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Effective Date: 6/4/07

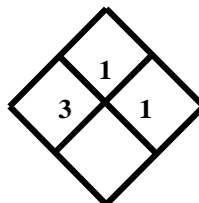
Material Safety Data Sheet

MSDS No: 11258

1. PRODUCT IDENTIFICATION

Trade Name: RenCast 6420

Chemical Family: Isocyanate



NFPA RATING

| | |
|----------------------|----|
| Health: | 3* |
| Flammability: | 1 |
| Reactivity: | 1 |
| Personal Protection: | |

HMIS RATING

Synonyms:

RP 6420 Resin
TDT 186-1 Resin

Intended Use or Product Type: Rigid tough PUR prototype system resin

2. COMPOSITION / INFORMATION ON INGREDIENTS

| O S H A | CAS No. | CHEMICAL IDENTITY | EXPOSURE LIMITS | | | | CARCINOGEN STATUS | | | |
|------------------|----------------------------|--|-----------------|------|------|------|-------------------|------|-----|------|
| | | | ACGIH | | OSHA | | MFR. | IARC | NTP | OSHA |
| | | | TWA | STEL | PEL | STEL | | | | |
| * | 5124-30-1 | Cyclohexane, 1,1'-Methylenebis[4-Isocyanato-Hydrogenated MDI | 0.005 ppm | NE | NE | NE | NE | NR | NR | NR |
| | Common Name: Concentration | 30.00 - 60.00 % by wt | | | | | | | | |
| * | 56929 | N,N,N',N'-Tetrakis((4-4-Isocyanatocyclohexyl-1,1'-Methylene Cyclohexyl-4' -Carbamoyl)-2-Oxypropyl)Ethylenediamine Cycloaliphatic isocyanate prepolymer | NE | NE | NE | NE | NE | NR | NR | NR |
| | Common Name: Concentration | 60.00 - 100.00 % by wt | | | | | | | | |

NE = Not Established NR = Not Reviewed * = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Can be fatal if inhaled. Causes irritation if inhaled and can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction.

Primary Route(s) of Entry: Dermal; heated product may produce inhalable vapors.

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4. FIRST AID MEASURES

Ingestion: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes. Seek immediate medical attention.

Inhalation: Remove to fresh air. Seek immediate medical attention.

Eyes: Immediately flush eyes with water for at least 15 minutes. Seek immediate medical attention.

Overexposure Effects: Contact with liquid causes eye and skin irritation. If inhaled causes reathlessness, chest discomfort, and reduced pulmonary function. May cause allergic skin and respiratory reactions in some individuals, leading to asthma type spasms of the bronchial tubes and difficulty in breathing.

Medical Conditions Aggravated by Exposure: Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases, eye conditions or recurrent skin eczema or sensitization should be excluded from working with isocyanates.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

5. FIRE FIGHTING MEASURES

| | |
|---|--------------------|
| Flash Point: | > 300°F (> 149 °C) |
| Flash Point Method Used: | PMCC |
| Flammable Limits in Air (Lower - % by volume): | Not established |
| Flammable Limits in Air (Upper - % by volume): | Not established |

Fire Fighting Extinguishing Media: Carbon dioxide, dry chemical, foam, water.

Fire Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Decomposition and combustion products may be toxic.

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Remove spillage by absorbing in absorbent material.

7. HANDLING AND STORAGE

Signal Word: Danger!

Precautions: Can be fatal if inhaled. Causes irritation if inhaled and can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction. Do not breath vapor or mist. Avoid contact with eyes, skin, and clothing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

Other Handling Information: Nuisance dust may be generated when sanding or sawing cured material.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Wear impermeable gloves.

Respiratory Protection: If a person is concerned with exposure to isocyanates, an organic respirator can provide protection at less than the TLV. It is not a requirement at an exposure level less than the TLV. For exposures in excess of the TLV, an air supplied respirator would be required. Conditions that may create exposures above the TLV are spray applications, the material being strongly heated in excess of 125F before application, or the use of material in poorly ventilated areas.

Eye Protection: Wear splash-proof chemical goggles.

Engineering Controls: General mechanical and local exhaust in accordance with ACGIH recommendations.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|----------------------------------|------------------------------|
| Color: | Colorless |
| Physical State: | Liquid |
| Solubility in Water: | Reacts with water |
| Vapor Pressure: | 0.0009 mm Hg at 25°C (77 °F) |
| Specific Gravity: | 1.07 - 1.09 (water = 1) |
| Boiling Point: | Not Determined |
| Melting Point: | 66 - 73°F (19 - 23 °C) |
| Evaporation Rate: | Not Determined |
| Vapor Density: | > 1 (Air = 1) |
| pH: | Not Determined |
| Coefficient of water/oil: | Not Determined |

Percent Volatile: Not determined.

10. STABILITY AND REACTIVITY

Conditions to Avoid: Excessive heat for prolonged periods of time.

Stability: Stable.

Incompatibility: Strong oxidizers, acids and bases.

Hazardous Decomposition Products: Combustion may form toxic materials, such as carbon dioxide, carbon monoxide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Inhalation Toxicity (LC50): Component(s) are highly toxic, 0.2 - 2 mg/l or 20 - 200 ppm.

Acute Inhalation Exposure Effects: Respiratory irritant.

Sensitization: May cause allergic skin reaction and respiratory sensitivity in some people.

Skin Irritation: Irritant.

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Eye Irritation: Irritant.

12. ECOLOGICAL INFORMATION**13. DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.

14. TRANSPORT INFORMATION**DOT: Non-Bulk****Proper Shipping Name:** Not Regulated**IATA:****Proper Shipping Name:** Aviation regulated liquid, n.o.s.**Technical Shipping Name (If n.o.s.):** Dicyclohexylmethane diisocyanate**Hazard Class:** 9**ID Number:** UN 3334**Label:** Miscellaneous**IMDG: Non-Bulk****Proper Shipping Name:** Not Regulated**TDG: Non-Bulk****Proper Shipping Name:** Not Regulated**15. REGULATORY INFORMATION****US Federal Regulations:**

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): Not specifically listed as hazardous waste under RCRA (40 CFR 261). However, it is strongly recommended that compound be treated as a hazardous waste and disposed of accordingly.

SARA Title III: Section 313 Toxic Chemical List (TCL): This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: Cyclohexane, 1,1'-Methylenebis[4-Isocyanato-

Common Name: Hydrogenated MDI

Percent in Composition: 30 - 60 % by wt

Comment:

TSCA Section 8(b) - Inventory Status: All chemical components of this product are in compliance with TSCA inventory requirements.

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TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

International Regulations:

Canadian Inventory Status: All components in this product are included on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

Canadian WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations. D1B D2A D2B

State Regulations:

California Proposition 65: This product does not contain any chemicals currently on the California list of Known Carcinogens and Reproductive Toxins.

Pennsylvania Right-to-Know: The following is required composition information:

Chemical Name: N,N,N',N'-Tetrakis((4-4-Isocyanatocyclohexyl-1,1'-Methylene Cyclohexyl-4' -Carbamoyl)-2-Oxypropyl)Ethylenediamine

Common Name: Cycloaliphatic isocyanate prepolymer

CAS Number: 56929

Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Cyclohexane, 1,1'-Methylenebis[4-Isocyanato-

Common Name: Hydrogenated MDI

CAS Number: 5124-30-1

Comment: Hazardous Substance

16. OTHER INFORMATION

| | |
|---------------------|-----------------|
| MSDS No: | 11258 |
| Approved By: | Dianne Blessing |
| Title: | EH&S Specialist |

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