LIMITED QUANTITY MAXIMUM NET QUANTITY PER PKG | 1 L |
| CARGO AIRCRAFT ONLY PACKING INSTRUCTION | 364 |
| CARGO AIRCRAFT ONLY MAXIMUM NET QUANTITY PER PKG | 60 L |
| SPECIAL PROVISIONS | A3 |
| ERG CODE | 3L |
14. TRANSPORTATION INFORMATION (Continued)

INTERNATIONAL MARITIME ORGANIZATION SHIPPING INFORMATION (IMO): 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
IBC's: 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 EHS (TPQ) (40 CFR 355, Appendix A)</th>
<th>SECTION 304 RQ (40 CFR Table 302.4)</th>
<th>SECTION 313 TRI (threshold) (40 CFR 372.65)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Benzene</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Propylene Glycol Monomethyl Ether Acetate As a glycol ether</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>Proprietary Polyisocyanate</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Proprietary Polyisocyanate</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Xylene</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

U.S. SARA 302 EXTREMELY HAZARDOUS THRESHOLD PLANNING QUANTITY (TPQ): Proprietary Polyisocyanate: 500 lb (227 kg); Proprietary Polyisocyanate: 100 lb (454 kg)

U.S. SARA 304 EXTREMELY HAZARDOUS REPORTABLE QUANTITY (RQ): Proprietary Polyisocyanate: 100 lb (454 kg); Proprietary Polyisocyanate: 100 lb (454 kg)

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): Proprietary Polyisocyanate = 100 lb (45.4 kg); Proprietary Polyisocyanate = 100 lb (45.4 kg); Ethyl Benzene = 1000 lb (454 kg); Toluene = 100 lb (454 kg); Xylene = 100 lb (454 kg). As a glycol ether compound, the Propylene Glycol Monomethyl Ether Acetate component is a CERCLA Hazardous Material, although it has no specific reportable quantity.

U.S. CLEAN AIR ACT (CA 112r) THRESHOLD QUANTITY (TO): Proprietary Polyisocyanate = 10,000 lb (4540 kg); Proprietary Polyisocyanate = 10,000 lb (4540 kg).

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): The Ethyl Benzene and Toluene component is on the California Proposition 65 lists. WARNING: This product contains a chemical known to the State of California to cause 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 LISTS: The Xylene and Toluene components are on the CEPA Priority Substances 1 list, not considered as "TOXIC" under Section 64 of CEPA.

Ethyl Benzene is a 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/D2A (Poisonous and Infectious Material, Other Effects/Very Toxic: Inhalation Toxicity, Teratogenicity and Embryotoxicity), D2B (Poisonous and Infectious Material, Other effects/Toxic: Skin Irritation) as per the Controlled Product Regulations.

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. TOXIC BY INHALATION. MAY CAUSE EYE, SKIN AND RESPIRATORY IRRITATION. VAPORS MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS.
16. OTHER INFORMATION (Continued)

U.S. ANSI STANDARD LABELING (continued): CAN CAUSE SKIN AND RESPIRATORY SENSITIZATION AND ALLERGIC REACTION. CONTAINS COMPOUNDS THAT ARE SUSPECT CARCINOGENS AND A COMPOUND THAT IS A REPRODUCTIVE TOXIN. POSES ASPIRATION HAZARD IF SWALLOWED. 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 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 SYSTEM CLASSIFICATION:

Classification Flammable Liquid Category 2, Carcinogenic Category 2, Reproductive Toxicity Category 2, Acute Inhalation Toxicity Category 2, Aspiration Hazard Category 1, Specific Target Organ Toxicity Repeated Exposure Category 2, Eye Irritation Category 2, Specific Target Organ Toxicity (Inhalation-Respiratory Irritation) Single Exposure Category 3, Skin Irritation Category 2, Respiratory Sensitizer Category 1, Skin Sensitization Category 1, Specific Target Organ Toxicity (Inhalation-Central Nervous System) Single Exposure Category 3, Aquatic Chronic Toxicity Category 3

Signal Word: Danger


Precautionary Statements:


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

Hazard Symbols/ Pictograms: GHS2, GHS05, GHS08

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 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.

