(M) SAFETY DATA SHEET

PRODUCT NAME: HP 8104A  DATE: December 01, 2013

SECTION 1: MATERIAL AND MANUFACTURER IDENTIFICATION

MANUFACTURER:
Eteco, Inc.
1000 South Linwood Ave.
Santa Ana, CA 92705
Phone: 714 480 1370

TRANSPORTATION EMERGENCY CALL CHEMTREC:
800 424 9300

MEDICAL EMERGENCY INFORMATION:
800 328 8501

PRODUCT IDENTIFICATION NUMBER: HP 8104A
CHEMICAL FAMILY: POLYMERIC ISOCYANATE

SECTION 2: HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>MATERIAL OR COMPONENT</th>
<th>CAS NUMBER</th>
<th>% BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLYMERIC DIPHENYL METHANE DIISOCYANATE</td>
<td>9016-87-9</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Occupational Exposure Limit(s) if available, are listed in section 8.

SECTION 3: HAZARDS IDENTIFICATION

This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200)

Physical State and Appearance: Brown Liquid

Emergency Overview:

INHALATION OF MDI MISTS OR VAPORS MAY CAUSE RESPIRATORY IRRITATION, BREATHLESSNESS, CHEST DISCOMFORT AND REDUCED PULMONARY FUNCTION. OVEREXPOSURE WELL ABOVE THE PEL MAY RESULT IN BRONCHITIS, BRONCHIAL SPASMS AND PULMONARY EDEMA. LONG-TERM EXPOSURE TO ISOCYANATES HAS BEEN REPORTED TO CAUSE LUNG DAMAGE, INCLUDING REDUCED LUNG FUNCTION WHICH MAY BE PERMANENT. ACUTE OR CHRONIC OVEREXPOSURE TO ISOCYANATES MAY CAUSE SENSATION IN SOME INDIVIDUALS, RESULTING IN ALLERGIC RESPIRATORY REACTIONS INCLUDING WHEEZING, SHORTNESS OF BREATH AND DIFFICULTY BREATHING.

Skin: HAZARDOUS IN CASE OF SKIN CONTACT (IRRITANT, SENSITIZER). SKIN INFLAMMATION IS CHARACTERIZED BY ITCHING, SCALING OR REDDENING.

Eyes: HAZARDOUS IN CASE OF EYE CONTACT (IRRITANT).

Inhalation: HAZARDOUS IN CASE OF INHALATION (LUNG IRRITANT, LUNG SENSITIZER).

Ingestion: SLIGHTLY HAZARDOUS IN CASE OF INGESTION.

Medical Conditions Aggravated by Overexposure: Preexisting conditions such as asthma, allergies, eczema, bronchitis, and other lung and skin disorders may be aggravated by exposure to the product. Results from a lifetime inhalation study in rats indicate that MDI aerosol was carcinogenic at 9 mg/m³, the highest dose tested. This is well above the recommended TLV of 5ppb (0.05 mg/m³). Only irritation was noted at the lower concentration of 0.2 and 1 mg/m³. No birth defects or teratogenic effects were reported in a teratology study with rats exposed to 1, 4, and 12 mg/m³ polymeric MDI for 6 hr/day on days 6-15 of gestation. Embryotoxicity and fetotoxicity was reported at the top dose in the presence of...
maternal toxicity. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma), which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TVL. Those symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering, in those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapor-only exposure.

Aggravated Medical Conditions:
Individuals who are sensitized to isocyanates and those with preexisting lung diseases or conditions, including non-specific bronchial hyper reactivity or asthma, must avoid all exposure to isocyanates.

