

MATERIAL SAFETY DATA SHEET**PRODUCT NAME:** EPO-TEK 301-2FL, Part A***HMIS: HEALTH-2 FIRE-1 REACTIVITY-0****Carcinogen: NTP (No) IARC (No) OSHA (No)**

* HMIS CODE ratings are estimated by Epoxy Technology.

**EPOXY TECHNOLOGY
14 FORTUNE DRIVE
BILLERICA, MA 01821****EMERGENCY PHONE:**
US/CANADA: 800-255-3924
INT'L COLLECT: + 813-248-0585**DATE REVISED:** 09/16/2002
REV: C

I. IDENTIFICATION & PHYSICAL DATA**PERCENT VOLATILE:** NA
BOILING POINT: NA
VAPOR DENSITY: >Air
APPEARANCE: Yellow Liquid
ODOR: Mild**VAPOR PRESSURE:** NA
SOLUBILITY IN WATER: None
EVAPORATION RATE: <BUAC
SPECIFIC GRAVITY: NA

II. HAZARDOUS INGREDIENTS

	CAS #	WT %	TOXICITY DATA
Diglycidyl Ether of Bisphenol A	001675-54-3	50-70%	See Ingredient Sheet 110103
Reaction product of epichlorohydrin & bisphenol A	025085-99-8	10-25%	See Ingredient Sheet 110104

Diglycidyl Ether of Bisphenol A is considered hazardous under OSHA's Hazardous Communication Standards under 29CFR, 1910.1200 and is considered hazardous under Sara Title III, under sections 311 and 312. Reaction product of epichlorohydrin & bisphenol A is considered hazardous via OSHA's Hazardous Communication Standards.

III. FIRE & EXPLOSION DATA**FLASH POINT:** >450F
EXTINGUISHING MEDIA: Dry chemical, foam, carbon dioxide.
UNUSUAL FIRE & EXPLOSION HAZARDS: void 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 @ ambient temperatures
CONDITIONS TO AVOID: Excessive heat.
MATERIALS TO AVOID: Acids, bases, amines, and oxide materials
HAZARDOUS DECOMPOSITION PRODUCTS: Fumes produced when heated to decomposition may include carbon monoxide, and carbon dioxide.
HAZARDOUS POLYMERIZATION: Will not occur.

The information and recommendations contained in this MSDS have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when 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 measures are necessary to safely use this product, either alone or in combination with other products, and to determine its environmental regulatory compliance obligations under applicable federal or state laws.

EFFECTS OF OVEREXPOSURE

INGESTION: Toxicity is considered to be extremely low.

INHALATION: Vapors are unlikely due to physical properties.

SKIN CONTACT: Can cause dermatitis.

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

CHRONIC EFFECTS OF OVEREXPOSURE: May cause temporary eye irritation.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: In case of eye contact, flush well with water. 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 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 301-2FL, Part B***HMIS: HEALTH- 3 FIRE-1 REACTIVITY-0****Carcinogen: NTP (No) IARC (No) OSHA (No)**

* HMIS CODE ratings are estimated by Epoxy Technology.

**EPOXY TECHNOLOGY
14 FORTUNE DRIVE
BILLERICA, MA 01821****EMERGENCY PHONE:**
US/CANADA: 800-255-3924
INT'L COLLECT: + 813-248-0585**DATE REVISED:** 10/12/01
REV: C

I. IDENTIFICATION & PHYSICAL DATA**PERCENT VOLATILE:** NA
BOILING POINT: 500°F
VAPOR DENSITY: >Air
APPEARANCE: Clear liquid
ODOR: Mild**VAPOR PRESSURE:** 1@100C
SOLUBILITY IN WATER: NA
EVAPORATION RATE: <BUAC
SPECIFIC GRAVITY: 0.95

II. HAZARDOUS INGREDIENTS	CAS#	WT%	TOXICITY DATA
Polyoxypropylenediamine	9046-10-0	75 –100%	See Ingredient Sheet 210103.

Polyoxypropylenediamine requires reporting according to 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 oxides of nitrogen, carbon monoxide, and carbon dioxide.

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V. HEALTH HAZARD DATA

Epo Tek 301-2FL, Part B

EFFECTS OF OVEREXPOSURE

INGESTION: Contains materials that may be moderately toxic. Ingestion can severely upset the gastric system.

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

SKIN CONTACT: Corrosive; expected to cause severe skin damage with burns and blistering.

EYE CONTACT: Extremely irritating with possible permanent eye injury.

CHRONIC EFFECTS OF OVEREXPOSURE: Combinations of above conditions can be experienced.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: In case of eye contact, flush well with water. Get medical attention immediately.

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

INGESTION: Give large quantities of water. Get medical attention immediately.

INHALATION: Can be irritating to respiratory track. Remove to fresh air. Get medical attention if discomfort persists.

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 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 must be worn.

