

MATERIAL SAFETY DATA SHEET**PRODUCT NAME:** EPO-TEK 731, Part A**EPOXY TECHNOLOGY
14 FORTUNE DRIVE
BILLERICA, MA 01821*****HMIS: HEALTH-2 FIRE-1 REACTIVITY-0****EMERGENCY PHONE:**
US/CANADA: 800-255-3924
INT'L COLLECT: +813-248-0585**Carcinogen: NTP (No) IARC (No) OSHA (No)****DATE REVISED: 7/2/01
REV: A**

* HMIS CODE ratings are estimated by Epoxy Technology.

I. IDENTIFICATION & PHYSICAL DATA**PERCENT VOLATILE:** NA
BOILING POINT: NA
VAPOR DENSITY: >Air
APPEARANCE: Clear Paste
ODOR: Mild**VAPOR PRESSURE:** NA
SOLUBILITY IN WATER: Low
EVAPORATION RATE: <BUAC
SPECIFIC GRAVITY: NA

II. HAZARDOUS INGREDIENTS

	CAS #	WT %	TOXICITY DATA
Epoxy Cresol Novolac	29690-82-2	35-55%	See Ingredient Sheet 110301
Reaction product of epichlorohydrin & bisphenol A	025085-99-8	35-55%	See Ingredient Sheet 110104

Epoxy Cresol Novolac and Reaction product of epichlorohydrin & bisphenol A both require reporting under OSHA's Hazardous Communication Standards, 1910.1200.

III. FIRE & EXPLOSION DATA**FLASH POINT:** >200F
EXTINGUISHING MEDIA: Dry chemical, foam, carbon dioxide.
UNUSUAL FIRE & EXPLOSION HAZARDS: Avoid fumes liberated by heat.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self contained breathing apparatus and complete personal protective equipment. Remove all ignition sources. Use a water spray to cool fire exposed containers.

IV. REACTIVITY DATA**STABILITY:** Stable
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Excessive heat.
MATERIALS TO AVOID: Strong oxidizing and reducing agents.
HAZARDOUS DECOMPOSITION PRODUCTS: Fumes produced when heated to decomposition may include carbon monoxide, and carbon dioxide.

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guarantee or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in the combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.

EFFECTS OF OVER EXPOSURE

INGESTION: Not determined.

INHALATION: Hot vapors can cause headaches, nausea, dizziness, and respiratory irritation.

SKIN CONTACT: Can cause dermatitis.

EYE CONTACT: Irritating to the eyes. Can cause injury.

CHRONIC EFFECTS OF OVER EXPOSURE: Can cause dermatitis and sensitization.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: In case of eye contact, flush with water for at least 15 minutes. Get medical attention immediately.

SKIN CONTACT: In case of skin contact, clean with soap and water. Do not use solvents. Remove contaminated clothing.

INGESTION: Get medical attention immediately.

INHALATION: Remove employee to fresh air. If discomfort persists, get medical attention.

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED: Eliminate ignition sources. Use eye and skin protection. Place leaking containers in a well ventilated area. Absorb spillage with inert material and dispose.

WASTE DISPOSAL METHOD: Incinerate or use hazardous waste treatment procedures that are in accordance with federal, state and local regulations.

VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Wear an NIOSH approved respirator whenever high level exposure to vapors or mist is anticipated.

VENTILATION: Local exhaust recommended for exposure control.

PROTECTIVE GLOVES: Impervious gloves - neoprene or equivalent. A combination of barrier cream and gloves is recommended.

EYE PROTECTION: Chemical splash goggles recommended.

OTHER PROTECTIVE EQUIPMENT: For operations where contact can occur, use a face shield and impervious apron. A safety shower and eye wash facility should be available.

VIII. SPECIAL PRECAUTIONS: Avoid contact with skin and eyes. Avoid breathing vapors. Keep containers closed when not in use. Remove all contaminated clothing immediately and wash. Wash skin thoroughly with soap and water after handling. Solvents should not be used to clean skin because of increased penetration potential - protective skin oils can be dissolved by solvents.

MATERIAL SAFETY DATA SHEET**PRODUCT NAME:** EPO-TEK 731, Part B**EPOXY TECHNOLOGY
14 FORTUNE DRIVE
BILLERICA, MA 01821*****HMIS: HEALTH-2 FIRE-1 REACTIVITY-0****EMERGENCY PHONE:**
US/CANADA: 800-255-3924
INT'L COLLECT: +813-248-0585**Carcinogen: NTP (No) IARC (No) OSHA (No)****DATE REVISED: 7/2/01
REV: A**

* HMIS CODE ratings are estimated by Epoxy Technology.

I. IDENTIFICATION & PHYSICAL DATA**PERCENT VOLATILE:** NA
BOILING POINT: NA
VAPOR DENSITY: >Air
APPEARANCE: Tan Paste
ODOR: Mild**VAPOR PRESSURE:** NA
SOLUBILITY IN WATER: Low
EVAPORATION RATE: <BUAC
SPECIFIC GRAVITY: NA

II. HAZARDOUS INGREDIENTS	CAS#	WT %	TOXICITY DATA
Polyamide Resin	68410231	75-100%	NA

Polyamide Resin is the only ingredient that requires reporting via Mass RTK, under sections 311 and 312 of Sara Title III.