<table>
<thead>
<tr>
<th>SECTION 4: FIRST AID MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eyes:</strong> In case of eye contact, immediately flush eyes with large amounts of water for at least 15 minutes, keeping the eyelids open. Get immediate medical attention.</td>
</tr>
<tr>
<td><strong>Skin Contact:</strong> Remove contaminated clothing. In case of contact, immediately wash skin with soap and plenty of water. If symptoms develop obtain medical attention. Contaminated clothing should be thoroughly cleaned. An MDI study has demonstrated that a polyglycol-based skin cleaner or corn oil may be more effective than soap and water.</td>
</tr>
<tr>
<td><strong>Inhalation:</strong> If excessive inhalation of vapor occurs, remove patient to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, qualified personnel may administer oxygen. Get immediate medical attention.</td>
</tr>
<tr>
<td><strong>Ingestion:</strong> If swallowed, dilute with water. DO NOT INDUCE VOMITING. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.</td>
</tr>
</tbody>
</table>

**NOTES TO PHYSICIANS:** There is no specific antidote to counteract the effects of MDI. Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

**Other First Aid Procedures:** Medical supervision of all employees who handle or come into contact with MDI is recommended. Pre-employment and periodic medical examinations with respiratory function test (PEV, PVC, as a minimum are suggested). Persons with asthmatic conditions chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with MDI. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to MDI, further exposure is not permissible.

<table>
<thead>
<tr>
<th>SECTION 5: FIRE FIGHTING MEASURES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flash Point:</strong> &gt;93.3°C, Closed Cup.</td>
</tr>
<tr>
<td><strong>Autoignition:</strong> &gt;600°C.</td>
</tr>
<tr>
<td><strong>Flammable Limits:</strong> Not available.</td>
</tr>
<tr>
<td><strong>Products of Combustion:</strong> Carbon Monoxide, Carbon Dioxide, Nitrous Oxide and HCN.</td>
</tr>
<tr>
<td><strong>Fire Hazards in Presence of Various Substances:</strong> Slightly flammable to flammable in presence of open flames, sparks and static discharge or combustible materials.</td>
</tr>
<tr>
<td><strong>Fire Fighting Media and Instructions:</strong> Small Fire: Use DRY chemical powder. Large Fire: Use water spray, fog or foam. Do not use water jet.</td>
</tr>
<tr>
<td><strong>Protective Clothing (Fire):</strong> Splash goggles. Full suit. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.</td>
</tr>
</tbody>
</table>
Special Remarks on Fire Hazards: Reacts slowly with water to produce carbon dioxide, which may rupture closed containers. This reaction accelerates at higher temperatures.

SECTION 6: ACCIDENTAL RELEASE MEASURES

For major spills call Chemtrec (800-424-9300)

Small Spill and Leak: Clean-up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including appropriate respiratory protection. Evacuate the area. Prevent further leakage, spillage or entry into drains.

Large Spill and Leak: Contain and absorb large spillages onto an inert, non-flammable adsorbent carrier (such as earth or sand). Shovel into open-top drums or plastic bags for further decontamination, if necessary. Wash the spillage area with Liquid decontaminant. Test atmosphere for MDI. Neutralize small spillages with decontaminant. Remove and properly dispose of residues (see Section 13 for disposal considerations). Notify applicable government authorities if release is reportable. The CERCLA RQ for 4,4-MDI is 5000 lbs (see CERCLA in Section 15).

Decontaminant: Preparation of Decontaminant Solution: Prepare a decontamination solution of 0.2-0.5% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium carbonate may be substituted for ammonium hydroxide). Follow the precautions on the supplier’s material safety data sheets when preparing and using solution. Use of Decontamination Solution: Allow deactivated material to stand for at least 30 minutes before shoveling into drums. Do not tighten the bungs. Mixing with wet earth is also effective, but slower.

SECTION 7: HANDLING AND STORAGE

Handling: Avoid personal contact with the product or reaction mixture. Use only with adequate ventilation to ensure that the occupational exposure limit is not exceeded. The efficiency of the ventilation system must be monitored regularly because of the possibility of blockage. Avoid breathing aerosols, mists and vapors. (See Section 8 Exposure Control for details.)

Storage: Keep containers properly sealed and when stored indoors, in a well ventilated area. Keep contents away from moisture. Due to reaction with water, producing CO2-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Do not reseal contaminated containers. Uncontaminated containers, free of moisture, may be resealed only after placing under a nitrogen blanket. Do not store in containers made of cooper, cooper alloys or galvanized surfaces.

Ideal storage temperature is 16-38°C (60-100°F).

