

**1. Chemical Product and Company Identification**

Polytek Development Corp., 55 Hilton St., Easton, PA 18042, 610/559-8620  
 Product Name: **POLYGEL 40 Part A and POLYGEL 50 Part A**  
 Chemical Family: Polyurethane Prepolymer

**2. Hazardous Constituents**

Ingredient/CAS #	% by Wt.	Exposure Limits
Methylene bis(phenylisocyanate) (MDI), CAS# 101-68-8, and other isomers	<10	ACGIH TLV 0.005 ppm TWA OSHA PEL 0.02 ppm (Ceiling)
Toluene diisocyanate (TDI), mixed isomers, CAS 26471-62-5	<1	ACGIH TLV 0.005 ppm TWA OSHA PEL 0.02 ppm (Ceiling)

Other ingredients are a trade secret mixture of mostly nonhazardous substances (per 29 CFR 1910.1200) for which no exposure limits have been established by OSHA or ACGIH.

**3. Health Hazards**

**PRIMARY ROUTE(S) OF ENTRY:** Inhalation, skin or eye absorption  
**EYE:** May cause eye irritation.  
**SKIN:** Prolonged or repeated exposure may cause skin irritation, staining, or sensitization.  
**INGESTION:** May cause gastrointestinal discomfort and nausea, lethargy, or diarrhea.  
**INHALATION:** At room temp., vapors are minimal. Vapors or aerosols (e.g., generated during heating or spraying) may cause respiratory irritation. For individuals sensitized to MDI or TDI, exposure may result in allergic respiratory reactions (e.g., coughing, difficulty breathing).  
**CHRONIC EFFECTS:** Repeated overexposure to MDI and TDI may cause respiratory and dermal sensitization. TDI is listed as a carcinogen by IARC (2B) and NTP. TDI has been shown to cause cancer in lab animals when administered orally. Carcinogenicity via inhalation (the most likely means of industrial exposure) has not been proven.

**4. First Aid Measures**

**EYE CONTACT:** Flush with plenty of water. Seek medical attention.  
**SKIN CONTACT:** Wipe off. Wash with soap and plenty of warm water.  
**INHALATION:** Remove to fresh air. Treat symptomatically. Seek medical attention.  
**INGESTION:** Immediately drink large quantities of water. Seek medical attention. Do not induce vomiting unless so directed by a medical professional.

**5. Fire Fighting Measures**

**FLASH POINT:** > 380 °F  
**EXTINGUISHING MEDIA:** Carbon dioxide, dry chemical, foams, or water spray.  
**HAZARDOUS COMBUSTION PRODUCTS:** May include MDI and TDI 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 or foam into hot product may cause frothing. Use water to cool hot containers.

**6. Accidental Release Measures**

Clear non-emergency personnel from the area. Extinguish sources of ignition. 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 room temperature; do not exceed 100°F. Store in original, unopened container. Protect from atmospheric moisture. Do not allow water to get into container.

**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:** Recommend chemical splash goggles, protective clothing, and butyl rubber/neoprene gloves.  
**RESPIRATORY PROTECTION:** In the absence of good ventilation, use respirator equipped with organic vapor cartridges. In emergency situations, use SCBA.

**9. Physical Characteristics**

**APPEARANCE:** Clear to amber liquid  
**ODOR:** Slightly sweet and acrid odor  
**SOLUBILITY IN WATER:** Insoluble, reacts to form CO<sub>2</sub>  
**VAPOR PRESS.:** <1 mmHg @ 25°C  
**SPECIFIC GRAVITY:** 1.1 @ 25°C  
**BOILING POINT:** Not determined

**10. Stability and Reactivity**

**CONDITIONS TO AVOID:** Avoid temperatures <60 °F and >100 °F. Avoid moisture.  
**INCOMPATIBILITY WITH OTHER MATERIALS:** Avoid contact with water, acids, bases, alcohols, strong oxidizers, and some metals. 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**

**SARA SECTION 313:** This product contains the following Section 313 ingredient:  

Ingredient	CAS #	Weight %
Methylene bis (phenylisocyanate)	101-68-8	<10
Toluene diisocyanate (mixed isomers)	26471-62-5	<1

**RCRA:** Upon disposal, this product is not a RCRA hazardous waste (per 40 CFR 261). Upon exposure to moisture, product forms an inert, non-hazardous solid. Follow state and local regulations.  
**DOT:** Not a hazardous material for shipping purposes based on *United Nations Recommendations for the Transport of Dangerous Goods* and 49 CFR Part 171.  
**CA PROPOSITION 65:** TDI "Known to cause cancer."  
**OTHER INFORMATION:** For emergency shipping info., call CHEMTREC, 800/424-9300.

**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.