



16 Alt Road
Hunt Valley, MD 21030
Phone: (410) 771-9473

MATERIAL SAFETY DATA SHEET

TRANSPORTATION EMERGENCY

CALL CHEMTREC: 800-424-9300
DISTRICT OF COLUMBIA: 202-483-7616

SECTION I CHEMICAL PRODUCT IDENTIFICATION:

PRODUCT NAME..... : **BEYPUR 300 (Track Binder)**
CHEMICAL FAMILY.....: Aromatic Isocyanate Prepolymer
CHEMICAL NAME.....: Diphenylmethane Diisocyanate (MDI) Prepolymer
SYNONYMS.....: Modified Diphenylmethane Diisocyanate (MDI)
FORMULA.....: Proprietary chemical blend

SECTION II COMPOSITION/INFORMATION ON INGREDIENTS:

----- HAZARDOUS INGREDIENTS -----

<u>INDGREDIENT</u>	<u>CAS NUMBER</u>	<u>EXPOSURE LIMITS</u>	<u>CONCENTRATION (%)</u>
4,4' – Diphenylmethane Diisocyanate	101-68-8	OSHA : .02 ppm PEL ACGIH : .005 ppm TLV	Less than 10%
2,4' – Diphenylmethane Diisocyanate	5873-54-1	OSHA : Not Established ACGIH : Not Established	Less than 10%
2,4' – Toluene Diisocyanate	584-84-9	OSHA : .02 ppm PEL ACGIH : .005 ppm TLV	Less than 3%

----- OTHER INGREDIENTS -----

<u>INDGREDIENT</u>	<u>CAS NUMBER</u>	<u>EXPOSURE LIMITS</u>	<u>CONCENTRATION (%)</u>
Polyurethane Prepolymer	39420-98-9	OSHA : Not Established ACGIH : Not Established	Less than 80%

Approval Date: 3/29/05

MSDS Page 1
Continued on next page

SECTION III HAZARDS IDENTIFICATION:

POTENTIAL HEALTH EFFECTS:

INHALATION: When breathing high concentration of vapors for extended periods of time without adequate ventilation, a person may experience dizziness due to a lack of oxygen, and should leave the area immediately. Respiratory track irritation may also occur.

SKIN: Exposure of skin to this product may cause minor irritation, reddening, swelling, or blistering. In some individuals, prolonged contact may cause rashes resulting in dermatitis.

EYES: The component liquids, vapors, or mists are irritating to the eyes and can cause stinging, burning, lachrymation or tearing.

INGESTION: Ingestion could result in irritation and corrosive action in the mouth, stomach tissue and digestive tract. These irritations would likely be followed by vomiting and cramps.

SECTION IV FIRST AID MEASURES:

FIRST AID FOR EYES: Flush with copious amount of water, preferably, lukewarm water for at least 15 minutes, holding eyelids open all the time. Refer individual to physician or ophthalmologist for immediate follow-up.

FIRST AID FOR SKIN: 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 the area is washed.

FIRST AID FOR 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 occur.

FIRST AID FOR 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 person. Consult physician.

NOTE 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 as for contact dermatitis or thermal burns. If burned, treat as 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. An individual having a skin or pulmonary sensitization reaction to this material should be removed from exposure to an isocyanate.

SECTION V FIRE FIGHTING MEASURES:

FLASH POINT: 421.0 F (216.1 C) Pensky-Martens Closed Cup (ASTM D-93)

EXTINGUISHING MEDIA: Dry Chemical; Carbon Dioxide; Foam; 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, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 400 F (204 C), 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.

SECTION VI ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK PROCEDURES: Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment, including respiratory equipment during clean-up. (See Employee Protection Recommendations).

Major Spill: Call Beynon Sports Surfaces at (410) 272-2045.

Transportation Spill: CHEMTREC 800/424-9300.

If temporary control of isocyanate vapor is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Large quantities may be pumped into closed, but not sealed, container for disposal.

Minor Spill: Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well-ventilated area (outside) and treat with neutralizing solution: mixture of water (90%) with detergent (2%), and concentrated ammonia (3-8%). Add about 10 parts of neutralizer per part of isocyanate, with mixing. Allow to stand uncovered for 48 hours to let Carbon Dioxide escape.