Keep stocks of decontaminant (see Section 6) readily available.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

Preventive Measures: Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

Engineering Controls: Use local exhaust ventilation to maintain airborne concentrations bellow the TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of "Industrial Ventilation, a manual of Recommended Practice".

Personal Protection
   Eyes: Chemical safety goggles. If there is a potential for splashing, use a full face shield.

   Body and Hands: The following protective materials are recommended: Gloves-neoprene, nitrile rubber, butyl rubber. Thin latex disposable gloves should be avoided for repeated or long term use. Protective clothing should be selected and used in accordance with "Guidelines for the Selection of Chemical Protective Clothing" published by ACGIH.
**Respiratory:** When the product is sprayed or heated without adequate ventilation, an approved MSHA/NIOSH positive-pressure, supplied-air respirator may be required. Air purifying respirators equipped with organic vapor cartridges and a HEPA (P100) particulate filter may be used under certain conditions when a cartridge change-out schedule has been developed in accordance with the OSHA respiratory protection standard (29 C.F.R. 1910.134).

**Personal Protection in Case of a Large Spills:** Splash goggles. Full suit. Vapor respirator or a self-contained breathing apparatus. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Product Name** | **Exposure Limits**
---|---
4,4-Diphenylmethane Diisocyanate | ACGIH TLV 0.05 mg/m³ (8-hour, 40 hours/week)
 | OSHA PEL Ceiling Limit 0.20 mg/m³
 | NIOSH REL/TWA 0.05 mg/m³ (10-hour, 40 hours/week)
 | NIOSH REL/CEILING 0.20 mg/m³ (10-minutes)

**Exposure control/ personal protection:** Medical supervision of all employees who handle or come in contact with respiratory sensitizers is recommended. Persons with respiratory problems including asthmatic-type conditions, chronic Bronchitis, other chronic respiratory diseases or recurrent skin eczema or skin allergies should be evaluated for their suitability of working with this product. Once a person is diagnosed as sensitized, no further exposure to the material that caused the sensitization should be permitted. The Occupational Exposure limits do not apply to previously sensitized individuals.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>APPEARANCE AND ODOR</strong></td>
<td>Brown Liquid Slightly Musty</td>
</tr>
<tr>
<td><strong>BOILING POINT (°C)</strong></td>
<td>&gt;300°C</td>
</tr>
<tr>
<td><strong>MELTING POINT (°F/°C)</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>SPECIFIC GRAVITY (WATER = 1)</strong></td>
<td>1.23 gr/ml</td>
</tr>
<tr>
<td><strong>BULK DENSITY</strong></td>
<td>9.0 lb/gal</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>VAPOR PRESSURE (MM Hg.)</strong></td>
<td>0.000004 mmHg @ 25°C</td>
</tr>
<tr>
<td><strong>VAPOR DENSITY (AIR-1)</strong></td>
<td>8.5</td>
</tr>
<tr>
<td><strong>VISCOSITY</strong></td>
<td>900-1300 cps @ 25°C</td>
</tr>
<tr>
<td><strong>PERCENT (%) VOC</strong></td>
<td>0%</td>
</tr>
<tr>
<td><strong>FLASH POINTS</strong></td>
<td>&gt;93.3°C (230°F) Closed Cup</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

**Stability:** Stable at room temperature.

**Incompatibility with various Substances:** Reactive with moisture.

**Conditions of Instability:** Avoid high temperatures. Avoid freezing.

**Hazardous Decomposition Products:** Carbon Monoxide, Carbon Dioxide, Nitrous Oxide and HCN.

**Hazardous Polymerization:** Polymerization may occur at elevated temperatures in the presence of alkalis, tertiary amines and metal compounds.

**SECTION 11: TOXICOLOGICAL INFORMATION**

**Toxicity to Animals:**
- LD50 Rat Oral: >5000mg/kg
- LD50 Rabbit Dermal: >5000 mg/kg

**Inhalation:** This product is a respiratory irritant and potential respiratory sensitizer. Repeated inhalation of vapor or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty
in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons.

**Skin Contact:** Moderate irritant. Repeated and/or prolonged contact may cause skin sensitization. There is limited evidence from animal studies that skin contact may play a role in respiratory sensitization. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.

