

Development Corp.

1. Chemical Product and Company Identification

Product Name: POLYCEL 40 Part A and POLYCEL 50 Part A
Chemical Family: Polyurethane Prepolymer

2. Hazardous Constituents

Ingredient/CAS #	% by Wt	Exposure Limits
Methylene bis(isophtho)socyanate (MDI)	<10	ACGIH TLV 0.005 ppm TWA OSHA PEL 0.02 ppm (Ceiling)
CAS# 101-68-8, and other isomers		ACGIH TLV 0.005 ppm TWA OSHA PEL 0.02 ppm (Ceiling)
Toluene diisocyanate (TDI), mixed isomers	~1	ACGIH TLV 0.005 ppm TWA OSHA PEL 0.02 ppm (Ceiling)
CAS 26471-62-5		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 ROUTES) OF ENTRY: Inhalation, skin or eye contact
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 (estimated)
EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foam, 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 containize 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 buyol rubber/neoprene gloves.
RESPIRATORY PROTECTION: In the absence of good ventilation, use respirator equipped with organic vapor cartridges and particulate filters. In emergency situations, use SCBA. Use respirators in compliance with OSHA's respiratory protection standard (29 CFR 1910.134).

9. Physical and Chemical Properties

APPEARANCE: Clear to amber liquid
ODOR: Slightly sweet and acrid odor
SOLUBILITY IN WATER: Insol., results to form CO₂
VAPOR PRESS.: <1 mm Hg @ 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: see Section 5 (Combustion Products).

11. Regulatory and Other Information

SARA SECTION 313: This product contains the following Section 313 ingredients:

Inorganic	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. Part A cured with Part B may be RCRA hazardous owing to mercury content. Follow state and local regulations.
CA PROPOSITION 65: "WARNING: This product contains a chemical known to the State of California to cause cancer." (Contains TDI.)
DOT: Not a hazardous material for shipping purposes based on *United Nations Recommendations for the Transport of Dangerous Goods* and 49 CFR Part 171.
EMERGENCY SHIPPING INFORMATION: Call CHEMTREC, 800/424-9300.

REVISIONS/IMPROVEMENTS: Made various minor changes.
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.

Development Corp.

1. Chemical Name and Company Identification

Polytek Development Corp., 55 Hilton St., Easton, PA 18042, 610/559-8620

Product Name: POLYGEL 40 Part B and POLYGEL 50 Part B

Chemical Family: Trade secret blend of polyol and aromatic diamine

2. Identifiers

Inventor/CAS #

Exposure Limits

Polyol

Aromatic diamine

Proprietary aryl mercury compound (0.2%)

None established

ACGIH TLV 0.1 mg/m³ TW/A

OSHA PEL 0.1 mg/m³ (Ceiling)

3. Physical and Chemical Properties

PRIMARY ROUTE(S) OF ENTRY: Skin or eye contact, or ingestion

EYE: May cause eye irritation.

SKIN: Exposure may cause skin irritation and/or redness.

INGESTION: Toxic by ingestion (contains 0.2% of a mercury compound; also contains an aromatic diamine). May cause gastrointestinal discomfort if ingested.

INHALATION: At room temperature, vapors are minimal and material is not expected to be an inhalation hazard. Vapors or aerosols (e.g., generated during heating or spraying) may cause respiratory irritation.

CARCINOGENICITY: Not designated as a carcinogen by NTP, IARC, or OSHA.

CHRONIC EFFECTS: Long-term overexposure to mercury has been associated with central nervous system and kidney disorders. Some aryl mercury compounds have been found to cause developmental effects to fetuses in animal studies.

4. Hazards

EYE CONTACT: Flush with water for 15 minutes. Seek medical attention.

SKIN CONTACT: Wipe off. Wash with soap and plenty of warm water. Seek medical attention if irritation develops.

INHALATION: Remove to fresh air. Treat symptomatically. Seek medical attention.

INGESTION: If alert, drink water to dilute, then induce vomiting. Seek medical attention.

5. Reactivity

FLASH POINT: >570°F (estimated)

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, alcohol foam, or water fog.

HAZARDOUS COMBUSTION PRODUCTS: Likely to include carbon monoxide, carbon dioxide, nitrogen oxides, formaldehyde, mercury vapor, and unidentified toxic and irritating compounds.

OTHER INFORMATION: Firefighters wear protective gear and self-contained breathing apparatus (SCBA). A direct stream of water or foam into hot product may cause frothing and increase fire intensity.

6. Control Measures

Clean non-emergency personnel from the area. Remove sources of ignition. Contain spill to minimize environmental contamination. Absorb spilled material with non-reactive absorbent such

as sawdust, vermiculite, or sand. Collect and containerize spill material. Dispose of in accordance with federal, state and local regulations.

7. Handling and Storage

HANDLING: Avoid contact with eyes, skin and clothing. Avoid breathing vapor. Use in adequately ventilated area. Do not eat, drink or smoke in work area. Wash hands after handling. See also Section 8 of MSDS.

STORAGE: Store indoors. Do not exceed 120°F. Store in original container tightly closed.

8. Exposure Controls/Personal Protection

ENGINEERING CONTROLS: Provide general and/or local exhaust to minimize airborne concentrations.

PERSONAL PROTECTIVE EQUIPMENT: Eye protection (e.g., chemical splash goggles), protective clothing and PVC-coated gloves are recommended.

RESPIRATORY PROTECTION: In the absence of good ventilation, or if vapors or mists are generated (e.g., through heating or spraying), use respirator equipped with organic vapor cartridges. In emergency situations, use SCBA.

9. Physical and Chemical Data

APPEARANCE: Brown translucent liquid

ODOR: Mild odor

BOILING POINT: No data

VAPOR PRESSURE: < 1 mm Hg @ 25°C

SOLUBILITY IN WATER: Negligible

SPECIFIC GRAVITY: 1.0 @ 25°C

10. Conditions to Avoid

CONDITIONS TO AVOID: Avoid excessive heat and exposure to sunlight.

INCOMPATIBILITY WITH OTHER MATERIALS: Oxidizers, acids, organic sulfur compounds, and aluminum.

HAZARDOUS DECOMPOSITION PRODUCTS: Potentially oxides of carbon and nitrogen, organic acids, mercury vapor, and other unidentified irritating or toxic compounds.

11. Regulatory Information

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

Ingredient	CAS #	Weight %
Mercury Compound	Trade secret	<0.2

RCRA: Upon disposal, this product (uncured) is a characteristic RCRA hazardous waste (D009 - owing to mercury content) as defined in 40 CFR 261. Cured materials may be RCRA-regulated for mercury. Dispose of in accordance with federal, state and local regulations.

CA PROPOSITION 65: "WARNING: This product contains a chemical [mercury] known to the State of California to cause birth defects or other reproductive harm."

DOT: Not a hazardous material for shipping purposes based on United Nations Recommendations for the Transport of Dangerous Goods and 49 CFR Part 171.

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

REVISION INDICATOR: Revised Sections 2, 3 and 11.

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