

**MATERIAL SAFETY  
DATA SHEET  
440 RAIL GROUT PART A**

**PREFORMED LINE PRODUCTS  
URETHANE DIVISION  
1700 Woodhurst Lane  
Albemarle, North Carolina 28001  
704-983-6161**

Emergency Phone Number: Chemtrec 800-424-9300 (within the USA), 202-483-7616 (outside of the USA.) Call only in the event of a chemical emergency involving spill, leak, fire exposure, or accident involving chemicals.

MSDS DATE: 12/08/06

Prefomed Line Products recommends that each customer should study this Material Safety Data Sheet and become aware of the Product hazards. Further, to promote safe handling, each customer should notify its employees, agents and contractors of the information on this Material Safety Data Sheet and any Product hazards and safety information. Each customer should furnish a copy of this Material Safety Data Sheet to each of its customers for the Product and should request that such customers notify their employees and customers for the Product of the information on this Material Safety Data Sheet and any Product hazards and safety information.

<b>I. IDENTIFICATION</b>	
PRODUCT NAME: 440 Rail Grout Part A	
CHEMICAL FAMILY: Diisocyanate	
<b>II. HAZARDOUS INGREDIENTS</b>	
<b>COMPONENTS</b>	<b>CURRENT LIMITS</b>
4,4"-Diphenylmethane diisocyanate (MDI, CAS 101-68-8) Modified MDI	0.02 PPM, ceiling OSHA PEL Not Listed
<b>III. PHYSICAL DATA</b>	
Appearance: Liquid	Color: Pale Yellow
Odor: Faint	Boiling Point: 646° F
Vapor Pressure: <0.001	Vapor Density(air=1): No Data
Specific Gravity(H <sub>2</sub> O = 1): 1.2	Weight Per Gallon: 9.9 lbs.
Solubility in Water: Reacts	% Volatile by Volume: No Data
<b>IV. FIRE AND EXPLOSION HAZARD DATA</b>	
Flash Point: 400°F, 204°C Method Used: COC	
Flammable Limits: LFL:NE UFL:NE	
Extinguishing Method: Dry Chemical, foam, carbon dioxide, halogenated agents. If water is used, use very large quantities. The reaction between water and hot isocyanate may be vigorous.	
Special Fire Fighting Procedures/Fire and Explosion Hazards: Self-contained breathing apparatus with full facepiece and protective clothing.	
<b>V. REACTIVITY DATA</b>	
STABILITY: Stable under normal conditions	
INCOMPATIBILITY: Will react with any materials containing active hydrogens, such as water, alcohol, ammonia, amines, alkalies and acids. The reaction with water is very slow under 50°C, but is accelerated at higher temperatures and in the presence of alkalies, tertiary amines, and metal compounds. Some reaction can be violent.	
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion products: Carbon dioxide, carbon monoxide, nitrogen oxides, ammonia and trace amounts of hydrogen cyanide.	
HAZARDOUS POLYMERIZATION: May occur. High temperatures in the presence of alkalies, tertiary amines and metal compounds will accelerate polymerization. Possible evolution of carbon dioxide gas may rupture closed containers.	
<b>VI. HEALTH HAZARD DATA</b>	
EYE: Irritant	
SKIN CONTACT: No irritation is likely to develop following short contact periods with human skin. Skin sensitization and irritation may develop following short contact periods with human skin. Skin sensitization and irritation may develop after repeated and/or prolonged contact with human skin. Prolonged or repeated skin contact with MDI can induce delayed skin reactions several hours after overexposure.	
INGESTION: The acute oral LD50 in rat is probably above 10,000 mm/kg. Relative to other materials a single dose of this product is practically nontoxic by ingestion. Irritation of the mouth, pharynx, esophagus and stomach can develop following ingestion.	
INHALATION: Vapors and aerosols can irritate eyes, nose and respiratory passages. Severe overexposure may lead to pulmonary edema. MDI can induce respiratory sensitization with asthma-like symptoms similar to those induced by TDI(toluene diisocyanate). Symptoms include chronic cough, tightness of chest with difficulty in breathing. These symptoms may be immediate or delayed up to several hours after exposure. There are reports that chronic exposures may result in permanent decreases in lung function.	
SYSTEMIC AND OTHER EFFECTS: No other adverse clinical effects have been associated with exposures to this material.	
CARCINOGEN HAZARD: No toxicity information is available on this specific preparation; this health hazard assessment is based on information that is available on the properties of its components.	

