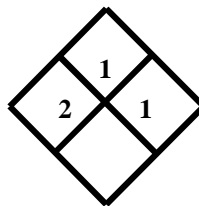


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**Effective Date:** 6/4/07**Material Safety Data Sheet**

MSDS No: 6250

**1. PRODUCT IDENTIFICATION****Trade Name:** RenCast 178-88**Chemical Family:** Isocyanate

NFPA RATING

<b>Health:</b>	<b>2*</b>
<b>Flammability:</b>	<b>1</b>
<b>Reactivity:</b>	<b>1</b>
<b>Personal Protection:</b>	

HMIS RATING

**Synonyms:**

TDT 178-88 Resin

**Intended Use or Product Type:** Polyurethane 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				
*	4098-71-9	Cyclohexane, 5-Isocyanato-1-(Isocyanatomethyl)-1,3,3-Trimethyl-Isophorone Diisocyanate  Common Name: Concentration 1.00 - 5.00 % by wt	0.005 ppm	NE	NE	0.02 ppm	NE	NR	NR	NR
*	5124-30-1	Cyclohexane, 1,1'-Methylenebis[4-Isocyanato-Hydrogenated MDI  Common Name: Concentration 10.00 - 30.00 % by wt	0.005 ppm	NE	NE	NE	NE	NR	NR	NR
*	119185-07-8	Polymer of Polytetramethylene Glycol and EO Capped Polyether Polyol with Isophorone Diisocyanate and Hydrogenated MDI  Common Name: Concentration Cycloaliphatic diisocyanate prepolymer 60.00 - 100.00 % by wt	NE	NE	NE	NE	NE	NR	NR	NR

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\* = OSHA Hazardous Ingredient

### 3. HAZARDS IDENTIFICATION

**Emergency Overview:** Causes irritation if inhaled and can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction. Can be harmful if inhaled and may be harmful if swallowed.

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

### 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 breathlessness, 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

<b>Flash Point:</b>	> 300°F (> 149 °C)
<b>Flash Point Method Used:</b>	Estimated
<b>Flammable Limits in Air (Lower - % by volume):</b>	Not established
<b>Flammable Limits in Air (Upper - % by volume):</b>	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.

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## 7. HANDLING AND STORAGE

**Signal Word:** Warning!

**Precautions:** Causes irritation if inhaled and can cause skin irritation, eye irritation, allergic respiratory reaction, and allergic skin reaction. Can be harmful if inhaled and may be harmful if swallowed. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Avoid tasting or swallowing. 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.

## 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

<b>Color:</b>	Red
<b>Physical State:</b>	Liquid
<b>Solubility in Water:</b>	Reacts with water
<b>Vapor Pressure:</b>	Not Determined
<b>Specific Gravity:</b>	1.05 (water = 1)
<b>Boiling Point:</b>	Not Determined
<b>Melting Point:</b>	Not Determined
<b>Evaporation Rate:</b>	Not Determined
<b>Density:</b>	Not Determined
<b>Vapor Density:</b>	> 1 (Air = 1)
<b>pH:</b>	Not Determined
<b>Coefficient of water/oil:</b>	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.

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

**Hazardous Polymerization:** Will not occur.

## **11. TOXICOLOGICAL INFORMATION**

**Acute Oral Effects (LD50):** Component(s) are slightly toxic, 500 - 5000 mg/kg (rat).  
Isophorone diisocyanate= 4814 mg/kg (rat)

**Inhalation Toxicity (LC50):** Component(s) are toxic, 2 - 20 mg/l or 200 - 2000 ppm.

**Acute Inhalation Exposure Effects:** Respiratory irritant.

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

**Skin Irritation:** Irritant.

**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**

<b>Proper Shipping Name:</b>	Isophorone diisocyanate mixture
<b>Hazard Class:</b>	6.1
<b>ID Number:</b>	UN 2290
<b>Packing Group:</b>	PG III
<b>Label:</b>	Toxic PG III

### **IATA: Non-Bulk**

<b>Proper Shipping Name:</b>	Isophorone diisocyanate mixture
<b>Hazard Class:</b>	6.1
<b>ID Number:</b>	UN 2290
<b>Packing Group:</b>	PG III
<b>Label:</b>	Toxic PG III

### **IMDG: Non-Bulk**

<b>Proper Shipping Name:</b>	Isophorone diisocyanate mixture
<b>Hazard Class:</b>	6.1
<b>ID Number:</b>	UN 2290
<b>Packing Group:</b>	PG III
<b>Label:</b>	Toxic PG III

### **TDG: Non-Bulk**

<b>Proper Shipping Name:</b>	Isophorone diisocyanate mixture
<b>Hazard Class:</b>	6.1
<b>ID Number:</b>	UN 2290

Effective Date: 6/4/07

Packing Group:

PG III

Label:

Toxic PG III

**15. REGULATORY INFORMATION****US Federal Regulations:**

**Occupational Safety and Health Act (OSHA):** This product is considered to be a hazardous chemical under the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**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: 10 - 30 % by wt

Comment:

Chemical Name: Cyclohexane, 5-Isocyanato-1-(Isocyanatomethyl)-1,3,3-Trimethyl-

Common Name: Isophorone Diisocyanate

Percent in Composition: 1 - 5 % by wt

Comment:

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

**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: Polymer of Polytetramethylene Glycol and EO Capped Polyether Polyol with Isophorone Diisocyanate and Hydrogenated MDI

Common Name: Cycloaliphatic diisocyanate prepolymer

**Effective Date:** 6/4/07

CAS Number: 119185-07-8

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

Chemical Name: Cyclohexane, 5-Isocyanato-1-(Isocyanatomethyl)-1,3,3-Trimethyl-

Common Name: Isophorone Diisocyanate

CAS Number: 4098-71-9

Comment: Environmental Hazardous Substance

**16. OTHER INFORMATION**

<b>MSDS No:</b>	6250
<b>Approved By:</b>	Dianne Blessing
<b>Title:</b>	EH&S Specialist

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