

MATERIAL SAFETY DATA SHEET

Polyurea 5000 – Part A

SECTION I

Product Identification and General Information

Product Name: Polyurea 5000 Part A
 Product Class: Polyaspartic Polyamine
 HMIS Codes: H F R P
 3 1 0 G

Date Prepared: 11/10/2009
 24 Hour Emergency Assistance: Chemtrec
 1-800-424-9300

SECTION II

Hazardous Ingredients

	<u>CAS#</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Aspartic Ester	CAS# is a trade secret	N/E	N/E
Monoaspartate	CAS# is a trade secret	N/E	N/E
Aliphatic Carboxylic Ester	623-91-6	N/E	N/E
Aldimine	54914-37-3	N/E	N/E
Modified Carbonate Bix-Oxazolidine	145899-78-1	N/E	N/E

SECTION III

Physical Data

Boiling Point: N/A
 Vapor Pressure: N/A
 Vapor Density: Heavier Than Air
 Specific Gravity: 1.00
 Percent Volatiles: N/A

Solubility in Water: Moderate
 Evaporation Rate: N/A
 Appearance: Yellow to Brown Liquid
 Odor: Ammonia

SECTION IV

Fire and Explosion Hazard Data

Flash Point: 180°F
 Flammable Limits:
 LEL: N/A
 UEL: N/A

Extinguishing media: Water Fog, Foam, Dry Chemical or CO₂.

Hazardous Combustion Products: Ammonia, Oxides of Nitrogen, Toxic Fumes.

Special Fire Fighting Procedures: Wear full protective clothing including NIOSH approved Self-Contained breathing apparatus.

Fire and Explosion Hazards: Exposure to heat will build pressure in container. Cool with water spray.

SECTION V

Reactivity Data

Stability: Stable

Hazardous Polymerization: Will not occur

Incompatibility: Mineral acids, organic acids and strong oxidizing agents

SECTION VI

Health Hazard Data

Primary Route of Entry: Dermal, inhalation, eye contact.

Eye Contact: Exposure to liquid or vapors may cause severe eye irritation. Symptoms include tearing, redness, burning, swelling and eye damage.

Skin Contact: May cause skin irritation. Redness, burning and skin damage.

Inhalation: Excessive inhalation of vapors can cause nasal and respiratory irritation, CNS effects include dizziness, weakness, nausea, headache and possible unconsciousness.

Ingestion: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Overexposure: May cause skin sensitization.

SECTION VII

First Aid

Eyes: Immediately flush eyes with copious amounts of water for 15 minutes. Seek medical attention.

Skin: Immediately remove contaminated clothing. Wipe excess from skin. Wash with plenty of soap and water. Seek medical attention. Do not reuse clothing until thoroughly cleaned.

Ingestion: Do not induce vomiting. Give large quantities of water. Call physician immediately.

Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Seek medical attention.

Note to Physician: After ingestion, the patient may improve after the initial crisis, but perforation of gastrointestinal tract may occur 2-4 days later with severe abdominal pain, rigidity and tenderness of the abdomen and shock. Strictures of the esophagus may occur.

SECTION VIII

Special Protection Information

Respiratory Protection: Use appropriate NIOSH approved respirator for organic vapor to prevent overexposure.

Ventilation: Provide sufficient ventilation to maintain exposure below level of overexposure.

Eye Protection: Chemical goggles and full face shield.

Skin Protection: Wear chemical resistant gloves and other clothing as required to prevent any contact with the skin.

SECTION IX

Spill or Leak Procedures

Steps to be taken if material is released or spilled: Ventilate spill area. Cover with inert, absorbent material and remove to disposal container. Observe all federal, state and local regulations. Do not flush to surface water or sanitary sewer.

Waste Disposal Method: Do not contaminate any lakes, streams, pond or underground water supply. Follow all federal, state and local regulations for disposal.

SECTION X

Shipping Information

D.O.T. Shipping Name: Polyamines, Liquid, Corrosive, N.O.S.