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 and 40 CFR 372: 75% MDI (CAS 101-68-8)

**VII. FIRST AID**

EYES: Immediately flush with plenty of water for at least 15 minutes. If redness itching, or a burning sensation develops, have eyes examined and treated by medical personnel.

SKIN: Wash material off of the skin with plenty of soap and water. If redness, itching, or a burning sensation develops, get medical attention.

INGESTION: Give one or two glasses of water to drink. If gastrointestinal symptoms develop, consult medical personnel. (Never give anything by mouth to an unconscious person.)

INHALATION: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is labored, give oxygen. Consult medical personnel.

**VIII. HANDLING PRECAUTIONS**

EXPOSURE GUIDELINES: Prevent skin and eye contact. Observe TLV limitations. Avoid breathing vapors or aerosols. Workers should shower and change to fresh clothing after each shift. A sensitized individual should not be exposed to the product which caused the sensitization. Individuals with existing respiratory disease such as chronic bronchitis, emphysema or asthma should not be exposed to isocyanates. These individuals should be identified through baseline and annual evaluation and removed from further exposure. Medical examination should include medical history, vital capacity, and forced expiratory volume at one second.

VENTILATION AND RESPIRATORY PROTECTION: If needed, use local exhaust ventilation to keep airborne concentrations below the TLV. Follow guidelines in the ACGIH publication "Industrial Ventilation". Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination.

EYE PROTECTION: Chemical tight goggles; full faceshield in addition if splashing is possible.

SKIN PROTECTION: Impervious gloves. Additional protection such as apron, arm covers, or full body suit may be required. Wash contaminated clothing before reworking.

SPECIAL HANDLING PRECAUTIONS: Prevent skin and eye contact. Observe TLV limitations. Avoid breathing vapors or aerosols. Workers should shower and change to fresh clothing after each shift. A sensitized individual should not be exposed to the product which caused the sensitization.

STORAGE TEMPERATURE: Room temperature

AVERAGE STORAGE LIFE: 12 months at 72°F

SPECIAL STORAGE PRECAUTIONS: Store in tightly sealed containers to protect from atmospheric moisture. Store in cool area, away from open flame or sparks.

**IX. SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IF MATERIAL IS SPILLED OR RELEASED: Wear skin, eye and respiratory protection during cleanup. Soak up material with absorbent and shovel into a chemical waste container. Cover container, but do not seal, and remove from work area. Prepare a decontamination solution of 0.2-0.5% liquid detergent and 3-8% concentrated ammonium hydroxide in water (5-10% sodium carbonate may be substituted for the ammonium hydroxide). Follow precautions on the supplier's material safety data sheets. All operations should be performed by trained personnel familiar with the hazards of the chemicals used. Treat the spill area with the decontamination solution, using about 10 parts of solution for each part of the spill, and allow it to react for at least 10 minutes. Carbon dioxide will be evolved, leaving insoluble polyureas. For major spills, call CHEMTREC (Chemical Transportation Emergency Center) at 800-424-9300 (within the USA), 202-483-7616 (outside the USA).

WASTE DISPOSAL METHOD: Slowly stir the isocyanate waste into the decontamination solution described above using 10 parts of the solution for each part of the isocyanate. Let stand 48 hours, allowing the evolved carbon dioxide to vent away. Neutralize the waste. Neither the solid nor the liquid portion is a hazardous waste under RCRA, 40 CFR 261.

**X. SHIPPING DATA**

D.O.T. SHIPPING NAME: NE

TECHNICAL NAME: Modified Diphenylmethane Diisocyanate

D.O.T. HAZARD CLASS: Non-regulated

FREIGHT CLASS: Pkg: Chemical NOI (Isocyanate); Bulk: Isocyanate

**FOR INDUSTRIAL USE ONLY**

NOTE: The opinions expressed herein are those of qualified personnel within the Prefomed Line Products-Urethane Division Co. The information contained is believed to be current as of the date of this Material Safety Data Sheet. Since the use of this information and opinions and conditions of the use of the product are not within the control of Prefomed Line Products Co., it is the user's obligation to determine the conditions of safe use of the Product.