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This product contains one or more reported carcinogens or suspected carcinogens which are noted in Section 3, Hazards Identification, CARCINOGENICITY.

This product contains one or more Hazardous Air Pollutants.

This product contains one or more reported mutagens or suspected mutagens.

This product contains one or more reported or suspected reproductive toxins.

SECTION 3 - HAZARDS IDENTIFICATION

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:

- ACUTE EYE CONTACT: Liquid, aerosols and vapors of this product are irritating and cause tearing, reddening and swelling accompanied by a stinging sensation.
- ACUTE SKIN CONTACT: Isocyanates react with skin protein and moisture and can cause irritation. Symptoms of skin irritation may be reddening, swelling, rash, scaling or blistering. Some persons may develop skin sensitization from skin contact. Cured material is difficult to remove. Repeated or prolonged skin contact with solvents can result in dry, defatted and cracked skin causing increased susceptibility to infection.
- ACUTE INHALATION: HDI vapors or mist at concentrations above the TLV or MGL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). Exposure well above the TLV or MGL may lead to bronchitis, bronchial spasm and fluid in the lungs. These effects are usually reversible. Solvent vapors may be irritating to the eyes, nose and throat. Symptoms of irritation may include: redness, burning, itching of the eyes, dryness of the throat, tightness of the chest, headache nausea, narcosis, fatigue and loss of appetite.
- ACUTE INGESTION: Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract. Vomiting may cause aspiration of this product resulting in chemical pneumonitis.
- CHRONIC INHALATION:

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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 TLV or MGL. These symptoms, which include: chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Chronic overexposure to isocyanates has also been reported to cause lung damage, including decrease in lung function, which may be permanent. Sensitization may be either temporary or permanent. Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage. Symptoms include: loss of memory, loss of intellectual ability and loss of coordination.

CHRONIC SKIN CONTACT: Prolonged contact with this isocyanate 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.

XYLENE: Studies have shown a possible association with exposure to xylene and respiratory tract irritation, liver and kidney damage, nausea and vomiting in humans.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Conditions aggravated by exposure may include skin disorders and respiratory (asthma-like) disorders.

ROUTE(S) OF EXPOSURE

Inhalation, Skin Contact, Eye Contact.

CARCINOGENICITY

Ethylbenzene has been shown to cause cancer in laboratory animals. The relevance of this finding to humans is uncertain. IARC has classified ethylbenzene as a possible human carcinogen, Group 2B.

CARCINOGENICITY:

SECTION 4 - FIRST AID MEASURES

EMERGENCY FIRST AID:

EYE CONTACT: Flush at once with large amounts of lukewarm water for at least 15 minutes and get medical attention.

SKIN CONTACT: Immediately remove contaminated clothing, wipe excess from skin and flush with clean water for at least 15 minutes. Wash affected area with soap and water. Get medical attention if persistent irritation and/or a skin rash, appears. Do not reuse clothing until thoroughly cleaned.

INHALATION: Move person to an area free from risk of further exposure.

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Administer oxygen or artificial respiration as needed.

Obtain medical attention. Consult a physician, if asthmatic type symptoms appear. Treatment is essentially symptomatic.
INGESTION: DO NOT INDUCE VOMITING. Give 1 to 2 cups of milk or water to drink. Do not give anything by mouth to an unconscious or convulsing person. Consult a physician.

NOTES TO PHYSICIAN:

EYES: Stain for evidence of corneal injury. If corneal is burned, instill antibiotic/steroid preparation frequently.
SKIN: This product is a known skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn.
INGESTION: Treat symptomatically. There is no specific antidote. Do not induce vomiting.
INHALATION: This product is a known pulmonary sensitizer. Treatment is essentially symptomatic. Persons with asthma-type conditions or sensitization should be excluded from working with isocyanates. Once a person is diagnosed as sensitized to an isocyanate, no further exposure can be permitted.