**Eye Contact:** The vapor, aerosol, and liquid are irritant.

**Ingestion:** Ingestion may cause irritation of the gastrointestinal tract. Based on the acute oral LD50 this product is considered practically non-toxic by ingestion.

**Remarks:** Short term test have shown that it is unlikely to be genotoxic. (BUTYLATEDHYDROXYTOLUENE)

**Carcinogenic Effects:** The ingredients of this product are not classified as carcinogenic by ACGIH or IARC, not regulated as carcinogens by OSHA, and not listed as carcinogens by NTP.

**Mutagenic Effects:** There is no substantial evidence of mutagenic potential.

**Reproductive Effects:** No adverse reproductive effects are anticipated.

**Teratogenic Effects:** No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in these studies were maximal respirable concentrations well in excess of the defined limits.

**Remark:** A study was conducted where groups of rats were exposed for 6 hours/day, 5 days/week for a lifetime to atmosphere of respirable polymeric MDI aerosol at concentrations of 0, 0.2, 1 or 6 mg/m3. No adverse effects were observed at 0.2 mg/m3. At the 1mg/m3 concentration, minimal nasal and lung irritant effect were seen. Only at the top concentration (6.0 mg/m3) there was an increased incidence of a benign tumor of the lung (adenoma). One malignant pulmonary tumor (adenocarcinoma) was seen in the 6.0 mg/m3 group. MDI administration to rats in this study did not change the distribution and incidence of tumors from those seen in control animals. The increased incidence of lung tumors is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung. In the absence of prolonged exposure to high concentration leading to chronic irritation and lung damage, it is highly unlikely that tumor formation will occur.

There are reports that excessive chronic exposure to diisocyanates may result in permanent decrease in lung function.

### SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity:** Polymeric MDI. LC50 (Zebra Fish) >1000 ml/l. EC50 (Daphnia magna) (24 hours) >1000 mg/l EC50 (E. Coli) > 100ml/l.

**Environmental Fate and Distribution:** It is unlikely that significant environmental exposure in the air or water will arise based on consideration of the production and use of the substance.

**Persistence and Degradation:** Immiscible with water, but will react with water to produce inert and non-biodegradable solids.

### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Information:** The generation of waste should be avoided or minimized wherever possible.

Disposal should be in accordance with local, state, provincial or national regulations, This material is not hazardous waste under RCRA 40 CFR 261. Small quantities should be treated with a decontaminant solution (see Section 6). The treated waste is not a hazardous material under RCRA 40 CFR 261. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.

Empty containers should be decontaminated and either passed to an approved drum recycler or destroyed.
SECTION 14: TRANSPORT INFORMATION

For major spills call Chemtrec (800-424-9300).

DOT Classification: Single containers less than 5000 lbs. are not regulated. Single containers with 5000 lbs. Or more of 4,4-Methylene Diphenyl Diisocyanate are regulated as: Other Regulated Substances, Liquid, N.O.S. (Methylene Diphenyl Diisocyanate), 9, NA3082, PGIII, RQ.

TDG Classification: Not regulated.
IMOM/IMDG Classification: Not regulated.
ICAO/IATA Classification: Not regulated.

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations

This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

HCS Classification: Class: Toxic
Class: Irritating substance.
Class: Sensitizing substance.

TSCA 8(b) inventory: All Ingredients Listed

EPCRA Section 313 (40 CFR 372)
Diisocyanate Compounds (Category Code N120) 100%

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act):
This product does not contain nor is it manufactured with ozone depleting substances.

State Regulations:

Canadian Regulations: This material has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

WHMIS (Canada): Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
Class D-2A: Material causing other toxic effects (VERY TOXIC).
Class D-2B: Material causing other toxic effects (TOXIC).

CEPA: DSL/NDSL: All Ingredients Listed.

SECTION 16: OTHER INFORMATION

CAUSES DAMAGE TO THE FOLLOWING ORGANS: LUNGS, RESPIRATORY TRACT, SKIN AND EYES. MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION.

Hazardous Material Information System (U.S.A.)
Health: 2 Fire Hazard: 1 Reactivity: 1

National Fire Protection Association (U.S.A.)
Health: 2 Fire Hazard: 1 Reactivity: 1
While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICATION OF SUCH INFORMATION AND RECOMMENDATIONS AND SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARD AND SHOULD BE USED WITH CAUTION, WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behavior of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.

