

MATERIAL SAFETY DATA SHEET

Reviewed 1/01

Section I

Manufacturer's Name
Coatings For Industry, Inc.

Emergency Response #
1-800-535-5053

Address
319 Township Line Road
Souderton, PA 18964

Non-Emergency #
215-723-0919

Chemical Name & Synonyms
Two Component Moisture Cured
Polyurethane Coating

Product and/or Trade Name
Urethabond 109 Part A

Section II - Hazardous Ingredients

	%	TLV	CAS #
Diphenylmethane Diisocyanate (MDI)	1.4	OSHA: not established ACGIH: not established	26447-40-5

Non isomer specific CAS number includes 2,2' MDI and 2,4' MDI.

Polyisocyanate Based

MDI	25.3	OSHA: not established* ACGIH: not established
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*Specific chemical identity is withheld as a trade secret.

4,4'-Diphenylmethane

Diisocyanate (MDI)	7.3	OSHA: .020 ppm ceiling-PEL .200 mg/m3 ceiling ACGIH: .005 ppm TWA .051 mg/m3 TWA	101-68-8
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Aromatics 100	64.3	OSHA: 50 ppm (245 mg/m3) For 8 hour workday	64742-95-6
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This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not "hazardous" per this OSHA standard may be listed.

Human Effects and Symptoms of Overexposure Cont'd

irritating to the eyes, nose and throat. These symptoms can be delayed up to several hours after exposure.

Chronic Inhalation- 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 later exposure to isocyanate at levels well below the TLV. 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. Similar to many nonspecific asthmatic responses, there are reports that once sensitized, an individual can experience these symptoms upon exposure to dust, cold air or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has been reported to cause lung damage, including decrease in lung function, which may be 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.

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 **very difficult** to remove. Repeated or prolonged skin contact can result in dry, defatted and cracked skin causing increased susceptibility to infection. In addition, skin irritation (i.e. redness, swelling), which can develop into dermatitis.

Chronic Skin Contact- Prolonged contact with the 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. Animal tests have indicated respiratory sensitization can result from skin contact with MDI.

Acute Eye Contact- Liquid, aerosols, and vapors of this product (isocyanate solvents) are irritating and can cause tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible.

Chronic Eye Contact-None determined.

Acute Ingestion- Can result in irritation and possible corrosive action in the mouth, stomach tissue and digestive tract. However, it is not considered a common occupational route of exposure.

Chronic Ingestion-None determined.

Emergency and First Aid Procedures

Eye Contact-Flush with copious amounts of lukewarm water for a minimum of 15 minutes, while lifting eyelids. Contact eye physician for immediate follow up.

Skin Contact-Remove contaminated clothing. Wash skin thoroughly with water and soap. Wash contaminated clothing before reuse. Seek medical attention if irritation develops or persists.

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.

Emergency and First Aid Procedures Cont'd

Inhalation-Remove to fresh air. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult a physician should this occur.

NOTE TO PHYSICIAN.....

Eyes-Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation frequently. Workplace vapors could produce reversible corneal epithelial edema impairing vision.

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. Inducing vomiting is contraindicated because of the irritating nature of the product.

Inhalation- This product is a known pulmonary sensitizer. Treatment is essentially symptomatic. An individual having a dermal or pulmonary sensitization reaction to this material must be removed from any further exposure to any isocyanate.

Section VI- Employee Protection

Eye Protection Requirements...Liquid chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be worn along with a full face shield.

Skin Protection Requirements...Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum.

Respiratory Requirements...Concentrations greater than TLV can occur when MDI is sprayed, heated or used on poorly ventilated areas. In such case, or whenever concentrations of MDI exceed the TLV, respiratory protection must be worn. A positive pressure, supplied air-respirator or self-contained breathing apparatus is recommended. In situations where MDI is not sprayed, heated or used in a poorly ventilated area, and a supplied air or self-contained breathing apparatus is unavailable or its use impractical, at least an air-purifying respirator equipped with an organic vapor cartridge and particulate pre-filters must be worn. However, this should be permitted only for short periods of time at relatively low concentrations (at or below the TLV). However, due to the poor warning properties of MDI, proper fit and timely replacement of filter elements must be ensured. Observe OSHA regulations for respirator use (29 CFR 1910.134).

Ventilation Requirements...Exhaust ventilation sufficient to keep the airborne concentrations of MDI and solvent below the respective TLV to be utilized. Standard reference sources regarding industrial ventilation (i.e. SCGIH industrial ventilation) should be consulted for guidance about adequate ventilation.

Additional Protective Measures...Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

Section X – Regulatory Information

D.O.T. Shipping Name ~~~~~ Paint
 D.O.T. Hazard Class ~~~~~ Combustible Liquid
 UN/NA Number ~~~~~ UN1263
 D.O.T. Label ~~~~~ Combustible Liquid
 D.O.T. Placard ~~~~~ Combustible

Dot Classification ~~~~~ Paint, 3, Combustible Liquid, UN1263, PGIII
 OSHA Status ~~~~~ This product is hazardous under the criteria of the
 federal OSHA Hazard Communication Standard
 29 CFR 1910.1200.
 TSCA Status ~~~~~ On TSCA inventory
 SARA Title III
 Section 302 Extremely Hazardous Substances: None

Section 311/312 Hazard Categories:

- Immediate Health Hazard
- Delayed Health Hazard
- Reactive Hazard
- Fire Hazard

Section 313 Toxic Chemicals:

Aromatics 100 (CAS#64742-95-6)
 4'4'-Diphenylmethane Diisocyanate
 (CAS#101-68-8)

Section XI –Other Regulatory Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Component Name/ CAS#	Concentration	State Code
Diphenylmethane Diisocyanate (MDI) (2,2;2,4) 26447-40-5	Approx. 1.4%	NJ4
Polyisocyanate Based on MDI NJTSRN (31765300002)-5317P	Approx. 76%	PA 3, NJ 4

FL = Florida Substance List
 IL = Illinois Toxic Substances List

Section XI –Other Regulatory Information

- MA = Massachusetts Hazardous Substance List
 - NJ1 = New Jersey Hazardous Substance List
 - NJ4 = New Jersey Other – included in 5 predominant ingredients > 1%
 - NJTSRN = New Jersey Trade Secret Registry Number
 - PA1 = Pennsylvania Hazardous Substance List
 - PA3 = Pennsylvania Non-Hazardous present at 3% or greater
 - RI = Rhode Island List of Designated List over 0.1%
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California Proposition 65

To the best of our knowledge, this product contains no levels of listed substances, which the state of California has found to cause cancer, birth defects or other reproductive effects.

NFPA 704M RATINGS

Health	Flammability	Reactivity	Other	
3	2	1		

0=Insignificant	1=Slight	2=Moderate	3=High	4=Extreme
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HMIS RATINGS

Health	Flammability	Reactivity
3*	2	1

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

*=Chronic Health Hazard

NOTICE : This information is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Coatings For Industry, Inc. assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material, such vendees or users assume all risks associated with the use of the material. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer’s responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The preceding specific information is made for the purpose of complying with numerous federal, state and local laws and regulations.