III. FIRE & EXPLOSION DATA**FLASH POINT:** >365F
EXTINGUISHING MEDIA: Dry chemical, foam, carbon dioxide.
UNUSUAL FIRE & EXPLOSION HAZARDS: Avoid fumes liberated by heat.
SPECIAL FIRE FIGHTING PROCEDURES: Wear self contained breathing apparatus and complete personal protective equipment. Remove all ignition sources. Use a water spray to cool fire exposed containers.

IV. REACTIVITY DATA**STABILITY:** Stable
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Excessive heat.
MATERIALS TO AVOID: Strong oxidizing and reducing agents.
HAZARDOUS DECOMPOSITION PRODUCTS: Fumes produced when heated to decomposition may include oxides of nitrogen, carbon monoxide, and carbon dioxide.

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EFFECTS OF OVER EXPOSURE

INGESTION: May cause gastrointestinal irritation.

INHALATION: Hot vapors can cause headaches, nausea, dizziness, and respiratory irritation, if inhaled.

SKIN CONTACT: Contains material that may cause moderate skin injury. May cause dermatitis and sensitization.

EYE CONTACT: Irritating to the eyes. Contains materials that may cause severe eye irritation or injury.

CHRONIC EFFECTS OF OVER EXPOSURE: May cause dermatitis and sensitization.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: In case of eye contact, flush with water for at least 15 minutes. Get medical attention immediately.

SKIN CONTACT: In case of skin contact, clean with soap and water. Do not use solvents. Remove contaminated clothing.

INGESTION: Get medical attention immediately.

INHALATION: Remove employee to fresh air. If discomfort persists, get medical attention.

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED: Eliminate ignition sources. Use eye and skin protection. Place leaking containers in a well ventilated area. Absorb spillage with inert material and dispose.

WASTE DISPOSAL METHOD: Incinerate or use hazardous waste treatment procedures that are in accordance with federal, state and local regulations.

VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Wear an NIOSH approved respirator whenever high level exposure to vapors or mist is anticipated.

VENTILATION: Local exhaust recommended for exposure control.

PROTECTIVE GLOVES: Impervious gloves - neoprene or equivalent. A combination of barrier cream and gloves is recommended.

EYE PROTECTION: Chemical splash goggles recommended.

OTHER PROTECTIVE EQUIPMENT: For operations where contact can occur, use a face shield and impervious apron. A safety shower and eye wash facility should be available.

VIII. SPECIAL PRECAUTIONS: Avoid contact with skin and eyes. Avoid breathing vapors. Keep containers closed when not in use. Remove all contaminated clothing immediately and wash. Wash skin thoroughly with soap and water after handling. Solvents should not be used to clean skin because of increased penetration potential - protective skin oils can be dissolved by solvents.

REGULATORY INFORMATION

**EPOXY TECHNOLOGY
14 FORTUNE DRIVE
BILLERICA, MA 01821
Tel: (978) 667-3805**

PRODUCT NAME: EPO-TEK 731
DATE REVISED: 7/2/01
REV: A

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right To Know Act of 1986 (40 CFR 372): None

1. TSCA Inventory Status

All the components of this product are listed on the TSCA Inventory.

2. RCRA Status

This product contains the following chemicals listed on the 40 CFR Part 261.33: None

3. CERCLA Status

This product contains the following chemicals listed on the 40 CFR Part 302.4: None

4. Transportation

Part A

Not Restricted

Part B

Not Restricted

The information contained herein is given in good faith. However, no guarantee or warranty of any kind expressed or implied is made with respect to this information.

INGREDIENT SHEET**EPOXY TECHNOLOGY
14 FORTUNE DRIVE
BILLERICA, MA 01821****INGREDIENT CODE NUMBER:** 110104**EMERGENCY PHONE:**
US/CANADA: 800-255-3924
INT'L COLLECT: +813-248-0585***HMIS: HEALTH (1) FLAMMIBILITY (1)
REACTIVITY (0)****DATE REVISED:** 10/13/00
REV: A**CARCINOGEN: NTP (No) IARC (No) OSHA (No)**
*HMIS CODE rating are estimated by Epoxy Technology

I. IDENTIFICATION & PHYSICAL DATAColor: Colorless to slight Yellow
Odor: Slight
Physical State: Liquid
Solubility in Water: None
Vapor Pressure: NA
Specific Gravity: 1.16
Boiling Point: NA

II. HAZARDOUS INGREDIENTS**WT %****CAS #**

Reaction product of epichlorohydrin & bisphenol A

100%

025085-99-8

TOXICITY DATASkin(LD50): in rabbits is 20,000mg/kg.
Ingestion(LD50): in rats is >5000mg/kg
Mutagenicity: Animal mutagenicity, studies were negative.

III. FIRE AND EXPLOSION DATA**FLASH POINT:** 485 F**EXTINGUISHING MEDIA:** Foam, CO2, dry chemical.**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None Known**FIRE FIGHTING EQUIPMENT:** Wear positive pressure self-contained breathing apparatus and full protective equipment.