DATE OF PRINTING: March 3, 2014

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 (continued):**

DFG MAK Pregnancy Risk Group Classification: Group A: A risk of damage to the developing embryo or fetus must be considered to be probable. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. Group B: Currently available information indicates a risk of damage to the developing embryo or fetus must be considered to be possible. Damage to the developing organism cannot be excluded when pregnant women are exposed, even when MAK and BAT values are observed. Group C: There is no reason to fear a risk of damage to the developing embryo or fetus when MAK and BAT values are observed. Group D: Classification in one of the groups A-C is not yet possible because, although the data available may indicate a trend, they are not sufficient for final evaluation. IDLH: Immediately Dangerous to Life and Health. This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. LOQ: Limit of Quantitation. NEC: Not Established. When no exposure guidelines are established, an entry of NE is made for reference. NIC: Notice of Intended Change. NIOSH: The exposure that shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, the ceiling shall be assumed as a 15-minute TWA exposure (unless otherwise specified) that shall not be exceeded at any time during a workday. NIOSH RELs: NIOSH’s Recommended Exposure Limits.
HAZARD RATINGS: HAZARDOUS MATERIALS IDENTIFICATION SYSTEM HAZARD RATINGS: This rating system was developed by the National Paint and Coating Association and has been adopted by the OSHA HazMat Program.

DEFINITIONS OF TERMS (Continued):

HAZARD RATINGS:

PHYSICAL HAZARD:

Water Reactivity: Materials that do not react with water. Organic Peroxides: Materials that are generally stable, even under fire conditions and will not react with water.

Explosives: Materials that are not Explosive Compounds. Oxidizers: No rating. Unstable Reactives: Substances that will not polymerize, decompose, condense, or self-react.

1 Water Reactivity: Materials that change or decompose upon exposure to moisture. Oxidizing. Substances that are highly reactive in the presence of water. Physical Changes: Materials that may react explosively with water.

3 Water Reactivity: Materials that may react explosively with water at a rate greater than or equal to 1 kg of explosive's standard defined burn energy. Oxidizing. Substances that will react explosively with water at a rate greater than or equal to 1 kg of explosive's standard defined burn energy.

4 Water Reactivity: Materials that will react explosively with water under almost all ambient temperature conditions. Oxidizing. Materials that will react explosively with water under almost all ambient temperature conditions.

PYROGENIC HAZARD:

Materials that may ignite spontaneously when exposed to air at a temperature of 45.4°C (130°F) or below (pyrophoric).

5 Pyrogenic Material: Materials that may ignite spontaneously when exposed to air at a temperature of 45.4°C (130°F) or below (pyrophoric).

Acute Oral Toxicity LD₅₀: The concentration that is lethal to 50% of test animals when administered by oral route. Acute Dermal Toxicity LD₅₀: The concentration that is lethal to 50% of test animals when administered by dermal route.

Toxicity: The degree of hazard is based on the route of exposure and the concentration tested. Materials that are toxic by the oral route are rated 4, based on toxicity alone. Materials that are toxic by the dermal route are rated 4, based on toxicity alone. Materials that are toxic by eye are rated 4, based on toxicity alone. Materials that are toxic by inhalation are rated 4, based on toxicity alone. Materials that are toxic by all routes of exposure are rated 4, based on toxicity alone. Materials that are toxic by at least two routes of exposure are rated 4, based on toxicity alone. Materials that are toxic by at least three routes of exposure are rated 4, based on toxicity alone.

Oxidizers: Materials that, in either solid or liquid form, may react explosively with water without requiring heat or confinement. Oxidizers: Materials that, in either solid or liquid form, may react explosively with water without requiring heat or confinement.

Explosives: Materials that, under emergency conditions, can cause significant destruction or injury. Explosives: Materials that, under emergency conditions, can cause significant destruction or injury.

Stable: Materials that, under emergency conditions, can cause minor destruction or injury. Stable: Materials that, under emergency conditions, can cause minor destruction or injury.

