MATERIAL SAFETY DATA SHEET

Epoxy Resin 3/99

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Epoxy Resin General Use: Mixed with Epoxy Hardener to produce counter molds of copper and brass dies.
Company: UEI™ Systems, A Division of Universal Engraving, Inc.
9090 Nieman Road Overland Park, KS, USA 66214
1-800-821-8864 or 913-599-0244
EMERGENCY CONTACT: 1-800-424-9300 United States and Canada 01-703-527-3887 International

2. HAZARDOUS INGREDIENTS

	CAS NO.	PEL	TLV
Bisphenol F/Epichlorohydrin Epoxy Resin	28064-14-4	No OSHA nor ACGIH limits have been established for this product.	
Carbon Black	1333-86-4	3.5mg/m3	3.5 mg/m3

3. HAZARD IDENTIFICATION: Black Liquid
Routes of Entry: Inhalation, Skin Contact, Eye Contact, Ingestion
Inhalation: Not expected to be a relevant route of exposure. However, high vapor or aerosol mist concentrations may be irritating to the nose, throat, and upper respiratory tract.
Skin: Product may be moderately irritating to the skin and may cause skin sensitization.
Eye: Product may be moderately irritating to the eyes.
Ingestion: Not expected to be a relevant route of exposure. However, product is predicted to have a low order of acute oral toxicity.
Signs and Symptoms: Irritation as noted. Skin sensitization (allergy) may be evidenced by rashes, especially hives.
Aggravated Medical Conditions: Pre-existing skin, eye, and respiratory disorders may be aggravated by exposure to this product.

4. FIRST AID MEASURES
Inhalation: Move individual into fresh air. If symptoms persist seek medical attention. If breathing is difficult administer oxygen. Keep person warm and quiet. Seek immediate medical attention.
Skin: Remove contaminated clothing/shoes and wipe excess from skin. Flush skin with water. Follow by washing with soap and water. If irritation occurs, get medical attention. Do not re-use clothing until cleaned. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent re-use.
Eye: Move individual into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart. Seek immediate medical attention.
Ingestion: Do not induce vomiting. In general no treatment is necessary unless large quantities of product are ingested. However, get immediate medical advice.
Note to physicians: In general, emesis induction is unnecessary in high viscosity, low volatility products, e.g. neat epoxy resins.

5. FIRE FIGHTING MEASURES
Flash Point: 480 F (PMCC) Extinguishing Media: Use water fog, “alcohol” foam, dry chemical, or CO2. Special Fire Fighting Procedures and Precautions: Material will not burn unless preheated. Cool fire-exposed containers with water. Unusual Fire and Explosion Hazards: No unusual hazards.

6. ACCIDENTAL RELEASE MEASURES
Spill or Leak Procedures: May burn although not readily ignitable. Use cautious judgment when cleaning up large spill. Large spills: Wear respirator and protective clothing as appropriate. Shut off source of leak, Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand, or other suitable material. Dispose of properly. Flush area with water to remove trace residue. Small spills: Take up with an absorbent material and dispose of properly.

7. HANDLING AND STORAGE
Store in a cool, dry place away from open flames and high temperatures. Empty containers can contain hazardous product residues. Handle in accordance with the hazard potential of curing agent used. Avoid contact with eyes and prolonged/repeated contact with skin. Wash thoroughly after handling. Launder contaminated clothing before re-use. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed.
Warning: May cause skin and eye irritation. May cause skin sensitization. Minimize bodily contact. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before re-use. Heating this resin above 300 F in the presence of air may cause slow oxidative decomposition; above 500 F polymerization may occur. Some curing agents such as aliphatic polyamines can produce exothermic reactions which in large masses can cause runaway polymerization and charring of the reactants. Fumes and vapors from these thermal and chemical decompositions vary widely in composition and toxicity. Do not breathe fumes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Respiratory protection not ordinarily required. Protective Clothing: Avoid contact with eyes. Wear safety glasses or goggles as appropriate. Avoid prolonged or repeated skin contact. Wear chemical-resistant gloves and other clothing as required to minimize contact.

9. PHYSICAL AND CHEMICAL PROPERTIES
Boiling Point: Not Available Specific Gravity: 1.2 (H2O) = 1) Vapor Pressure: <1 @ 20 Deg C (mm HG)
Melting Point: Not Available Solubility: Negligible (in water) Vapor Density: Not Applicable (Air = 1)
Evaporation Rate (N-Butyl Acetate = 1): Not Applicable Physical Form: Black liquid.

10. STABILITY AND REACTIVITY
Stability: Stable Hazardous Polymerization: Will not occur. Conditions and Materials to Avoid: Can react vigorously with strong oxidizing agents, strong Lewis of mineral acids, and strong mineral and orgaic bases/especially primary and secondary aliphatic amines. Hazardous Decomposition Products: Carbon monoxide, aldehydes, acids, and other organic substances may be formed during combustion or thermal or oxidative decomposition. Reaction with some curing agents may produce considerable heat. Run-a-way cure reactions may char and decompose the resin system, generating unidentified fumes and vapors which may be toxic.

11. ADDITIONAL INFORMATION
UEI™ Systems provides the information contained herein in good faith. It is believed to be correct. However it is not all inclusive and should be used only as a guide. Individuals receiving this information must exercise their independent judgement in determining its appropriateness for a particular purpose. UEI ™ Systems shall not be held liable for any damage resulting from handling or from contact with this product.

Abbreviations:
OSHA - Occupational Safety and Health Act
ACGIH - American Conference of Governmental Industrial Hygienists
VPEL - Vapor Permissible Exposure Limit
TWA - Time Weighted Average
TLV - Threshold Limit Value
STEL - Short Term Exposure Limit