

**MATERIAL SAFETY DATA SHEET****PRODUCT NAME:** EPO-TEK 417F, Part A**EPOXY TECHNOLOGY  
14 FORTUNE DRIVE  
BILLERICA, MA 01821****\*HMIS: HEALTH- 1 FIRE-1 REACTIVITY- 1****EMERGENCY PHONE:**  
US/CANADA: 800-255-3924  
INT'L COLLECT: + 813-248-0585**Carcinogen: NTP (No) IARC (No) OSHA (No)****DATE REVISED: 9/25/01  
REV: C**

\* HMIS CODE ratings are estimated by Epoxy Technology.

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

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

Silver flake

7440-22-4

75-85%

See Ingredient Sheet 310200

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**III. FIRE & EXPLOSION DATA****FLASH POINT:** >200 F**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.

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**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.

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The information and recommendation 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 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.

## V. HEALTH HAZARD DATA

EPO-TEK 417F, Part A

### EFFECTS OF OVER EXPOSURE

**INGESTION:** May be moderately toxic

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

**SKIN CONTACT:** Can cause dermatitis, sensitization.

**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.

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## 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.

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## 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 417F, 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:** 9/25/01  
**REV:** C

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**I. IDENTIFICATION & PHYSICAL DATA**

**PERCENT VOLATILE:** NA  
**BOILING POINT:** NA  
**VAPOR DENSITY:** >Air  
**APPEARANCE:** Amber liquid  
**ODOR:** Mild

**VAPOR PRESSURE:** NA  
**SOLUBILITY IN WATER:** NA  
**EVAPORATION RATE:** <BUAC  
**SPECIFIC GRAVITY:** 1.02

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<b>II. HAZARDOUS INGREDIENTS</b>	<b>CAS #</b>	<b>WT %</b>	<b>TOXICITY DATA</b>
Imidazole	288-32-4	25-50%	See Ingredient Sheet 210803

Imidazole is the only hazardous ingredient that requires reporting per Sara Title III, under 311 and 312.

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**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.

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**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 417F, Part B

### EFFECTS OF OVEREXPOSURE

**INGESTION:** Ingestion can severely upset the gastric system.

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

**SKIN CONTACT:** Mildly irritating in rabbit dermal irritation studies. May cause dermatitis and skin sensitization in some individuals.

**EYE CONTACT:** Causes eye burns in rabbit irritation studies. Irritating to the eyes. Can cause injury.

**CHRONIC EFFECTS OF OVEREXPOSURE:** Repeated and/or prolonged exposures may result in: adverse

Respiratory effects( such as cough, tightness of chest or shortness of breath), adverse eye effects (such as

Conjunctivitis corneal damage), adverse eye effects (such as rash, irritation or corrosion).

### 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.

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### 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.

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### 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.

**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 417F  
DATE REVISED: 6/22/2006  
REV: E

### 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

Proper Shipping Name: Corrosive, Liquid, Basic, Organic, N.O.S (Imidazole)  
Hazard Class: 8  
Packing Group: III  
ID Number: UN3267  
Transport Label(s): Corrosive Liquid

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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:** 310200**\*HMIS: HEALTH- 1 FIRE- 0 REACTIVITY- 0****EMERGENCY PHONE:**  
US/CANADA: 800-255-3924  
INT'L COLLECT: + 813-248-0585**Carcinogen: NTP (No) IARC (No) OSHA (No)****DATE ISSUED:** 12/29/99

\* HMIS CODE ratings are estimated by Epoxy Technology.

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**I. IDENTIFICATION & PHYSICAL DATA****PERCENT VOLATILE:** <0.5 %  
**BOILING POINT:** NA  
**VAPOR DENSITY:** >Air  
**APPEARANCE:** Fine powder - Silver color  
**ODOR:** Mild**VAPOR PRESSURE:** NA  
**SOLUBILITY IN WATER:** Nil  
**EVAPORATION RATE:** NA  
**SPECIFIC GRAVITY:** 10.5

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

Silver flake

7440-22-4

100

**TOXICITY DATA**

ACGIH TLV (TWA) = 0.10 mg/M3

OSHA PEL (TWA) = 0.01 mg/M3

Silver appears in the Mass. RTK Hazardous substance list.