Clean Up: Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

SECTION VII HANDLING AND STORAGE:

STORAGE TEMPERATURE: Minimum 60 F (15 C) Maximum 95 F (35 C)

SHELF LIFE: 6 months

SPECIAL SENSITIVITY: If container is exposed to high heat, 400 F (204 C) it can be pressurized and possibly rupture. MDI reacts slowly with water to form carbon dioxide gas. This gas can cause sealed containers to expand and possibly rupture.

HANDLING/STORAGE PRECAUTIONS: Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breathe aerosols or vapors. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Exposure to vapors of heated MDI can be extremely dangerous. Employee education and training in the safe use and handling of this compound are required under the OSHA Hazard Communication Standard.

SECTION V III PERSONAL PROTECTION:

- RESPIRATORY PROTECTION:** NOISH approved organic vapor respirator for exposure below TLV and less than one hour. An air-supplied respirator must be worn during spray applications or whenever long-term exposure is anticipated.
- EYE PROTECTION:** 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.
- SKIN PROTECTION:** Permeation resistant gloves (butyl rubber, nitrile rubber, polyvinyl alcohol). However, please note that PVA degrades in water. Cover as much of the exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered by the cream to a minimum.
- VENTILATION PROTECTION:** Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heated or spray applied.
- ADDITIONAL PROTECTION:** Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES:

- PHYSICAL FORM:** Liquid
- COLOR:** Pale Yellow or Black Tinted
- ODOR:** Slightly musty odor
- BOILING POINT:** 406 F (208 C) @ 5mmHg
- MELTING/FREEZING POINT:** Range 50 F (10 C) to 60 F (16 C)
- SOLUBILITY IN WATER:** Not soluble. Reacts slowly with water to liberate carbon dioxide gas.
- SPECIFIC GRAVITY:** 1.08 @ 77 F (25 C)
- BULK DENSITY:** 9.01 lbs./gal.
- % VOLATILE BY VOLUME:** Negligible
- VAPOR PRESSURE:** Less than 10-5 mmHg @ 77 F (25 C) for MDI

SECTION X STABILITY AND REACTIVITY:

- STABILITY:** This is a stable material.
- HAZARDOUS POLYMERIZATION:** May occur; Contact with moisture, other materials which react with isocyanates, or temperatures above 400 F (204 C), may cause polymerization.
- INCOMPATIBILITIES:** Water, amines, strong bases, alcohols. Will cause some corrosion to copper alloys and aluminum.
- INSTABILITY CONDITIONS:** Contamination with water.
- DECOMPOSITION PRODUCTS:** By high heat and fire: carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors or aerosols.

SECTION XI DISPOSAL CONSIDERATIONS:

WASTE DISPOSAL METHOD: Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.

EMPTY CONTAINER PRECAUTIONS: Empty containers must be handled with care due to product residue. Decontaminate containers prior to disposal. Empty decontaminated containers should be crushed to prevent reuse. **DO NOT HEAT OR CUT EMPTY CONTAINER WITH ELECTRIC OR GAS TORCH.** Gases may be highly toxic.

TRANSPORTATION EMERGENCIES: Contact should be made with Martin Surfacing (800-673-2402) or if for some reason there is no response, contact CHEMTREC (800-424-9300) when this product is unintentionally released from its container during its course of distribution, regardless of the amount released. Distribution includes transportation, storage incidental to transportation, loading and unloading. Such notification must be immediate and made by the person having knowledge of the release.

SECTION XII TRANSPORTATION INFORMATION:

TECHNICAL SHIPPING NAME: Methylene diphenyl diisocyanate
FREIGHT CLASS BULK: Isocyanate
FREIGHT CLASS PACKAGE: Chemicals, NOI (Isocyanate), NMFC 60000
PRODUCT LABEL: Product Label Established

DOT (DOMESTIC SURFACE)

HAZARD CLASS DIVISION NUMBER: Non-Regulated

IMO / IMDG CODE (OCEAN)

HAZARD CLASS DIVISION NUMBER: Non-Regulated

ICAO / IATA (AIR)

HAZARD CLASS DIVISION NUMBER: Non-Regulated