

MATERIAL SAFETY DATA SHEET**PRODUCT NAME:** 301, 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:
(978) 667 3805****DATE REVISED:** 2/6/01**REV: C**

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

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

Mixture of epichlorohydrin and bisphenol A	025085-99-8	65-85%	See Ingredient Sheet 110104.
1,4 Butanediol Diglycidyl Ether	2425-79-8	1-10%	NA

Mixture of epichlorohydrin and bisphenol A is considered hazardous under OSHA's Hazardous Communication Standards under 29CFR, 1910.1200. 1,4 butanediol diglycidyl ether is considered hazardous under 311 and 312 of Sara Title III.

III. FIRE & EXPLOSION DATA**FLASH POINT:** >400F**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 measures are necessary to safely use this product, either alone or in the combination with other products, and to determine its environmental regulatory compliance obligations under applicable federal or state laws.

V. HEALTH HAZARD DATA

Epo Tek 301, Part A

EFFECTS OF OVEREXPOSURE

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

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

SKIN CONTACT: Skin irritation may be experienced with some individuals.

EYE CONTACT: Extremely irritating with the possibility of permanent eye injury.

CHRONIC/ACUTE EFFECTS OF 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: 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.

14 FORTUNE DRIVE
BILLERICA, MA 01821

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

EMERGENCY PHONE:
(978) 667 3805

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

DATE ISSUED: 2/6/01
REV: C

*HMIS CODE ratings are estimated by Epoxy Technology.

I. IDENTIFICATION & PHYSICAL DATA

PERCENT VOLATILE: Not volatile
BOILING POINT: [448F@1013](#) Mbar
VAPOR DENSITY: Heavier than air
APPEARANCE: Colorless liquid
ODOR: Pungent

VAPOR PRESSURE: 0.02 hpa @ 20C
SOLUBILITY IN WATER: Low
EVAPORATION RATE: Slower than Butyl Acetate
SPECIFIC GRAVITY: <1

II. HAZARDOUS INGREDIENTS

	CAS#	WT%	TOXICITY DATA
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2,2,4-Trimethyl-1, 6-Hexanediamine	003236-53-1	75-100%	See Ingredient Sheet 210110.
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2,2,4-Trimethyl-1, 6-Hexanediamine is the only ingredient that requires reporting under Sara Title III, under sections 311 and 312.

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 PROCIDURES: 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, carbon dioxide, and oxides of nitrogen.

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V. HEALTH HAZARD DATA

Epo Tek 301, Part B

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 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, flush well with 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 or 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.

REGULATORY INFORMATION

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

PRODUCT NAME: 301
DATE REVISED: 2/6/01
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

DOT/IATA Shipping Name: Trimethylhexamethylenediamines
Hazard Class: 8
Packing Group: III
ID Number: UN2327
Transport Label(s): Corrosive, Liquid, Basic, Organic, 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.

INGREDIENT SHEET

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

INGREDIENT CODE NUMBER: 110104

EMERGENCY PHONE:
(978) 667 – 3805

***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 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 #

Mixture 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

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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: 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.

INGREDIENT SHEET**EPOXY TECHNOLOGY
14 FORTUNE DRIVE
BILLERICA, MA 01821****INGREDIENT CODE NUMBER:** 210110**EMERGENCY PHONE:**
(978) 667 – 3805***HMIS: HEALTH (3) FLAMMIBILITY (1) REACTIVITY (0)****DATE ISSUED:** 9/15/00**CARCINOGEN: NTP (No) IARC (No) OSHA (No)**

*HMIS CODE rating are estimated by Epoxy Technology

II. IDENTIFICATION & PHYSICAL DATAColor: Clear
Odor: Amine
Physical State: Liquid
Solubility in Water: NA
Vapor Pressure: NA
Specific Gravity: 0.865
Boiling Point: 232C

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

2,2,4-Trimethyl-1, 6-hexanediamine

100%

003236-53-1

TOXICITY DATA (AQUATIC)LC50(Fish) 0.5 mg/l 48H
EC10(Bacteria) 89mg/l 17H
EC50 (Daphnia) 31.5 mg/l 24H
EC50 (Algae) 29.5mg/l 72H

IV. FIRE AND EXPLOSION DATA**FLASH POINT:** 230F**EXTINGUISHING MEDIA:** Carbon dioxide, foam, dry chemical, water spray.**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None**FIRE FIGHTING EQUIPMENT:** None

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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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.

IX. HEALTH HAZARD DATA

210110

EFFECTS OF OVER EXPOSURE

INGESTION: May injure eye tissue and result in permanent damage. Corrosive. Causes chemical burns.

INHALATION: Corrosive. May cause burns resulting in permanent damage.

SKIN CONTACT: May cause burns resulting in permanent damage. Causes skin sensitization, an allergic reaction, which becomes evident on re-exposure to this material.

EYE CONTACT: Irritating to the eyes. May injure eye tissue and result in permanent damage. Corrosive. Causes chemical burns.

CHRONIC EFFECTS OF OVER EXPOSURE: No specific information available. Material is considered to be a potential carcinogen.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: In case of eye contact, flush with water for at least 15 minutes or until all material has been removed. Obtain medical attention without delay, preferably from an ophthalmologist.

SKIN CONTACT: Immediately flush skin with plenty of water. Remove contaminated clothing. Obtain medical attention if irritation develops or persists. Wash clothing before reuse.

INGESTION: Aspiration of material into the lungs may cause chemical pneumonitis (damage to lungs) which may be fatal. If swallowed, do not induce vomiting. Have person drink 8-10 glasses of water to dilute material in stomach. Get medical attention immediately.

INHALATION: Remove employee to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.

X. 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.

XI. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirator's.

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 should be used.

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.

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XII. 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.