Innovative Composite Solutions

Section I

Neptune Research 1346 South Killian Drive Lake Park, Florida 33403	Emergency Telephone Number – 800-535-5053 Telephone Number for Information – 800-328-0090 / 561-683-6992
Product Name – Trident-Glass	Date Prepared – 10.21.10

Section II—Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s) CAS#)	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Homologues of methylene bisphenyl isocyanate* (9016-87-9)	N/A	N/A	N/A	5-10
Methylene bisphenyl isocyanate* (101-68-8)	N/A	.005 ppm (TWA)	N/A	1-5
	.02ppmCeiling (STEL)	N/A	N/A	
	.2mg/m3Ceiling(STEL)	N/A	N/A	
Polypropylene Polyol (25322-69-4)	N/A	N/A	N/A	5-15

*This component is listed as a SARA section 313 Hazardous component

Section III—Physical/Chemical Characteristics

Vapor Pressure (mm Hg) – 0.0003 mm Hg Specific Gravity (H20 = 1) – 1.22 Vapor Density (AIR = 1) – 8.5
Evaporation Rate (Butyl Acetate = 1) Ether =1 – N/A Boiling Point – N/A Melting Point – N/A
Solubility in Water: Insoluble – reacts slowly with water to liberate carbon dioxide gas
Appearance and Odor – Fiberglass cloth, coated with viscous resin, odorless

Section IV—Fire and Explosion Hazard Data

Flash Point - 370°F / Method Used – Pensky-Martens Closed Cup	Flammable Limits - N/A	LEL - N/A	UEL - N/A

Extinguishing Media: Carbon Dioxide, foam, dry chemical. Water spray for large fires

Special Fire Fighting Procedures: Full emergency equipment with self-contained breathing apparatus and full protective clothing should be worn by firefighters. During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 400° F, polymeric MDI can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Therefore, use cold water to cool fire-exposed containers.
Unusual Fire & Explosion Hazards - None

Section V—Reactivity Data

Stability: Stable
Hazardous Decomposition or Byproducts: Carbon Monoxide, Oxides of nitrogen, traces of HCN, MDI vapors or aerosols
Incompatibility (Materials to Avoid) Water, amines, strong bases, alcohols. Will cause some corrosion to copper alloys and aluminum
Hazardous Polymerization: May Occur / Contact with moisture, other materials which can react with isocyanates or temperatures above 400°, may cause polymerization.
Conditions to Avoid: Contamination with water

Section VI—Health Hazard Data

Route(s) of Entry: Skin contact from liquid and aerosols (spray application). Inhalation. Although MDI is low volatility, an inhalation hazard can exist from MDI aerosols or vapors formed during heating, foaming or spraying. Can irritate mucous membranes, cause runny nose, sore throat, coughing, and other symptoms.

Acute Skin Contact: Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

Chronic Skin Contact: Prolonged contact can cause reddening, swelling, rash, scaling or blistering and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapor. Animal tests have indicated that respiratory sensitization can result from skin contact with MDI. These data reinforce the need to prevent direct skin contact with MDI.

Acute Eye Contact: Liquid, aerosols or vapor are irritating and can cause tearing, reddening and swelling. If left untreated, corneal damage can occur and injury is slow to heal. Damage, however is usually reversible

Acute Ingestion: Irritation and corrosive action can occur in the mouth, stomach tissue and digestive tract. Symptoms can include: sore throat, abdominal pain, nausea, vomiting and diarrhea.
Carcinogenicity: In a chronic inhalation study, rats were exposed to an aerosol of polymeric MDI for six hours per day, five days per week, for a period of two years. The exposure concentrations were 0, 0.2, 1.0 and 6.0 mg/m3. The occurrence of pulmonary adenomas (benign tumors) and a single pulmonary adenocarcinoma (malignant tumor) was considered to be related to exposure. These tumors were observed only in the rats that were exposed to the high concentration of 6 mg/m3.
NTP – No IARC Monographs – No OSHA Regulated – No

Medical Conditions Generally Aggravated by Exposure – Asthma or other respiratory disorder (bronchitis, emphysema, bronchial hyper-reactivity), skin allergies & eczema

Emergency and First Aid Procedures -

Ingestion: Do not induce vomiting. Give one to two cups of milk or water to drink. Do not give anything by mouth to an unconscious person, consult a physician
Inhalation: Move to an area free from risk of further exposure. 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 physician should this development occur.
Skin contact: Remove contaminated clothing. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or persists after area is washed.
Eye contact: Flush with copious amount of water. Preferably lukewarm, for at least 15 minutes, holding eyelids open at all times. Refer individual to a physician or ophthalmologist for immediate follow up.
Notes to Physician –
Eyes: stain for evidence of corneal injury. If cornea is burned, instill antibiotic steroid preparation frequently. Workplace vapors have produced reversible corneal epithelial edema impairing vision
Skin: This compound is a known skin sensitizer. Treat symptomatically for contact dermatitis or thermal burns, if burned treat as a thermal burn.
Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of this compound.
Respiratory: This compound is a known pulmonary sensitizer. Treatment is essentially symptomatic. Remove exposed individual to any isocyanate.

Section VII—Precautions for Safe Handling and Use

Steps to Take if Material Is Released or Spilled – Resin is incorporated in cloth material, therefore non-flowable. Exposure to moisture results in resin becoming an inert solid.
Waste Disposal Method – In accordance with federal, state and local regulations.
Precautions to Be Taken in Handling and Storing – Store in a cool dry area.
Transportation Information – DOT (49 CFR 172) - Unrestricted, IATA - Unrestricted

Section VIII—Control Measures

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Respiratory – N/A Monitoring – N/A Medical Surveillance – N/A
Skin protection – Permeation resistant gloves (butyl rubber, nitrile, and polyvinyl alcohol). However, please note that polyvinyl alcohol degrades in water. Cover as much of the exposed area as possible, with protective clothing. If skin creams are used, keep the area covered by the cream to a minimum.
Eyes – Liquid, chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment chemical goggles should be used in combination with a full face shield. Safety showers and eye wash stations should be available.
Ventilation – Local exhaust sources regarding industrial ventilation (i.e. ACGIH Industrial Ventilation) should be consulted for guidance about adequate ventilation.

Section IX—Other Information

The information contained herein is based on the data available to us and is believed to be accurate. The data is offered in good faith as typical values and not product specification. The information in this data sheet was compiled from the information supplied by the vendors of the components of this compound. Neptune Research, Inc. makes no warranty either expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. The recommended industrial hygiene and safe handling procedures are believed to be genuinely applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. Neptune Research, Inc. assumes no responsibility for injury from the use of the product described herein. This information is intended only to assist in the safe handling of this material.