IV. REACTIVITY DATA**STABILITY:** Stable**CONDITIONS TO AVOID:** Avoid storage at high temperatures.**HAZARDOUS DECOMPOSITION PRODUCTS:** None Known.**HAZARDOUS POLYMERIZATION:** Will not occur

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V. **HEALTH HAZARD DATA**

110104

EFFECTS OF OVER EXPOSURE

None Established.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: Flush eyes with plenty of water.

SKIN CONTACT: Wash off in flowing water or shower.

INGESTION: No adverse effects anticipated by this route of exposure incidental to proper industrial handling.

INHALATION: No adverse effects anticipated by this route of exposure.

VI. **SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED: Soak up in absorbent material such as sand, or polypropylene or polyethylene fiber products and collect in suitable containers. Residual resin may be removed using steam or hot soapy water.

WASTE DISPOSAL METHOD: Employ waste disposal procedures that are in accordance with federal, state and local regulations.

VII. **SPECIAL PROTECTION INFORMATION**

RESPIRATORY PROTECTION: Wear an approved respirator whenever exposure to air born vapors are anticipated.

VENTILATION: Locale exhaust recommended for exposure control.

PROTECTIVE GLOVES: Impervious gloves-neoprene or equivalent. A combination of barrier cream and gloves is recommended.

EYE PROTECTION: Chemical splash goggles recommended.

OTHER PROTECTIVE EQUIPMENT: For operations where contact can occur, use a face shield and impervious apron. A safety shower and eye wash facility should be available.

VIII. **SPECIAL PRECAUTIONS:** Avoid contact with skin and eyes. Avoid breathing vapors generated by heating. Keep containers closed when not in use. Remove all contaminated clothing and wash.

INGREDIENT SHEET

**EPOXY TECHNOLOGY
14 FORTUNE DRIVE
BILLERICA, MA 01821**

INGREDIENT CODE NUMBER: 110301

EMERGENCY PHONE:
US/CANADA: 800-255-3924
INT'L COLLECT: +813-248-0585

***HMIS: HEALTH (2) FLAMMIBILITY (1)
REACTIVITY (0)**

DATE ISSUED: 2/27/01

CARCINOGEN: NTP (No) IARC (No) OSHA (No)
*HMIS CODE rating are estimated by Epoxy Technology

I. IDENTIFICATION & PHYSICAL DATA

Color: Amber
Physical State: Solid
Vapor Pressure: NA
Boiling Point: NA
Odor: Slight
Solubility in Water: Insoluable
Specific Gravity: 1.12

II. HAZARDOUS INGREDIENTS

WT%

CAS #

Epoxy Cresol Novolac	100%	29690-82-2
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TOXICITY DATA

Skin: May cause skin irritation.
Eye: (Rabbit) slight irritation.
Dermal (LD50): Rabbit: Greater than 3,000 mg/kg
Oral Effects (LD50): Rat: Greater than 10,000mg/kg

III. FIRE AND EXPLOSION DATA

FLASH POINT: >200F

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical, water spray.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Decomposition and combustion products may be toxic. Dust may be explosive if mixed with air in critical proportions and in the presence of a source of ignition.

FIRE FIGHTING EQUIPMENT: Use self-contained breathing apparatus.

IV. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Avoid strong acids or bases in bulk and elevated temperatures.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, and aldehydes.

HAZARDOUS POLYMERIZATION: Will not occur

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V. HEALTH HAZARD DATA

110301

EFFECTS OF OVER EXPOSURE

INGESTION: May be harmful by ingestion. Irritating the gastro intestinal tract.

INHALATION: May be harmful by inhalation. Irritating to the respiratory tract.

SKIN CONTACT: Severe irritation to the skin.

EYE CONTACT: Irritating to the eyes. May cause injury.

CHRONIC EFFECTS OF OVER EXPOSURE: Overexposure to this material can cause skin and eye irritation and allergic skin reactions.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: In case of eye contact, flush with water for at least 15 minutes. Get medical attention immediately.

SKIN CONTACT: Wash immediately with plenty of soap and water. Take off contaminated clothing and shoes.

INGESTION: Remove visible material, clean the face with water; lay down quiet and seek medical advice immediately.

INHALATION: Remove employee to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED: Avoid personal contact. Take up with absorbent material and shovel into a closed container.

WASTE DISPOSAL METHOD: Employ waste disposal procedures that are in accordance with federal, state and local regulations.

VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: Wear an approved respirator whenever exposure to air born vapors are anticipated.

VENTILATION: Local exhaust recommended for exposure control.

PROTECTIVE GLOVES: Impervious gloves-neoprene or equivalent. A combination of barrier cream and gloves is recommended.

EYE PROTECTION: Chemical splash goggles recommended.

OTHER PROTECTIVE EQUIPMENT: For operations where contact can occur, use a face shield and impervious apron. A safety shower and eye wash facility should be available.

VIII. SPECIAL PRECAUTIONS: Avoid contact with skin and eyes. Avoid breathing vapors generated by heating. Keep containers closed when not in use. Remove all contaminated clothing and wash.