

MATERIAL SAFETY DATA SHEET

Date Prepared: 6/11/08

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Urethane Adhesive

MSDS Number: 110001

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Urethane Adhesive
Product Numbers: 100885 (Medium) 100886 (Superfast) 100887 (Fast)
Product Use: Urethane Adhesive

Company

Fibre Glass-Evercoat
a Division of Illinois Tool Works Inc.
6600 Cornell Road
Cincinnati, Ohio USA
Phone: 513-489-7600

Emergency Telephone Numbers:

CHEMTREC: 1-800-424-9300
CANUTEC: 1-613-996-6666

Prepared By: Safety Department

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	EINECS Number	% (by weight)
4,4' Diphenylmethane Diisocyanate	101-68-8	202-966-0	< 99 %
Dephenylmethane Diisocyanate	26447-40-5	247-714-0	< 10 %

SECTION 3. HAZARDS IDENTIFICATION

Acute Effects (Short Term):

Eye: Product may be irritating to eyes if in direct contact.

Skin: Prolonged or repeated exposure may cause skin irritation. Acute skin contact – Isocyanates reacts with skin protein & moisture & cause irritation which may include reddening, swelling, rash, scaling or blistering.

Inhalation: MDI vapors at concentrations above the TLV can irritate the mucous membranes in the respiratory tract (nose, throat, lungs) causing a runny nose, sore throat, coughing, chest discomfort, shortness of breathe and reduced lung function. Persons with pre-existing, nonspecific bronchial hyper reactivity can respond to concentrations below TLV with similar symptoms as well as asthma attack.

Aggravated Medical Condition:

Pre-existing eye, skin & respiratory disorders may be aggravated by exposure to fumes or vapors of this product at elevated temperatures. Existing allergies may increase the chance of developing increased allergy symptoms. Asthma, other respiratory disorders (bronchitis, emphysema, bronchial hyper reactivity), skin allergies, eczema.

Other Health Hazards:

Lung tumors have been observed in laboratory animals exposed to aerosol droplets of MDI/ Polymeric MDI (6 mg/m³) for their lifetime. Tumors occurred concurrently with respiratory

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irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Cancer Information: none anticipated.

Primary Route(s) of Entry: eye contact, skin contact, inhalation

SECTION 4. FIRST AID MEASURES

Eyes: In case of eye contact, immediately flush eyes with plenty of water for a minimum of 15 minutes, while holding eyelids open and seek medical attention immediately.

Skin: Remove contaminated clothing or shoes, wipe excess from skin. Wash with soap and plenty of water (warm water is preferred if available)

Ingestion: Do not give any liquids, DO NOT induce vomiting. Obtain medical attention immediately.

Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Seek medical attention immediately. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point: >400° F (PMCC)

Explosive Limit: Lower: N/A Upper: N/A

Autoignition Temperature: N/A

Extinguishing Media: Use dry chemical, carbon dioxide, foam or water fog. For large fires, alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function but much less effective. Water is not recommended but may be applied in very large quantities as fine spray when other extinguishing media is not available.

Special Fire Fighting Instructions: Full emergency and protective equipment with self-contained breathing apparatus NIOSH approved with a full face piece operated in the positive pressure demand mode. Do not enter a confined space without full bunker gear. During fire, irritating and toxic gases may be generated by thermal decomposition or combustion. Product reacts with water. Reaction may produce heat and / or gases.

SECTION 6. ACCIDENTAL RELEASE MEASURES

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Spill or leak Procedures: Eliminate all sources of ignition and ventilate the area. Dike and contain spilled material and control further pillage if feasible. Cover spill with clay, sand, saw dust, vermiculite, or other suitable absorbent. Collect material in non-leaking containers and seal tightly for disposal. Attempt to neutralize by adding a mixture of: water (80%) with non-ionic surfactant tergitol TMN-10 (20%), or water (90%), concentrated ammonia (3-8%) and detergent (23%). Add about 10 parts of neutralizer per part of Isocyanate while mixing. Allow to stand uncovered for 48 to let CO₂ escape. If ammonia is used, use good ventilation to prevent vapor exposure. Large quantities may be pumped into closed, but not sealed containers. Refer to section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Handling: Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Employee education and training in the safe use and handling of this material are required under the OSHA Hazard communication standard. Use with adequate ventilation.

STORAGE: Store indoors in a dry place away from heat, sparks and flame. Keep containers tightly closed when not in use.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Safety glasses, splash goggles

Skin Protection: Avoid contact with skin and clothing. Use chemical resistant protective gloves.

