

1. Chemical Product and Company Identification

Polytek Development Corp., 55 Hilton St., Easton, PA 18042, 610/559-8620
Product Name: **POLY-OPTIC® 14-SERIES PART A (1410, 1411, 1420, 1470)**
Chemical Family: Polyurethane Prepolymer

2. Hazardous Constituents

<u>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: > 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 may be necessary when product is used in confined space or heated or sprayed. A supplied-air respirator is recommended owing to poor warning properties. If unavailable, use an air-purifying respirator equipped with organic vapor cartridges and HEPA filters and follow a filter change out schedule. 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	COEFF OF WATER/OIL: N/AV
ODOR: Odorless	SPECIFIC GRAVITY: 1.07 @ 25°C
ODOR THRESHOLD: N/AV	VAPOR PRESS.: N/AV
SOL. IN WATER: Insoluble; reacts slowly to form CO ₂	VAPOR DENSITY: N/AV
BOILING POINT: N/AV	EVAP. RATE: N/AV
FREEZING POINT: N/AV	pH: N/AV

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:

<u>Ingredient</u>	<u>CAS #</u>	<u>Weight %</u>
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.

REVISION 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.