MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Epo Tek H20E, Part A **INGREDIENT CODE NUMBER:** Not applicable

EPOXY TECHNOLOGY 14 FORTUNE DRIVE BILLERICA, MA 01821

EMERGENCY PHONE:

(508) 667 3805

*HMIS: HEALTH- 2 FIRE-1 REACTIVITY- 1

*ANSI CODE: 2

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

DATE ISSUED: 11/20/96

* HMIS and ANSI CODE ratings are estimated by Epoxy Technology.

I. IDENTIFICATION & PHYSICAL DATA

PERCENT VOLATILE: NA

BOILING POINT: NA

VAPOR PRESSURE: NA

SOLUBILITY IN WATER: Low

VAPOR DENSITY: >Air

EVAPORATION RATE: <BUAC

APPEARANCE: Silver Paste

SPECIFIC GRAVITY: NA

ODOR: Mild

II. HAZARDOUS INGREDIENTS CAS# WT % TOXICITY DATA

Silver flake 7440-22-4 60 See Ingredient 310200 MSDS

Silver is the only Epo Tek H20E, Part A ingredient that requires MSDS reporting per Mass. RTK.

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.

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.

EFFECTS OF OVER EXPOSURE

INGESTION: May cause severe gastric disturbance. May be moderately toxic. **INHALATION:** Can cause respiratory irritation. This type of exposure is avoidable with the use of local exhaust ventilation.

SKIN CONTACT: Can cause dermatitis and irritation. This type of exposure can be avoided by the use of local exhaust ventilation, gloves, and chemical splash goggles. **EYE CONTACT:** Irritating to the eyes. this type of exposure can be avoided by the use of local exhaust ventilation and chemical splash goggles.

CHRONIC EFFECTS OF OVER EXPOSURE: Can cause dermatitis and sensitization. See MSDS for silver - Ingredient 310200.

EMERGENCY & FIRST AID PROCEDURES

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

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

INGESTION: If swallowed, get medical attention immediately.

INHALATION: Can be irritating to respiratory tract. This type of exposure is

avoidable with positive exhaust ventilation.

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: 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. Keep containers closed when not in use. Remove all contaminated clothing immediately and wash. Wash skin throughly 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 H20E, Part B
INGREDIENT CODE NUMBER: Not applicable

EPOXY TECHNOLOGY 14 FORTUNE DRIVE BILLERICA, MA 01821

EMERGENCY PHONE:

(508) 667 3805

*HMIS: HEALTH- 2 FIRE-1 REACTIVITY- 1

*ANSI CODE: 2

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

DATE ISSUED: 11/20/96

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

II. HAZARDOUS INGREDIENTS	CAS#	WT %	TOXICITY DATA
Silver flake	7440-22-4	80	See Ingredient 310200 MSDS
Acrylonitrile	107-13-1	0.02	ACGIH (TLV-Skin):TWA-2 ppm

Acrylonitrile and Silver are the only Epo Tek H20E, Part B ingredients that require MSDS reporting per Mass. RTK.

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.

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.

^{*} HMIS and ANSI CODE ratings are estimated by Epoxy Technology.

EFFECTS OF OVER EXPOSURE

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

INHALATION: Can cause respiratory irritation and sensitization. This type of contact can be avoided by the use of local, exhaust ventilation.

SKIN CONTACT: May cause dermatitis and sensitization. This type of exposure is avoidable by the use of local, exhaust ventilation, adequate clothing, gloves and chemical splash goggles.

EYE CONTACT: Irritating to the eyes. Can cause injury. This type of exposure is avoidable by the use of local, exhaust ventilation, adequate clothing, gloves and chemical splash goggles.

CHRONIC EFFECTS OF OVER EXPOSURE: May cause dermatitis and sensitization. Acrylonitrile is a human suspected carcinogen by NTD, IARC and OSHA.

EMERGENCY & FIRST AID PROCEDURES

EYE CONTACT: In event of eye contact, flush well with water and 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: Can be irritating to respiratory tract. Remove 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 a NIOSH approved respirator whenever high level exposure to vapors or mist is anticipated.

VENTILATION: Local exhaust ventilation recommended for exposure control.

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

EYE PROTECTION: This type of contact can be avoided through the use of Chemical splash goggles.

OTHER PROTECTIVE EQUIPMENT: For operations where contact can occur, use a face shield and impervious apron. A safety shower and eye must be located in close proximity to work and handling areas.

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.

Epo Tek H20E Series employs a curing agent which is known to contain acrylonitrile. According to OSHA, acrylonitrile is a suspected cancer causing agent. The average acrylonitrile content in these types of products generally range from 0.4 to 1.2 % or 4,000 to 12,000 ppm. Our proprietary vendor is supplying us with the lowest acrylonitrile containing products available in the US market today.

Furthermore, the convenient mix ratio (1:1) reduces the acrylonitrile content of < 200 pm to a value of < 100 ppm in the mix for safer handling. With good hygiene practices and appropriate engineering controls, potential exposure to acrylonitrile will be