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**III. FIRE & EXPLOSION DATA****FLASH POINT:** >200F  
**EXTINGUISHING MEDIA:** Non Flammable  
**UNUSUAL FIRE & EXPLOSION HAZARDS:** None  
**SPECIAL FIRE FIGHTING PROCEDURES:** None

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**IV. REACTIVITY DATA****STABILITY:** Stable  
**CONDITIONS TO AVOID:** NA  
**MATERIALS TO AVOID:** NA  
**HAZARDOUS DECOMPOSITION PRODUCTS:** NA  
**HAZARDOUS POLYMERIZATION:** Will not occur.

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To the best of our knowledge, the information contained herein is accurate. Epoxy Technology Inc., however, assumes no liability for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist.

## V. HEALTH HAZARD DATA

Ingredient 310200

### EFFECTS OF OVER EXPOSURE

**INGESTION:** No specific information available.

**INHALATION:** Prolonged or severe exposure to dust may produce respiratory irritation. The use of NIOSH approved respirators and effective, local exhaust ventilation can minimize this type of exposure.

**SKIN CONTACT:** Prolonged or repeated contact may result in irritation.

**EYE CONTACT:** Irritating to the eyes. The use of chemical splash goggles will prevent this form of contact.

**CHRONIC EFFECTS OF OVER EXPOSURE:** Prolonged or repeated exposure to silver dust can result in Pneumoconiosis and/or permanent skin pigmentation (Argyria).

### 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.

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## VI. SPILL OR LEAK PROCEDURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED:** Vacuum or sweep up dust. Follow good housekeeping procedures.

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

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## VII. SPECIAL PROTECTION INFORMATION

**RESPIRATORY PROTECTION:** Wear a NIOSH approved respirator whenever high level exposure to air born particles 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 air born particles. 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:** 210803**\*HMIS: HEALTH- 3 FIRE-1 REACTIVITY- 1****EMERGENCY PHONE:**  
US/CANADA: 800-255-3924  
INT'L COLLECT: + 813-248-0585**Carcinogen: NTP (No) IARC (No) OSHA (No)****DATE ISSUED:** 12/29/99

\* HMIS CODE ratings are estimated by Epoxy Technology.

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**I. IDENTIFICATION & PHYSICAL DATA****PERCENT VOLATILE:** NA  
**BOILING POINT:** 256 C  
**VAPOR DENSITY:** NA  
**APPEARANCE:** Amber solid  
**ODOR:** Mild**VAPOR PRESSURE:** NA  
**SOLUBILITY IN WATER:** 2410 gm/l  
**EVAPORATION RATE:** NA  
**SPECIFIC GRAVITY:** 1.03  
**MELTING POINT:** 89 C

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

Imidazole

288-32-4

99

ACGIH (TWA) = Not Established  
OSHA PEL (TWA) = Not Established  
TLV = 2mg/m3 (Established by supplier)  
Oral LD50 (Rat) = 965 mg/kg  
Eyes & Skin (Rabbit) = Severely  
irritating, Corrosive.

Imidazole does not appear in Mass RTK hazardous substance list

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**III. FIRE & EXPLOSION DATA****FLASH POINT:** >200F**EXTINGUISHING MEDIA:** Dry chemical, foam, carbon dioxide, water fog.**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.

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

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## V. HEALTH HAZARD DATA

Ingredient 210803

### EFFECTS OF OVEREXPOSURE

**INGESTION:** Ingestion causes severe gastric disturbances.

**INHALATION:** Can be severely irritating to the respiratory tract. This type of exposure is avoidable with adequate, local exhaust ventilation.

**SKIN CONTACT:** Skin contact with imidazole can result in severe irritation. This type of exposure is avoidable with local exhaust ventilation, adequate clothing, the use of barrier cream, gloves, and chemical splash goggles.

**EYE CONTACT:** Eye contact with imidazole can result in severe irritation. Swelling and corneal clouding may result. This type of exposure is avoidable with, local exhaust ventilation and the use of chemical splash goggles.

**CHRONIC/ACUTE EFFECTS OF EXPOSURE:** Specific information not available.

### EMERGENCY & FIRST AID PROCEDURES

**EYE CONTACT:** Wash eyes with running water for, at least, 15 minutes. Get immediate medical attention.

**SKIN CONTACT:** Wash affected areas with soap and water. Do not use solvents for cleaning. Remove contaminated clothing.

**INGESTION:** Do not induce vomiting. If conscious, dilute with water or milk. Get immediate medical attention.

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

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## 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.

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## 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 required.

**OTHER PROTECTIVE EQUIPMENT:** For operations where contact is possible, use chemical splash goggles, adequate clothing coverage, and gloves. A safety shower and eye wash facility must be located in reasonable proximity to work stations.

**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 absorption potential. Protective skin oils can be dissolved by solvents.