We disclaim liability for damage or injury incurring directly or indirectly from the use of this product.

APPROVED AND AUTHORIZED BY: Enes Terlic
(M) SAFETY DATA SHEET

PRODUCT NAME: HP 8104B
DATE: December 01, 2013
MSDS NUMBER: HP 8104B
SUPERSEDES MSDS: April 25, 2012

SECTION 1: MATERIAL AND MANUFACTURER IDENTIFICATION

MANUFACTURER:
Eteco, Inc.
1000 South Linwood Ave.
Santa Ana, CA 92705
Phone: 714 480 1370

TRANSPORTATION EMERGENCY CALL CHEMTREC:
800 424 9300

MEDICAL EMERGENCY INFORMATION:
800 328 8501

PRODUCTION IDENTIFICATION NUMBER: HP 8104B
CHEMICAL FAMILY: POLYETHER POLYOL BLEND

SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>MATERIAL OR COMPONENT</th>
<th>CAS NUMBER</th>
<th>% BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROPRIETARY COMPONENT</td>
<td>Mixture</td>
<td>55-90 %</td>
</tr>
<tr>
<td>GLYCOLS</td>
<td>Mixture</td>
<td>0-10 %</td>
</tr>
</tbody>
</table>

*Occupational Exposure Limit(s), if available, are listed in Section 8.

SECTION 3: HAZARD IDENTIFICATION

This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

Physical State: Liquid

Potential Acute Health Effects:

- **Eyes**: Corrosive to eyes.
- **Skin**: Corrosive to skin on contact. Skin contact may produce burns.
- **Inhalation**: Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking or shortness of breath.
- **Ingestion**: May cause burns to mouth, throat and stomach.

GENERAL INFORMATION: Read the entire MSDS for more thorough evaluation of the hazards.

SECTION 4: FIRST AID MEASURES
**Eye Contact:** Check for and remove any contact lenses. In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

**Skin Contact:** In case of contact, immediately wash skin with soap and plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention immediately.

**Inhalation:** If excessive inhalation of vapor occurs, remove to fresh air. If breathing is difficult, qualified personnel may administer oxygen. Get medical attention immediately.

**Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Notes to Physician:** Symptomatic treatment and supportive therapy as indicated. Administer oxygen if necessary. Following severe exposure the patient should be kept under medical review for at least 48 hours as delayed pulmonary edema may develop.

### SECTION 5: FIRE FIGHTING MEASURES

**Flash Point:** >212°F Closed Cup

**Auto Ignition Temp:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:**

Thermal Decomposition products are toxic and may include oxides of carbon and nitrogen, amines, possibly other irritating gases.

**Fire Fighting Media and Instructions:**

- SMALL FIRE: Use DRY chemical powder.
- LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Protective Clothing (Fire):**

Splash goggles. Full suit. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**For major spills call Chemtrec (800-424-9300)**

See Safety Data Sheet section 8 Personal Protective Equipment

**Small Spill and Leak** Absorb with an inert material and put the material in an appropriate waste disposal container.

**Large Spill and Leak** Corrosive liquid. Toxic liquid.

Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements of confined area; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

### SECTION 7: HANDLING AND STORAGE
Handling  Do not ingest. Do not breathe vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Avoid contact with eyes, skin and clothing.

Storage  Keep container tightly closed. Keep container in a cool, well-ventilated area.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Preventive Measures  Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.

Engineering Controls  Use local exhaust ventilation to maintain airborne concentrations below the TLV. Suitable respiratory equipment should be used in case of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of 'Industrial Ventilation, a manual of Recommended Practice.'

