

MATERIAL SAFETY DATA SHEET
Photopolymer EC 500

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Photopolymer EC 500

Product class: Mixture of methacrylated monomers and polyol

Revision date: 01/20/2011

Company name: EnvisionTEC, Inc,
15162 S. Commerce Dr.
Dearborn, MI, 48120
USA

Emergencies: Call 1-313-436-4300

Product information: Call 1-313-436-4300

2. COMPOSITION/INFORMATION ON INGREDIENS

<u>Ingrediens List</u>	<u>CAS Number</u>	<u>Percentage</u>
Methacrylated monomers	Proprietary	25-85%
Polyol	Proprietary	10-70 %
Photoinitiator	Proprietary	0.1-5%

3. HAZARD IDENTIFICATION

Emergency overview: This product is dark yellow liquid with a slight acrylate odor, which may cause skin and eye irritation.

Ingestion: No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of ingestion.

Skin: This product may cause moderate skin irritation (reddening and swelling) and/or sensitization. Reddening and swelling may not occur immediately. Prolonged contact with these products may aggravate this effect.

Inhalation: No significant signs or symptoms indicative of any adverse health hazard are expected to occur at standard conditions. However, aerosols, or vapors, which may be generated at elevated processing temperatures, may cause respiratory tract irritation. Symptoms of irritation may include coughing, mucous production and shortness of breath.

Eyes: These products may cause moderate eye irritation.

Target organ: None known.

Carcinogenicity: None of the components present on these products at the concentration equal to or greater than 0.1% are not listed as a carcinogen by IARC, NTP, or OSHA.

Routes of exposure: Skin and eye contact, inhalation and ingestion.

Chronic: Some substances in this class of materials that have shown limited evidence of mutagenicity in vitro.

4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. In general no treatment is necessary unless large quantities of product are ingested. However, if swallowed, seek medical attention.

Skin: Remove contaminated clothing and wash contact area with soap and water for 15 minutes. Particular attention should be paid to hair, nose, and ears, other areas not easily cleaned. Get medical attention.

Inhalation: In case of exposure to a high concentration of vapor or mist, remove person to fresh air. If

breathing has stopped, administer artificial respiration and seek medical attention.

Eyes: Immediately flush with plenty of water (under eye lids) for at least 15 minutes. Get medical attention immediately.

5. FIREFIGHTING MEASURES

Flash point: > 93 C / 200 F

Method: Setaflash

Extinguishing media: Use carbon dioxide or dry chemical for small fires; aqueous foam or water spray for larges fires.

Special firefighting procedures: Firefighters should wear full protection clothing and self-contained breathing apparatus (SCBA). Thoroughly decontaminate firefighting equipment including all firefighting apparel after the incident.

6. ACCIDENTAL RELEASE MEASURES

Accidental release measures: In the event of a spill, immediately remove all sources of ignition. Using appropriate personal protective equipment and non-sparking tools, contain spilled material. Cover the liquid with inert absorbent. Scoop all contaminated material into drums for proper disposal.

7. SPECIAL STORAGE AND HANDLING PRECAUTIONS

Handling and storage: Store in tightly closed, properly vented containers away from heat, sparks, open flame, strong oxidizers, radiation, and other initiators. Prevent contamination by foreign materials, freezing

conditions and moisture contact. Use only non-sparking tools and limit storage time.

Do not store at or below 60 F (15 C). If frozen, material must be warmed and remixed gently (< 100 F).

Heating this product above 300 F in the presence of air may cause slow oxidative decomposition; above 500 F polymerization may occur. Fumes and vapors from this thermal decomposition can be irritating. Do not breath fumes.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

- Ventilation: Local exhaust is recommended to control exposure, which may result from operations generating aerosols and hot operations generating vapors.
- Respiratory protection: If these materials are handled at elevated temperature or under mist forming conditions, NIOSH/MSHA approved respiratory protection equipment should be use.
- Skin protection: Impervious gloves (nitrile or neoprene).
- Eye and face protection: Chemical splash goggles. A face shield is recommended during operations where splashing could occur.
- Other equipment: For operations where contact can occur a safety shower and eye wash facility should be available.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance: Dark yellow color liquid

Odor:	Arcylate
Specific gravity:	Not available
Boiling point:	> 93 C / 200 F
Flash point:	> 93 C / 200 F
Ignition temperature:	n.d
Lower explosion limit:	n.d
Upper explosion limit:	n.d
Solubility in organic solvents:	soluble in organic solvents
Solubility in water:	negligible
Volatile fraction: (by weight)	negligible
Vapor pressure:	negligible

10. STABILITY AND REACTIVITY

Stability:	Stable when stored in container designed for use with light sensitive materials.
Hazardous: polymerization	Unless inhibited, product can polymerize, raising temperature and pressure possibly rupturing container. Check inhibitor content often, adding to bulk liquid if need. Do not blanket or mix with oxygen-free gas as it renders the inhibitor ineffective.
Hazardous decomposition products:	Hazardous decomposition product may include oxides of carbon and various hydrocarbon fragments.

Incompatibility: Polymerization initiators, including peroxides, strong oxidizing agents, copper, copper alloys, carbon steel, iron, rust, and strong bases.

Conditions to avoid: High temperatures, direct sunlight, oxidizing conditions, freezing conditions, UV/visible light. Storing or shipping under cold conditions may lead to crystallization and loss of resin clarity. Mild reheating for short period of time until resin is clear is recommended before use.

11. TOXICOLOGICAL INFORMATION

Toxicological information: No significant signs or symptoms indicative of any adverse health hazard are expected to occur as a result of ingestion. Some substances in this class of material have indicated limited evidence of mutagenicity in vitro test. A lifetime painting study of all materials that contain this product with mice indicated no evidence of carcinogenicity.

12. ECOLOGICAL INFORMATION

Ecological information: Keep product from waterways and watersheds.

13. DISPOSAL METHOD

Disposal method: Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Department of transportation classification: Not hazardous by D.O.T. regulations

D.O.T. proper shipping name: Not regulated

Other requirements: N/A

15. SUPPLEMENT

NPCA HMIS rating: Health: 2 (Moderate)
Flammability: 1 (Slight)
Reactivity: 2 (Moderate)
Personal protection: D

TSCA Status: All components of these products are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

16. OTHER INFORMATION

To the best of our knowledge the information contained herein is accurate. However, EnvisionTEC, Inc. makes no warranty, expressed or implied regarding the accuracy of these results to be obtained from the use thereof. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. EnvisionTec, Inc. assumes no responsibility for injury from the use of the product described herein.