Technical Shipping Name: Polyaspartic Polyamine

D.O.T. Hazard Class: 8 Corrosive Liquid

UN/NA Number: UN2735

Packing Group: II

Reportable Quantity: N/A

D.O.T. Labels Required: Corrosive

Freight Class: 55

MATERIAL SAFETY DATA SHEET

Polyurea 5000 - Part B

SECTION I

Product Identification and General Information

Product Name: Polyurea 5000 Part B
Product Class: Aliphatic Polyisocyanate
HMIS Codes: H F R P
2 1 1 G

Date Prepared: 11/10/2009
24 Hour Emergency Assistance: Chemtrec
1-800-424-9300

SECTION II

Hazardous Ingredients

Aliphatic Polyisocyanate
Hexamethylene Isocyanate
HDI Based Polyisocyanate

<u>CAS#</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Proprietary (*)	N/E	N/E
822-060	N/E	.005 ppm
Proprietary (*)	N/E	N/E

(*) Listed in TSCA Inventory

SECTION III

Physical Data

Boiling Point: N/E
Vapor Pressure: N/E
Vapor Density: N/E
Specific Gravity: N/E
Percent Volatiles: None

Solubility in Water: Soluble
Evaporation Rate: N/E
Appearance: Clear/Pale Yellow
Odor: Slight

SECTION IV

Fire and Explosion Hazard Data

Flash Point: Greater than 250° F (SETA Flash c.c.)

Flammable Limits:

LEL: N/E

UEL: N/E

Special Fire Fighting Procedures: Fire-fighter should wear self-contained breathing apparatus and full protective clothing. Use water spray to cool nearby containers and structures exposed to fire.

Fire and Explosion Hazards: During fire, HDI vapors and other highly toxic gases may be generated.

Closed containers may explode when exposed to extreme heat or when contaminated with water.

Extinguishing Media: Dry chemical, carbon dioxide, foam water.

Hazardous Combustion Products: Carbon dioxide, carbon monoxide, oxides of nitrogen traces of HDI and HCN.

Fire and Explosion Hazards: During fire, HDI vapors and other highly toxic gases may be generated.

Closed containers may expand when exposed to extreme heat or when contaminated with water.

SECTION V

Reactivity Data

Stability: Stable

Hazardous Polymerization: May occur; contact with moisture or other materials which react with isocyanates or temperatures over 400°F may cause polymerization.

SECTION VI

Health Hazard Data

Primary Route of Entry: Inhalation, skin contact, eye contact

Eye Contact: May cause tearing, reddening and swelling accompanied by a stinging sensation.

Skin Contact: May cause irritation, reddening, swelling, rash, scaling or blistering.

Inhalation: Vapors or mist above the TLV can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort and reduced lung function. Persons with a pre-existing non-specific bronchial hyperactivity can respond to concentrations below the TLV with similar symptoms or an asthma attack. Exposure well above the TLV may lead to bronchitis, bronchial spasm and pulmonary edema.

Ingestion: No adverse effects found.

Chronic Overexposure: Can lead to sensitization (chemical asthma). Symptoms would include chest tightness, wheezing, cough, shortness of breath or asthmatic attack which could be immediate or delayed up to several hours after exposure. Chronic overexposure has been reported to cause lung damage which may be permanent.

SECTION VII

First Aid

Eyes: Flush with clean water for at least 15 minutes while lifting eyelids. Call physician immediately.

Skin: Remove contaminated clothing immediately. Wash affected areas thoroughly with soap (green tincture soap is recommended) and water. For severe exposures, get under safety shower after removing clothing. Get medical attention.

Ingestion: Do not induce vomiting. Give 1 or 2 cups of milk or water to drink. Consult physician.

Inhalation: Move to fresh air. Administer oxygen or artificial respiration as needed. Obtain medical attention.

SECTION VIII

Special Protection Information

Respiratory Protection: A respirator that is approved for use in isocyanate containing environments (air purifying or fresh air supplied) is necessary for spray applications or other situations such as high temperature use which may produce volatilization.

Ventilation: General dilution ventilation that maintains vapor levels below the appropriate exposure limit is recommended.

Eye Protection: Safety glasses or goggles are recommended.

Skin Protection: Impermeable gloves are recommended.

SECTION IX

Spill or Leak Procedures

Steps to be taken if material is released or spilled: Wear protective equipment to prevent exposure.

Collect spill with absorbent material. Flush area with a 5% TSP/water solution.

Waste Disposal Method: Dispose of in compliance with federal, state or local government regulations.

SECTION X

Shipping Data

D.O.T. Shipping Name: Epoxy Paint

Technical Shipping Name: Aliphatic Polyisocyanate

D.O.T. Hazard Class: Not Regulated

UN/NA Number: N/A

Reportable Quantity: None

D.O.T. Labels Required: None

Freight Class: 55