Respiratory Protection: Avoid breathing vapors which may be produced under some conditions such as heating. Avoid breathing aerosols and mists. Use NIOSH / MSHA approved respiratory protection equipment when airborne exposure is excessive.

Engineering Controls: Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below acceptable limits. Explosion-proof ventilation system is acceptable.

Ventilation: Hazard control from vapor or spray mist is ideally performed by the use of engineering controls. General or local ventilation or isolation may prove adequate to keep airborne exposures below exposure limits.

Exposure Guidelines:

Hazardous Ingredients	CAS Number	OSHA PEL/TWA	ACGIH TWA
4,4' Diphenylmethane Diisocyanate	101-68-8	0.20 mg / m ₃ TWA	0.005 ppm

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	406 °F@5mm Hg for MDI	Vapor Density:	8.5 (MDI) (Air=1)
Specific Gravity / Density:	1.32/11.0 lbs/gal	Percent Volatiles by weight:	N/A
Evaporation Rate:	N/A	Physical State:	Liquid
Melting Point:	N/A	pH:	N/A
Odor:	Slightly musty odor	Solubility:	N/A
Vapor Pressure:	<1 x 10 ⁻⁵ mm Hg @77° F	Appearance:	Beige in color
Octanol/Water Partition Coefficient:	N/A		

SECTION 10. STABILITY AND REACTIVITY

Hazardous Polymerization: Can occur which could be catalyzed by strong bases and wwater.

Hazardous Decomposition: By heat and fire: Carbon dioxide, carbon monoxide, Aldehydes, acids and other organic substances may be formed.

Chemical Stability: Stable under normal handling conditions of storage and handling. Product is very unstable when contaminated with water.

Incompatibility: Avoid temperatures above 90°F and below 64°F Avoid moisture. Product can decompose at elevated temperature.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Toxicity Data:

Ingredient	CAS #	LD ₅₀ Oral-Rat	LC ₅₀ Inhalation-Rat
4,4' Diphenylmethane Diisocyanate	N/A	15,800 mg/kg	370-490 mg/m ³
Diphenylmethane Diisocyanate	N/A	5010 <7,940 mg/kg	172-187 mg/m ³

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Carcinogenicity: see Section 3

Mutagenicity: Positive(Salmonella micro some test with metabolic activation; cell transformation assay) As well as negative(mouse lymphoma specific locus mutation test without metabolic activation) results have been observed "in vitro". However, MDI was negative in an "in vivo" (mouse micronucleus) assay.

Teratogenicity: not available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity: none

SECTION 13. DISPOSAL CONSIDERATION

RCRA Hazardous Waste: Waste must be disposed of in accordance with federal, state and local environmental control regulations. Incineration is the preferred method. Empty containers must be handled with care due to product residue. Do not heat or cut empty containers with electric or gas torch.

SECTION 14. TRANSPORT INFORMATION

DOT Description: The DOT Classification for shipping is N/A PGIII 25000lbs.

SECTION 15. REGULATORY INFORMATION

US Federal Regulations

TSCA (Toxic Substances Control Act) Status

TSCA (USA) All ingredients in this product are listed.

CERCLA RQ -

<u>Component</u>	<u>CAS No.</u>	<u>RQ</u>
4,4' Diphenylmethane Diisocyanate	(cas#101-68-8)	5000 lbs

SARA Title III: Section 302- Extremely Hazardous Substances

None

SARA Title III: Section 313- Toxic Chemical List

<u>Component</u>	<u>CAS Number</u>	<u>Percentage</u>
4,4' Diphenylmethane Diisocyanate	# 101-68-8	<99%
Diphenylmethane Diisocyanate	#26447-40-5	<10%

State and Local Regulations

California Proposition 65:

This product contains the following chemical(s) known to the state of California to cause cancer. NONE

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This product contains the following chemical(s) known to the state of California to cause birth defects or reproductive harm. NONE

SECTION 16. OTHER INFORMATION

HMIS Rating: Health -2, Flammability -3, Reactivity - 2
Key- 0=Least, 1=Slight, 2=Moderate, 3=Serious, 4=Extreme, *=Chronic Effects

Other Precautions for Use:

Additional Information may be obtained by calling the Evercoat MSDS Hotline at 1-800-729-7600.

NOTICE: The information accumulated herein is believed to be correct as of the date issued from sources, which are believed to be accurate and reliable. Since it is not possible to anticipate all circumstances of use, recipients are advised to confirm, in advance of need, that the information is current, applicable and suitable to their circumstance