

Development Corp.

## 1. Chemical Product and Company Identification

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

Product Name: **POLY-OPTIC<sup>®</sup> 14-SERIES PART A (1410, 1411, 1420, 1470)**

Chemical Family: Polyurethane Prepolymer

## 2. Hazardous Constituents

<u>Hazardous Ingredient/CAS #</u>	<u>Exposure Limits</u>
Dicyclohexylmethane-4,4'-diisocyanate, CAS# 5124-30-1 (synonym: methylene bis(4-cyclohexylisocyanate))	ACGIH TLV 0.005 ppm TWA OSHA: None established

## 3. Health Hazards

PRIMARY ROUTE(S) OF ENTRY: Inhalation, skin or eye contact

EYE: Liquids, vapors, and mists of this product are irritating to the eyes.

SKIN: Causes skin irritation -- redness, swelling, rash, blistering. Potent skin sensitizer.

INGESTION: Single oral dose toxicity is low, but may result in irritation and corrosive action in the mouth, stomach, and digestive tract.

INHALATION: At room temp., vapors are minimal, but vapors or mists generated during heating or spraying may cause respiratory irritation (runny nose, sore throat, coughing, shortness of breath). Exposure well above the TLV may cause bronchitis, or pulmonary edema (fluid in the lungs). After repeated overexposure, susceptible individuals may develop isocyanate sensitization causing them to react to later exposures even at low levels. Upon exposure, sensitized individuals may experience allergic respiratory reactions (e.g., asthmatic attack, coughing, difficulty breathing).

CHRONIC EFFECTS: Repeated overexposure may cause respiratory and dermal sensitization. Long-term overexposure may result in impaired lung function.

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

## 4. First Aid Measures

EYE CONTACT: Flush with water for at least 15 min. Seek medical attention.

SKIN CONTACT: Remove contaminated clothing. Wash thoroughly with soap and warm water. Seek medical attention if symptoms develop.

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

INGESTION: Do not induce vomiting. Give 1-2 cups milk or water. Seek medical attention.

## 5. Fire Fighting Measures

FLASH POINT: &gt; 350 °F (estimated)

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, foams, or water spray for large fires.

OTHER INFORMATION: Firefighters wear SCBA and full-body protective suit. Closed containers may explode when exposed to extreme heat or burst when contaminated with water.

## 6. Accidental Release Measures

Clear non-emergency personnel from the area. Extinguish sources of ignition and ventilate area. Contain spill to minimize environmental contamination. Cover spilled material with an inert absorbent. Pour neutralizing solution (isopropyl alcohol - 20%, ammonia - 10%, detergent - 2-5%, water - balance) over spill area and allow to react for 10 min. Collect material in open containers. Do not seal containers of spill residue since carbon dioxide is generated upon contact with moisture and dangerous pressure buildup can occur. Wash floor area with neutralizing solution.

## 7. Handling and Storage

**HANDLING:** Avoid breathing vapor. Use in well-ventilated area. Wear protective clothing to prevent 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 77-100°F. Crystallization and settling can occur at <77°F. Store in original, unopened container. Protect from atmospheric moisture and water.

## 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:** Wear eye protection (e.g., chemical splash goggles or safety glasses), protective clothing, and impermeable gloves (e.g., butyl, or nitrile rubber).

**RESPIRATORY PROTECTION:** When hand-mixing with adequate local exhaust, respiratory protection is not normally needed. Respirators are most likely necessary when product is used in confined space or heated or sprayed. Use a respirator equipped with organic vapor cartridges and HEPA filters or a supplied-air respirator. In emergencies, use SCBA. Respirators must be used in compliance with OSHA's respiratory protection standard (29 CFR 1910.134).

