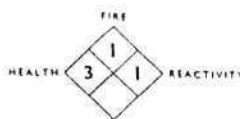




CARPENTER CO.



## MATERIAL SAFETY DATA SHEET

Section VI. HEALTH HAZARD DATA Page 2 - Richfill 101-2400

**Section I. GENERAL INFORMATION** HMIS

Product Name: Richfill 101-2400  
 Description: (A) Polymeric Isocyanate.  
 Manufacturer's Name: Carpenter Co.-Chemical Systems Division  
 5016 Monument Avenue  
 Richmond, Virginia 23230

Information Telephone: Carpenter Co.-Chemical Systems Division (804) 233-0606  
 Emergency Telephone: Chemtrec (800) 424-9300  
 Preparation Date: July 31, 1996

**Section II. HAZARDOUS INGREDIENTS**

Chemical Names:	Exposure Limits in Air:	OSHA (PEL)	ACGIH (TLV)
Methylene Bis (Phenylisocyanate), MDI	0.02ppm, Ceiling	0.005ppm, TWA	
DOT Name: Diphenylmethane-4,4'Diisocyanate			
Structurally Similar Oligomers	Not Est.	Not Est.	

**Section III. PHYSICAL CHEMICAL CHARACTERISTICS**

Boiling Point (°F):	>500 (Decomp.)	Specific Gravity: 1.22 (H <sub>2</sub> O=1)
Vapor Pressure: (mm Hg, @ 20°C)	0.00016	Melting Point (°F): N.Av.
Vapor Density: (air=1)	8.6	Evaporation Rate: <<1 (butyl acetate=1)
Solubility in H <sub>2</sub> O:	Reacts.	
Appearance and Odor:	Viscous dark brown liquid, slight aromatic odor.	

**Section IV. FIRE AND EXPLOSION DATA**

Flash Point: >400°F (COC) LEL: N.Av. UEL: N.Av.  
 Extinguishing Media: Dry chemical, foam, CO<sub>2</sub>, water fog.  
 Special Fire Fighting Procedures: Responding personnel must wear positive pressure self-contained breathing apparatus and protective clothing.  
 Unusual Fire or Explosion Hazards: Material reacts with water. Do not reseal water contaminated containers due to possible pressure build-up with time.

**Section V. REACTIVITY DATA**

Stability: Stable. Conditions to Avoid: Temperatures greater than 180°F.  
 Incompatibility: Reacts with material having active hydrogens such as water, alcohol, ammonia, amines, alkalis. Water reaction can be violent and is accelerated by alkalis, amines, and some metal compounds.  
 Hazardous Decomposition Products: Upon burning, oxides of carbon, and nitrogen, traces of hydrogen cyanide.  
 Hazardous Polymerization: May occur. Conditions to Avoid: High temperatures; presence of alkalis, amines, and metal compounds.

**Section VI. HEALTH HAZARD DATA**

Primary Routes of Entry: Inhalation, eye and skin contact, ingestion.  
 Acute Health Hazards:

Ingestion: Low order of acute toxicity but material can irritate mucous membranes of mouth and throat.  
 Inhalation: Can induce asthma-like respiratory sensitization reaction, respiratory irritation.  
 Eye Contact: May cause mild to moderate eye irritation.  
 Skin Contact: Repeated contact can cause skin sensitization.  
 Chronic Health Hazards: Continued overexposure may lead to sensitization reaction resulting in asthma-like reaction upon exposure below TLV. Results from a lifetime inhalation study in rats indicate that MDI aerosol was carcinogenic at very high levels, 600 ppb (0.6 ppm), the highest dose tested. This is well above the recommended TLV of 5 ppb (0.005ppm). Only irritation was noted at the lower levels of 20 ppb and 100 ppb.  
 Carcinogenicity: NTP: No IARC: No OSHA: No  
 Symptoms of Overexposure: Overexposure to vapors or mists may initially impair respiratory system and cause eye irritation.  
 Medical Conditions Aggravated by Exposure: Persons with respiratory problems or asthma should not use this product.  
 First Aid Procedures:  
 Ingestion: Do not induce vomiting. If conscious, give 2 glasses of water to drink. Get medical attention.  
 Inhalation: Remove to fresh air. Assist breathing and get medical attention as required.  
 Skin Contact: Wash thoroughly with soap and water. If redness develops, get medical attention.  
 Eye Contact: Immediately flush eyes with flowing water for at least 15 minutes. Get medical attention.

**Section VII. PRECAUTIONS FOR HANDLING AND USE**

Steps to Be Taken in Case Materials are Spilled: Evacuate area, Responding emergency personnel must have positive pressure supplied air respiratory equipment. Stop leak, dam up any liquid, absorb, and place in open container. Transport outdoors and treat with decontaminant (5% detergent and 5% ammonium hydroxide in water). Treat spill area additionally with decontaminant.  
 Waste Disposal Method: Dispose of materials in accordance with Federal, State, and Local regulations.  
 Handling/Storage: Store in cool dry location. Keep container tightly closed. Avoid breathing vapors. Open drums slowly to relieve any pressure build-up.  
 Other Precautions: None.

**Section VIII. CONTROL MEASURES**

Respiratory Protection: Use positive-pressure supplied air respirator if concentration exceeds TLV.  
 Ventilation: Local.

Section VIII. CONTROL MEASURES (Cont.) Page 3 - Richfill 101-2400

Skin Protection: Butyl, nitrile or rubber latex gloves.  
Eye Protection: Chemical goggles.  
Other Protection: Chemical apron and arm covers. Eyewash station and safety shower should be near.  
Work/Hygianic Practices: Wash thoroughly after using.

Section IX. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The ingredients of this product are on the TSCA inventory.

SARA TITLE III INFORMATION:

Section 311/312 - Reportable Materials:

Methylene Bis (Phenylisocyanate) - An immediate and, delayed health and reactivity hazard.

Section 313 - Supplier Notification:

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372):

<u>CAS #</u>	<u>CHEMICAL NAME</u>	<u>PERCENT BY WEIGHT</u>
101-68-1	Methylene Bis (Phenylisocyanate)	<45
9016-87-9	Polymeric Diphenylmethane Diisocyanate	<55

This information must be included in all MSDS's that are copied and distributed for this material.

The data in this Material Safety Data Sheet is offered for your consideration, investigation and verification. The data is presented in good faith and was obtained from sources Carpenter believes to be reliable. Carpenter, however, makes no representation as to the completeness or accuracy. Carpenter makes no warranty, expressed or implied, with respect to the data contained herein.

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