

1. Chemical Product and Company Identification

Polytek Development Corp., 55 Hilton St., Easton, PA 18042, 610/559-8620
 Product Name: **POLY PLASTI-FLEX CASTING RESIN PART A**
 Chemical Family: Methylene bis(phenylisocyanate)

2. Hazardous Constituents

Ingredient/CAS #	Exposure Limits
Methylene bis(phenylisocyanate) (MDI), CAS# 101-68-8, and other isomers	ACGIH TLV 0.005 ppm TWA OSHA PEL 0.02 ppm (Ceiling)

3. Health Hazards

PRIMARY ROUTE(S) OF ENTRY: Inhalation, skin or eye absorption
 EYE: May cause moderate eye irritation.
 SKIN: Exposure may cause skin irritation, staining, or sensitization.
 INGESTION: Single oral dose toxicity is low. May cause nausea, vomiting, and diarrhea.
 INHALATION: At room temp., vapors are minimal. Vapors or aerosols (e.g., generated during heating or spraying) may cause respiratory irritation. May cause respiratory sensitization in susceptible individuals. For individuals sensitized to MDI, exposure may result in allergic respiratory reactions (e.g., coughing, difficulty breathing).
 CHRONIC EFFECTS: Repeated overexposure to MDI may cause respiratory and dermal sensitization. Long-term overexposure to MDI may result in impaired lung function.
 CARCINOGENICITY: Rats exposed to MDI aerosol for their lifetime developed lung tumors.

4. First Aid Measures

EYE CONTACT: Flush with water immediately for 15 minutes. Seek medical attention.
 SKIN CONTACT: Wash with soap and plenty of water (preferably warm water).
 INHALATION: Remove to fresh air. Treat symptomatically. Seek medical attention.
 INGESTION: Seek medical attention. Do not induce vomiting unless so directed by a physician.

5. Fire Fighting Measures

FLASH POINT: > 400 °F (estimated)
 EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foams, or water fog or fine spray.
 HAZARDOUS COMBUSTION PRODUCTS: May include MDI vapor, nitrogen oxides, isocyanates, carbon monoxide, carbon dioxide, and unidentified toxic and irritating compounds.
 OTHER INFORMATION: Firefighters wear SCBA and full-body protective suit. Solid stream of water into hot product may cause violent steam generation or eruption. Dense smoke is formed when product burns. Use water to cool hot containers.

6. Accidental Release Measures

Clear non-emergency personnel from the area. Extinguish sources of ignition. Put on protective equipment (see Section 8). Contain spill to minimize environmental contamination. Absorb spilled material with an inert absorbent. Collect and containerize material. Do not seal containers of spill residue since carbon dioxide is generated upon contact with moisture and dangerous pressure buildup can occur. Neutralize contaminated floor area with a mixture of water (90%), ammonia (3-8%) and detergent (2%). Clean floor before material reacts with moisture in the air and forms a difficult to remove rubber.

7. Handling and Storage

HANDLING: Avoid breathing vapor. Use in well ventilated area. Avoid contact with eyes, skin and clothing. Do not eat, drink or smoke in work area. Wash hands after handling. See Section 8.
 STORAGE: Store indoors at temperatures >75°F and <105°F. Store in original, unopened container. Protect from atmospheric moisture and water, since MDI reacts with water to form CO₂ leading to potentially dangerous pressure build up in sealed containers.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Provide general and/or local exhaust to maintain airborne concentrations below exposure limits (see Section 1 for exposure limits).
 PERSONAL PROTECTIVE EQUIPMENT: Chemical splash goggles, protective clothing, and impervious rubber gloves are recommended.
 RESPIRATORY PROTECTION: In the absence of good ventilation, use a supplied-air respirator, or, if unavailable, a respirator equipped with organic vapor cartridges. In emergencies, use SCBA.

9. Physical Characteristics

APPEARANCE: Clear brown liquid
 ODOR: Mild odor
 SOLUBILITY IN WATER: Insoluble, forms CO₂
 VAPOR PRESSURE: Negligible
 SPECIFIC GRAVITY: 1.1 @ 25°C
 BOILING POINT: No data

10. Stability and Reactivity

CONDITIONS TO AVOID: Moisture and temperatures <75 °F and >95 °F to ensure product integrity.
 INCOMPATIBILITY WITH OTHER MATERIALS: Avoid contact with water, acids, bases, alcohols, strong oxidizers, and some metals (e.g., aluminum, brass, copper). Reaction with water generates carbon dioxide, and results in heat and pressure buildup in closed systems.
 HAZARDOUS DECOMPOSITION PRODUCTS: Possibly isocyanate vapor, carbon monoxide, nitrogen oxides, and traces of hydrogen cyanide.

11. Regulatory and Other Information

COMMUNITY RIGHT-TO-KNOW: This product contains the following Section 313 ingredient:

Ingredient	CAS #	Weight %
Polymeric diphenylmethane diisocyanate (includes MDI)	9016-87-9	100

DISPOSAL: Upon disposal, this product (uncured) is not a RCRA hazardous waste (per 40 CFR 261). Upon exposure to moisture, product forms an inert, non-hazardous solid.

TRANSPORT: Not a hazardous material for shipping in U.S., per 49 CFR Part 171.

HMS RATING: Health=2*; Flammability=1; Reactivity=1; PPE=C

EMERGENCY SHIPPING INFORMATION: Call CHEMTREC, 800/424-9300.

MSDS REVISION INDICATOR: First Issue.

DISCLAIMER: The information contained herein is considered accurate; however, Polytek makes no warranty regarding the accuracy of the information. The user must determine the suitability of the product for the intended use and accepts all risk and liability associated with that use.