## 9. Physical Characteristics

**APPEARANCE:** Clear pale yellow or violet liquid

**ODOR:** Mild odor

**SOLUBILITY IN WATER:** Reacts slowly forms CO<sub>2</sub>

**VAPOR PRESS.:** .000016mmHg @ 25°C

**SPECIFIC GRAVITY:** 1.07 @ 25°C

**BOILING POINT:** Decomposes

## 10. Stability and Reactivity

**CONDITIONS TO AVOID:** Avoid high temperatures and moisture.

**INCOMPATIBILITY WITH OTHER MATERIALS:** Avoid contact with water, acids, bases, alcohols, amines, strong oxidizers, and some metals. Reaction with water generates carbon dioxide, and results in potentially dangerous heat and pressure buildup in closed systems.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Possibly isocyanate vapor, carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen cyanide and other toxic gases.

## 11. Regulatory and Other Information

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

Ingredient	CAS #	Weight%
Dicyclohexylmethane-4, 4'-diisocyanate	5124-30-1	80-90

**DISPOSAL:** Upon disposal, 14-Series Part As are not RCRA hazardous waste (per 40 CFR 261). Upon exposure to moisture, product forms an inert, non-hazardous solid. Material cured with Part B may be hazardous owing to mercury in Part B. Follow federal, state and local regulations.

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

**HMIS:** Health=2\*; Flammability=1; Reactivity=1; PPE=C

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

**MSDS INDICATOR:** Made various minor changes and added 1411A.

**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 Product and Company Identification

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

Product Name: **POLY-OPTIC<sup>®</sup> 14-SERIES PART B (1410, 1411, 1420, 1470)**

Chemical Family: Polyol Blend

## 2. Hazardous Constituents

Hazardous Ingredient/CAS #

Polyalkyl polyol

Aryl mercury compound ( $\leq 0.5\%$ )Exposure Limits

None

ACGIH TLV 0.1 mg/m<sup>3</sup> TWA OSHA PEL 0.1 mg/m<sup>3</sup> (Ceiling)

## 3. Health Hazards

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, owing to mercury content. 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: Contains  $<0.5\%$  of an aryl mercury compound; similar mercury compounds have been found to cause adverse reproductive effects. Long-term overexposure to mercury has been associated with central nervous system and kidney disorders. 1420B contains a proprietary polyol that caused birth defects in laboratory rat studies.

## 4. First Aid: Measures

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

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

INHALATION: Remove to fresh air. Treat symptoms. Seek medical attention if symptoms persist.

INGESTION: If alert, drink water to dilute, and then consult a physician.

## 5. Fire Fighting Measures

FLASH POINT:  $>300^{\circ}\text{F}$  (estimated)

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

HAZARDOUS COMBUSTION PRODUCTS: Likely to include carbon monoxide, carbon dioxide, 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. Cool fire-exposed containers with water spray.

## 6. Accidental Release Measures

Clear non-emergency personnel. Put on protective equipment (see Sect. 8). 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 (see Sect. 11).

## 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.

STORAGE: Store indoors. Do not exceed  $100^{\circ}\text{F}$ . Store in original container tightly closed.

## 8. Exposure Controls/Personal Protection

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

PERSONAL PROTECTIVE EQUIPMENT: Eye protection (e.g., chemical splash goggles), protective clothing and PVC-coated/neoprene 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 supplied-air respirator or respirator equipped with organic vapor cartridges. In emergency situations, use SCBA.

## 9. Physical Characteristics

APPEARANCE: Colorless to slightly yellow liquid

BOILING POINT: No data

VAPOR PRESSURE: Negligible

ODOR: Mild odor

SOLUBILITY IN WATER: Negligible

SPECIFIC GRAVITY: ~1.05 @ 25°C

## 10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid moisture and excessive temperatures.

INCOMPATIBILITY WITH OTHER MATERIALS: Oxidizers

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

## 11. Regulatory and Other Information

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

<u>Ingredient</u>	<u>CAS #/Category</u>	<u>Weight %</u>
Mercury Compound	N458	≤0.5

DISPOSAL: 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 chemicals known to the State of California to cause birth defects or other reproductive harm." (Traces of mercury and toluene)

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

HMIS: Health=2; Flammability=1; Reactivity=0; PPE=C

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

**MSDS REVISION INDICATOR:** Several minor modifications and added 1411B.

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