Explosives: Materials that, under emergency conditions, can cause minor destruction or injury. Explosives: Materials that, under emergency conditions, can cause minor destruction or injury.

Organic Peroxides: Materials that, in either solid or liquid form, may react explosively with water without requiring heat or confinement. Organic Peroxides: Materials that, in either solid or liquid form, may react explosively with water without requiring heat or confinement.

Explosives: Materials that, under emergency conditions, can cause significant destruction or injury. Explosives: Materials that, under emergency conditions, can cause significant destruction or injury.

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Stable: Materials that, under emergency conditions, can cause minor destruction or injury. Stable: Materials that, under emergency conditions, can cause minor destruction or injury.
FLAMMABILITY HAZARD (continued): 1. Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperatures or that are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh). Materials that in themselves are normally stable, but that can become unstable at elevated temperatures and pressures. Materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures with air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal, and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. 2. Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur. Materials in this degree would not under normal conditions form hazardous atmospheres with air, but under high ambient temperatures or under moderate heating could release vapor in sufficient quantities to produce hazardous atmospheres with air. Liquids having a flash point at or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and III A liquids.) Solid materials in the form of powders or coarse dusts of representative diameter between 420 microns (40 mesh) and 2 mm (10 mesh) that burn rapidly but that generally do not form explosive mixtures with air. Solid materials in fibrous or shredded form that burn rapidly and create flash fire hazards, such as cotton, sisal, and hemp. Solids and semisolids that readily give off flammable vapors. Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. 3. Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class II and III A liquids). Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. 4. Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperatures or that are readily dispersed in air and will burn readily. Flammable or cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. INSTABILITY HAZARD: 1. 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 or above 37.8°C (100°F) and below 93.4°C (200°F) (i.e. Class II and III A liquids). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. 2. Materials that in themselves are readily ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class II and III A liquids). Materials that on account of their physical form or environmental conditions can form explosive mixtures with air and are readily dispersed in air. Flammable or combustible dusts with representative diameter less than 420 microns (40 mesh). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. 3. Liquids and solids that can be ignited under almost all ambient temperature conditions. Materials in this degree produce hazardous atmospheres with air under almost all ambient temperatures or, though unaffected by ambient temperatures, are readily ignited under almost all conditions. Liquids having a flash point below 22.8°C (73°F) and having a boiling point at or above 37.8°C (100°F) and those liquids having a flash point at or above 22.8°C (73°F) and below 37.8°C (100°F) (i.e. Class II and III A liquids). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. 4. Materials that will rapidly or completely vaporize at atmospheric pressure and normal ambient temperatures or that are readily dispersed in air and will burn readily. Flammable or cryogenic materials. Any liquid or gaseous materials that is liquid while under pressure and has a flash point below 22.8°C (73°F) and a boiling point below 37.8°C (100°F) (i.e. Class IA liquids). Materials that burn with extreme rapidity, usually by reason of self-contained oxygen (e.g. dry nitrocellulose and many organic peroxides). Solids containing greater than 0.5% by weight of a flammable or combustible solvent are rated by the closed cup flash point of the solvent. ECOLOGICAL INFORMATION: Effect concentration in water. Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms that consume contaminated plant or animal matter. Membrane threshold limit. Log KOW or log KOC. Coefficient of Oil/Water Distribution is used to assess a substance’s behavior in the environment. 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, a professional association that establishes exposure limits. OSHA: U.S. Occupational Safety and Health Administration. NIOSH: National Institute of Occupational Safety and Health, which is the research arm of OSHA. DOT: U.S. Department of Transportation. TC: Transport Canada. SARA: Superfund Amendments and Reauthorization Act. TSCA: U.S. Toxic Substance Control Act. CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act. Marine Pollutant status according to the DOT. CERCLA or Superfund; and various state regulations. This section also includes information on the precautionary warnings that appear on the material’s package label. CANADA: WHMIS: Canadian Workplace Hazardous Materials Information System. TC: Transport Canada. DSL/NDSL: Canadian Domestic/Non-Domestic Substances List.