

**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: 20540Z

Product Use: Urethane Adhesive

**Distributed By**

The Easthill Group  
dba/ The Eastwood Company  
263 Shoemaker Road  
Pottstown, PA 19464  
USA & Canada: 800-345-1178  
Outside USA: 610-323-2200

**Emergency Telephone Numbers:**

CHEMTREC: 1-800-424-9300

**SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Ingredient(s)</b>	<b>CAS Number</b>	<b>EINECS Number</b>	<b>% (by weight)</b>
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/m<sup>3</sup>) 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 CO<sub>2</sub> 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 <sup>3</sup> TWA	0.005 ppm

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

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

**SECTION 10. STABILITY AND REACTIVITY**

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

**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:**

<b>Ingredient</b>	<b>CAS #</b>	<b>LD<sub>50</sub> Oral-Rat</b>	<b>LC<sub>50</sub> Inhalation-Rat</b>
4,4' Diphenylmethane Diisocyanate	N/A	15,800 mg/kg	370-490 mg/m3
Diphenylmethane Diisocyanate	N/A	5010 <7,940 mg/kg	172-187 mg/m3

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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 -**

Component	CAS No.	RQ
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

Component	CAS Number	Percentage
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