SECTION 5 - FIRE FIGHTING MEASURES

FIRE AND EXPLOSIVE PROPERTIES OF THE CHEMICAL:

Flammability Classification : OSHA Flammable Liquid - Class 1C
Flashpoint : 82.0 °F
Explosion Level : Low - .9
High - 9.5

EXTINGUISHING MEDIA

Water spray, dry chemical, carbon dioxide (CO2), alcohol foam

SPECIAL FIRE-FIGHTING PROCEDURES

Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by fire fighters. Isolate from heat, electrical equipment, sparks and open flame.
Solvent vapor may be heavier than air. Stagnant air may cause vapors to accumulate and travel along the ground to an ignition source which may result in a flash back to the source of the vapors.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Evacuate nonessential personnel. Remove all sources of ignition and ventilate the area. Notify appropriate authorities if necessary. Put on personal protective equipment (See Section 8). Dike or impound spilled product and control further spillage if possible.

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CLEAN-UP: Prepare a decontamination solution based on:
(5%) concentrated ammonia, (2%) detergent, and (93%) water.

Pour decontamination solution over spill area and allow to react for at least 10 minutes. Collect material in open containers and add further amounts of decontamination solution. Remove containers to a safe place, cover loosely, and allow to stand for 24 to 48 hours. Wash down spill area with decontamination solutions.

Maintain an ample supply of decontaminated solution for future spills.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Keep away from heat, sparks and open flame. If container is exposed to high heat, it can be pressurized and possibly rupture explosively.

STORAGE: Ground containers during storage and transfer operations. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Ideal storage temperature range for ease of handling is 51-81 Degrees F.

SPECIAL COMMENTS: Avoid contact with skin and eyes.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

VENTILATION

Use exhaust ventilation to keep airborne concentrations below exposure limits.

RESPIRATOR PROTECTION: A supplied air respirator (either positive pressure or continuous flow type) is recommended. Before an air purifying respirator can be used, air monitoring must be performed to measure airborne concentrations of HDI monomer, HDI polyisocyanate and organic solvent(s).

A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate containing spray paint environments, and used in accordance with all recommendations made by the manufacturer, can be used when ALL of the following conditions are met:

- the airborne isocyanate concentrations are not known; or
- the airborne isocyanate monomer concentrations exceed 0.05 ppm (10 times the TLV); or
- the airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/cu m averaged over 8 hours or 10 mg/cu m averaged over 15 minutes (10 times the MGL); or
- no airborne solvent concentration exceeds its odor threshold; or
- at least one airborne solvent concentration exceeds its odor

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threshold and that solvent's odor threshold is lower than its TLV.
EYE PROTECTION

Safety glasses, splash goggles or face shield. Contact lenses should not be worn as eye protection but used with safety glasses, splash goggles or face shield for full protection.

SKIN PROTECTION REQUIREMENTS

Permeation resistant gloves. Cover as much of the exposed skin area as possible with appropriate clothing, such as, long sleeved clothing, etc.

ADDITIONAL PROTECTIVE MEASURES . . . : Safety showers and eyewash stations should be available.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State : LIQUID
Vapor Pressure : 7.00
Vapor Density : 6.00
Boiling Point Range : Lower - 277.0 °F
Higher --N/A °F
Specific Gravity : 1.010
Weight per Volume : 8.4100 LB/GL
VOC - Total (lb/gal). : 3.532
Evaporation Rate : .860 (n-Butyl Acetate = 1)
Volatile by Weight : 42.0000
Volatile by Volume : 48.8537

SECTION 10 - STABILITY AND REACTIVITY

STABILITY :
Stable under normal conditions.

INCOMPATIBILITIES

Water, amines, strong bases, alcohol, metal compounds and surface active materials.

HAZARDOUS POLYMERIZATION : May occur; Contact with moisture or other materials which react with isocyanates or temperatures over 400 Deg F (204 Deg C) may cause polymerization.

CONDITIONS TO AVOID

High temperatures.

DECOMPOSITION PRODUCTS : By high heat and fire: carbon dioxide, carbon monoxide, oxides of nitrogen, HCN, HDI.

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SECTION 11 - TOXICOLOGICAL INFORMATION

TOXICITY DATA FOR: HDI Homopolymers

EYE EFFECTS: Severe irritant capable of inducing corneal injury (Rabbit); maximum primary eye irritation score: 54.6/110 for a 24 hour exposure.

SKIN EFFECTS . . ; : Moderate irritant; primary dermal irritation score: 3.4/8.0 (Rabbit).

