

**MATERIAL SAFETY DATA SHEET****Alfa International Corp.****E10-104 Epoxy****MSDS Number: 602****MSDS Date: 8/17/06****SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: E10-104 Epoxy

MANUFACTURER: Alfa International Corp.
ADDRESS: 32 Mechanic Ave., Unit 99, Woonsocket, RI 02895

EMERGENCY PHONE: 866-353-2532
CHEMTREC PHONE: 800-424-9300
OTHER CALLS: 401-765-0503
FAX PHONE: 401-765-0508

CHEMICAL NAME: Silver Filled Bisphenol A / Epichlorohydrin Based Epoxy Resin

PRODUCT USE: Epoxy Resin
PREPARED BY: Alfa International

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>% WT</u>	<u>EXPOSURE LIMIT</u>	<u>OSHA PEL</u>	<u>VP</u>
Bisphenol-A-(Epichlorohydrin); Epoxy Resin	25068-38-6	<25%	-	-	-
Silver	7440-22-4	>75%	1 mg/m3	0.01 mg/m3	0
Dicyandiamide	-	<2%	-	-	-
Amine Adduct with Epoxy Resin	134001-76-2	<2%	-	-	-

SECTION 3: HAZARDS IDENTIFICATION**EMERGENCY OVERVIEW:**

Human Health Hazards: May be irritating to the eyes and skin. Contact with hot material can cause thermal burns. May cause skin sensitization.

Safety Hazards: Material will not burn unless preheated.

SECTION 4: FIRST AID MEASURES

EYE CONTACT: Flush eye with water. Rest eyes for 30 minutes. If redness, burning, blurred vision or swelling persist, consult a physician.

SKIN CONTACT: In case of contact with hot product, immediately flood the affected area with cold water. Wipe excess material from exposed area. Flush exposed skin with water and follow by washing with soap if available. Carefully remove clothing; if clothing is stuck to a burn area do not pull it off, but cut around it. Cover burn area with a clean material. Transport to nearest medical facility for additional treatment.

INGESTION: Do not induce vomiting. Have victim rinse out mouth with water, then drink sips of water to remove taste from mouth. In general, no treatment is necessary unless large quantities of product are ingested. However, get medical advice. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide.

SPECIAL HAZARDS DURING FIRE FIGHTING:

Material will not burn unless preheated. Clear fire area of all non-emergency personnel. Cool fire exposed containers with water. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS:

Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots) including a positive pressure NIOSH approved self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

May burn although not readily ignitable.
Use cautious judgement when cleaning up large spills.
Shut off leaks, if possible without personal risk.

ENVIRONMENTAL PRECAUTIONS:

Dike and contain.
Contain run-off and dispose of properly.
Remove contaminated soil to remove contaminated trace residues.
Prevent from entering into drains, ditches or rivers.

CLEAN-UP METHODS – SMALL SPILLAGE:

Soak up with an absorbent such as clay, sand or other suitable material.
Place in non-leaking container.
Seal tightly for proper disposal.

CLEAN-UP METHODS – LARGE SPILLAGE:

Remove with vacuum trucks or pump to storage/salvage vessels.
Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal.
Flush area with water to remove trace residue.

ADDITIONAL ADVICE:

Notify authorities if any exposures to the general public or environment occurs or is likely to occur.
See Section 13 for information on disposal.

SECTION 7: HANDLING AND STORAGE

HANDLING:

Avoid prolonged or repeated contact with skin, eyes and clothing. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. **WARNING!** May cause skin and eye irritation. May cause skin sensitization. This resin may be handled, shipped and stored at elevated temperature in bulk. The recommended pumping temperature is 180 Degrees Fahrenheit. Wash with soap and water before eating, drinking, smoking, applying cosmetics, or using toilet facilities. Launder contaminated clothing before reuse. Contaminated leather articles, including shoes, cannot be decontaminated and should be destroyed to prevent reuse. To prevent thermal burns avoid contact with hot product.

STORAGE:

Store in a cool, dry place with adequate ventilation. Keep containers closed when not in use. Keep away from open flames and high temperatures.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE MEASURES: Wear protective clothing specified for normal operations.

EYE PROTECTION:

Avoid contact with eyes.
Wear chemical goggles if there is potential contact with eyes.
Safety spectacles.

HAND PROTECTION:

Butyl
EVAL-Laminate

SKIN AND BODY PROTECTION:

Wear chemical-resistant gloves and other clothing as required to minimize contact.