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 301-2FL
DATE REVISED: 10/12/01
REV: C

1. 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

2. TSCA Inventory Status

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

3. RCRA Status

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

4. CERCLA Status

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

5. Transportation

Part A

Not Restricted

Part B

DOT/IATA Shipping Name: Polyoxypropylenediamine
Hazard Class: 8
Packing Group: III
ID Number: UN2735
Transport Label(s): Amines, Liquid, Corrosive, N. O. S.

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.

PRODUCT NAME: Diglycidyl Ether of Bisphenol

EPOXY TECHNOLOGY
14 FORTUNE DRIVE
BILLERICA, MA 01821

INGREDIENT CODE NUMBER: 110103

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

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

DATE REVISED: 9/12/00
REV: A

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

I. IDENTIFICATION & PHYSICAL DATA

Color: Colorless - yellow
Odor: Characteristic
Physical State: Liquid to semi - solid
Solubility in Water: None
Vapor Pressure: Not Applicable
Specific Gravity: 1.16
Boiling Point: Not Applicable

II. HAZARDOUS INGREDIENTS

WT%

CAS

TOXICITY DATA

Diglycidyl Ether of Bisphenol A

100%

001675-54-3

The LD50 for skin(rabbits) is 20,000mg/kg.
Ingestion: oral(rats): is >5,000mg/kg.
Mutagenicity(effects on genetic material):
Animal mutagenicity studies were negative.
In vitro mutagenicity studies were negative in
some cases and positive in others.

III. FIRE AND EXPLOSION DATA

FLASH POINT: 485F

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

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

FIRE FIGHTING EQUIPMENT: Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of re-ignition is passed.

IV. REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Avoid storage at high temperatures.

HAZARDOUS DECOMPOSITION PRODUCTS: Burning may produce irritating vapors and/or carbon monoxide

HAZARDOUS POLYMERIZATION: Will not occur

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EFFECTS OF OVER EXPOSURE

INGESTION: Single dose oral toxicity is considered to be extremely low. No hazards anticipated from swallowing small amounts incidental to normal handling operations.

INHALATION: Vapors are unlikely due to physical properties.

SKIN CONTACT: May cause skin irritation, dermatitis.

EYE CONTACT: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely.

CHRONIC EFFECTS OF OVER EXPOSURE: No specific information available. Material is considered to be "an immediate health hazard" due to potential for skin reaction.

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 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: 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.

PRODUCT NAME: Reaction Product of
epichlorohydrin & bisphenol A

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 (1)

DATE ISSUED: 9/13/00

CARCINOGEN: NTP (No) IARC (No) OSHA (No)

*HMIS CODE rating are estimated by Epoxy Technology

I. IDENTIFICATION & PHYSICAL DATA

Color: 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 and Bisphenol A

100%

025085-99-8

TOXICITY DATA

Skin(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

The information and recommendations contained in this Material Safety Data Sheet have been compiled from sources believed to represent 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, whether alone or in combination with other products, and determine its environmental regulatory compliance obligations under applicable federal or state laws.

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

PRODUCT NAME: Polyoxypropylenediamine
INGREDIENT CODE NUMBER: 210103

*HMIS: HEALTH- 3 FIRE-1 REACTIVITY-0

Carcinogen: NTP (No) IARC (No) OSHA (No)

* HMIS CODE ratings are estimated by Epoxy Technology.

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EMERGENCY PHONE:
US/CANADA: 800-255-3924
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DATE REVISED: 9/12/00
REV: A

I. IDENTIFICATION & PHYSICAL DATA

PERCENT VOLATILE: nil
BOILING POINT: 500F
VAPOR DENSITY: >Air
APPEARANCE: Clear liquid
ODOR: Mild

VAPOR PRESSURE: 1@100C
SOLUBILITY IN WATER: NA
EVAPORATION RATE: <BUAC
SPECIFIC GRAVITY: 0.95
pH: 11.7

II. HAZARDOUS INGREDIENTS

CAS#

WT %

Polyoxypropylenediamine

9046-10-0

100%

TOXICITY DATA:

Oral LD50: 2.88g/kg rat – slightly toxic

Inhalation: Not Determined

Dermal LD50 2.98g/kg rabbit – practically non toxic

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 oxides of nitrogen, carbon monoxide, and carbon dioxide.

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EFFECTS OF OVER EXPOSURE

INGESTION: Contains materials that may be moderately toxic. Ingestion can severely upset the gastric system.

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

SKIN CONTACT: Corrosive; expected to cause severe skin damage with burns and blistering.

EYE CONTACT: Extremely irritating with possible permanent eye injury.

CHRONIC EFFECTS OF OVER EXPOSURE: Combinations of above conditions can be experienced.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: In case of eye contact, flush well with water. Get medical attention immediately.

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

INGESTION: Give large quantities of water. 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 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 must be worn.

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.