SENSITIZATION . . . : Pulmonary and dermal sensitizer in animals and humans. Evidence exists that cross-sensitization between HDI and other isocyanates, particularly hydrogenated MDI and TDI, can occur.
SUBCHRONIC TOXICITY . . : Rats exposed to an HDI homopolymer (biuret type, at 3.7, 17.5 and 76.6 mg/cu m for three weeks (6 hrs/day, 5 days /wk) exhibited respiratory distress and many inflamed areas of tissue in the lungs and upper respiratory tract when exposed to 17.5 mg/cu m and above. The No Observable Effect Level (NOEL) was 3.7 mg/cu m. Rats exposed for three months (6 hrs/day, 5 days/wk) to a HDI homopolymer (biuret type, at aerosol concentrations of 0.4, 3.4 and 21 mg/m3 exhibited lung weight increases at the highest dose. Histo-pathologic diagnosis of the test animals revealed swelling and thickening in the lower respiratory tract as well as thickening of the bronchio-alveolar areas of the lung and thickening of the septum in the 21 mg/m3 animals. There were no effects noted in the upper and central respiratory tract. The (NOEL) in this study is considered to be 3.4 mg/m3.

SECTION 12 - ECOLOGICAL INFORMATION

No data at this time.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Waste must be disposed of in accordance with federal, state and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to residue and vapor. Decontaminate containers prior to disposal. DO NOT HEAT OR CUT EMPTY CONTAINERS WITH ELECTRIC OR GAS TORCH.

SECTION 14 - TRANSPORT INFORMATION

DOT SHIPPING NAME : RESIN SOLUTION
DOT HAZARD CLASS : 3
UN/NA NUMBER : UN1866
DOT PACKAGING GROUP : PG III
DOT LABEL : FLAMMABLE LIQUID
DOT PLACARD : FLAMMABLE LIQUID

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DOT PRODUCT RQ lbs.....: 770 lbs.

SECTION 15 - REGULATORY INFORMATION

U.S. FEDERAL REGULATORY INFORMATION
TSCA SECTION 8(b) - INVENTORY STATUS:

All components of this product are either listed on the U.S. Toxic Substances Control Act (TSCA) inventory of chemicals or are otherwise compliant with TSCA Regulations.

SARA 313 TOXIC CHEMICALS:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

XYLENE (MIXED ISOMERS)

CAS# 1330-20-7 PCT BY WT: 15 - 40

ETHYLBENZENE

CAS# 100-41-4 PCT BY WT: 8.4000

TOLUENE-1,3-DIISOCYANATE

CAS# PROPRIETARY PCT BY WT: 2.0000

SECTION 16 - OTHER INFORMATION

Prepared by :
Date of issue : 09/02/2009
Last Revision Date : 03/27/2009
MSDS Prepared for :
MSDS Last Prepared : NONE
HMIS Rating: Health- 3* Flammability- 3
Reactivity- 1

This Material Safety Data Sheet conforms to the Hazard Communication Standard, 29 CFR 1910.1200(g) (4).

The above information pertains to this product as currently formulated and is based on the information available, as of this date. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are out-

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side our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

Abbreviations used: int.- interior; ext.- exterior; MSDS - Material Safety Data Sheet; HMIS - Hazardous Materials Information System; CAS - Chemical Abstracts Services; pct - percent; wt - weight; mm Hg - millimeters of mercury; F - Fahrenheit; ACGIH - American Conference of Governmental Industrial Hygienists; TLV - Threshold Limit Value; OSHA - Occupational Safety and Health Administration; PEL - Permissible Exposure Limit; TWA - Time-Weighted Average; STEL- Short Term Exposure Limit; N/A- Not applicable IARC - International Agency for Research on Cancer; NE - Not established NTP - National Toxicological Program; CFR - Code of Federal Regulations; OSHA - Z 29CFR 1910, Subpart Z; VOC - Volatile Organic Compounds; TCC - Tag Closed Cup; LEL - Lower Explosive Limit; Mg/m³ or Mg/Cu M - milligram per cubic meter; mppcf - millions of particles per cubic foot; ppm - parts per million; NIOSH - National Institute of Occupational Safety and Health; MSHA - Mine Safety and Health Administration; CNS - Central Nervous System.