RESPIRATORY PROTECTION:

No respiratory protection is usually required under normal conditions of use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

Clear

PHYSICAL STATE: Viscous Liquid

BOILING POINT:
F: >500
C: >260

FLASH POINT:
F: 480
C: 249

VAPOR PRESSURE: 0.03 mbar
@ F: 171
C: 77

RELATIVE DENSITY: 3.6

SOLUBILITY IN WATER: Negligible

SECTION 10: STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Avoid high temperatures.

INCOMPATIBILITY (MATERIAL TO AVOID):

Can react vigorously with strong oxidizing agents, strong lewis or mineral acid, and strong mineral and organic bases.
Avoid contact with water or liquids.
Do not allow molten product to contact water or other liquids.
This can cause violent eruptions, splatter hot material, or ignite flammable material.
Reaction with some curing agents may produce considerable heat and possible violent decomposition.

HAZARDOUS REACTIONS:

Stable under normal use conditions.
Hazardous polymerization will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE ORAL TOXICITY: LD50 – Low toxicity, LD50 > 2000 mg/kg.

ACUTE DERMAL TOXICITY: LD50 – Low toxicity, LD50 > 2000 mg/kg.

SENSITIZATION: May cause skin sensitization.

CARCINOGENICITY: Recent 2-year bioassays in rats and mice exposed by the dermal route to the diglycidyl ether of bisphenol A (BADGE) yielded no evidence of carcinogenicity to the skin or any other organs. This study clarifies prior equivocal results from a 2-year mouse skin painting study, which were suggestive, but not conclusive, for weak carcinogenic activity. **Note:** Diglycidyl ether of bisphenol A (BADGE) is a component in all BPA/ECH based epoxy resins.

MUTAGENICITY: Resins of this type, liquid resins based on diglycidyl ether of bisphenol A have proved to be inactive when tested by in vivo mutagenicity assays. These resins have shown activity in in-vitro microbial mutagenicity screening and have produced chromosomal aberrations in cultured rat liver cells. The significance of these tests to man is unknown.

POTENTIAL HEALTH EFFECTS

Inhalation: Not expected to be a relevant route of exposure, however, under conditions where exposure to vapors or mists is possible, could cause respiratory tract irritation.

Skin: May be mildly irritating to the skin.
Contact with hot material can cause thermal burns which may result in permanent damage.
May cause skin sensitization.

Eyes: May be mildly irritating to the eyes.
Contact with hot material can cause thermal burns which may result in permanent damage or blindness.

Ingestion: Not likely to be a relevant route of exposure.

SECTION 12: ECOLOGICAL INFORMATION

BIODEGRADABILITY: This section will be updated as ecological reviews are completed.

ECOTOXICITY: This section will be updated as ecological reviews are completed.

SECTION 13: DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL: If this material becomes a waste, it would not be a hazardous waste by RCRA criteria (40 CFR 261). Place in an appropriate disposal facility in compliance with local and federal regulations.

SECTION 14: TRANSPORT INFORMATION

CFR_ROAD NOT REGULATED FOR TRANSPORT
IATA_C NOT REGULATED FOR TRANSPORT
IMDG NOT REGULATED FOR TRANSPORT
CFR_RAIL NOT REGULATED FOR TRANSPORT

SECTION 15: REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

NOTIFICATION STATUS

AICS: y
DSL: y
INV (CN): y
ENCS (JP): y
TSCA: y
EU NLP: y
KECI (KR): y
PICCS (PH): y

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) No RQ

SARA 311/312 Hazards

Hazard Chronic Health

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III**Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required**

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) No De minimis
Concentration

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III**Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)**

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) Threshold Planning
Quantity: No TPQ

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) Reportable quantity:
No RQ

New Jersey Right-To-Know Chemical List

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) Not Listed

Additional Components Not Found In Section 2:

Components	CAS-No.	Concentration	Remarks
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Phenyl Glycidyl Ether	122-60-1	< 6 PPM	Not Listed
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Pennsylvania Right-To-Know Chemical List

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) Not Listed

Additional Components Not Found In Section 2:

Components	CAS-No.	Concentration	Remarks
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Phenyl Glycidyl Ether	122-60-1	< 6 PPM	Not Listed
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Massachusetts Right-To-Know Chemical List

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) Not Listed

Additional Components Not Found In Section 2:

Components	CAS-No.	Concentration	Remarks
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Phenyl Glycidyl Ether	122-60-1	< 6 PPM	Not Listed
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US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

Additional Components Not Found In Section 2:

Components	Concentration	Regulation	Value	Remarks
Phenyl Glycidyl Ether	< 6 PPM	US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)	Listed: 10/1/1990	Carcinogenic

HMIS Rating: Health: 2
Fire: 1
Reactivity: 0

SECTION 16: OTHER INFORMATION

REFERENCE: Prepared in accordance with 29 CFR 1910.1200.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.