Personal Protection  

**Eyes**  Chemical safety goggles. If there is a potential for splashing, use a full-face shield.

**Body and Hands**  Full chemical suit. Gloves.

**Respiratory**  Wear appropriate respirator when ventilation is inadequate.

Personal Protection in case of a Large Spill  

Splash goggles. Full suit. Vapor respirator or a self-contained breathing apparatus. Boots. Gloves.  Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Product Name  

<table>
<thead>
<tr>
<th>Exposure Limits</th>
</tr>
</thead>
</table>

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE AND ODOR**  Clear Slight Odor

**BOILING POINT (°F/°C)**  Not determined

**MELTING POINT (°F/°C)**  Not determined

**SPECIFIC GRAVITY (WATER = 1)** 1.12 kg/l

**BULK DENSITY** 8.8 lb/gal

**pH OF UNDILUTED PRODUCT** Not determined

**VAPOR PRESSURE (MM Hg.)** Not determined

**VAPOR DENSITY (AIR-1)** >1

**VISCOSITY** 600 to 900 cps @ 25°C

**PERCENT (%) VOC** 0

**SOLUBILITY IN WATER** Soluble

SECTION 10: STABILITY AND REACTIVITY

Stability and Reactivity  This product is stable.

Conditions of Stability  Avoid moisture to protect product quality.

Incompatibility with Various Substances  Slightly reactive to reactive with oxidizing agents, alkalis.

Hazardous Decomposition Products
Thermal decomposition products are toxic and may include oxides of carbon and nitrogen, amines, possibly other irritating gases.

**Hazardous Polymerization** Will not occur.

**SECTION 11: TOXICOLOGICAL INFORMATION**

No applicable data for this section.

**SECTION 12: ECOLOGICAL INFORMATION**

No applicable data for this section.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Information** Incinerate or landfill in a licensed facility. Do not discharge into waterways of sewer systems. Container Disposal: Steel drums must be emptied (as defined by RCRA, Section 261.7 or state regulations that may be more stringent) and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approve landfill. Drums destined for scrap dealer of landfill must be punctured or crushed to prevent reuse.

Material for disposal should be placed in appropriated sealed containers to avoid potential human and environmental exposure. It is the responsibility of the generator to comply with all federal, state, provincial and local laws and regulations. We recommend that you contact an appropriate waste disposal contractor and environmental agency for relevant laws and regulations. Under the US, Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determined at the time of disposal, whether the product meets relevant waste classification and to assure proper disposal.

**SECTION 14: TRANSPORT INFORMATION**

Transportation Emergency Number 1-800-424-9300 (CHEMTREC).

<table>
<thead>
<tr>
<th>Classification</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT Classification</td>
<td>Non Regulated</td>
</tr>
<tr>
<td>TDG Classification</td>
<td>Non Regulated</td>
</tr>
<tr>
<td>IMO/IMDG Classification</td>
<td>Non Regulated</td>
</tr>
<tr>
<td>ICAO/IATA Classification</td>
<td>Non Regulated</td>
</tr>
</tbody>
</table>

**SECTION 15: REGULATORY INFORMATION**

**U.S. Federal Regulations**

This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).

**HCS Classification**

Class: Corrosive material

TSCA 8(b) inventory: All ingredients Listed.

CERCLA (Comprehensive Environmental Response, Compensation and Liability Act):

Any spill or release above the RC must be reported to the National Response Center (800-424-8802)

SARA 313 toxic chemical notification and release reporting: None
State Regulations
California prop 65: No ingredients listed.

Canadian Regulations
This product has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations) and this MSDS (Material Safety Data Sheet) contains all the information required by the CPR.

WHMIS (Canada)
Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class D-2B: Material causing other toxic effects (Toxic).

CEPA
DSL/NDSL Not all Ingredients Listed.

SECTION 16: OTHER INFORMATION

Causes respiratory tract, eye and skin burns.
Harmful if inhaled.
May be harmful if swallowed.
Contains material, which may cause birth defects based on animal data.

Hazardous Material Information System (U.S.A.)

| Health: | 1 |
| Fire Hazard: | 1 |
| Reactivity: | 0 |

National Fire Protection Association (U.S.A.)

| Health: | 1 |
| Fire Hazard: | 1 |
| Reactivity: | 0 |

Notice to Reader

While the information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity, and behavior of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behavior should be determined by the user and made known to handlers, processors and end users.

We disclaim liability for damage or injury incurring directly or indirectly from the use of this product.

APPROVED AND AUTHORIZED BY: Enes Torlic