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Material Safety Data Sheet

Product No. 16014 H20E Epo-Tek® Silver Conductive Epoxy Resin, Part A

Issue Date (10-16-02)

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Section 1: Product and Company Identification

Product Name: H20E Epo-Tek® Silver Conductive Epoxy Resin – Part A

Synonym: Silver Conductive Epoxy, H20E

Company Name

Ted Pella, Inc. and PELCO International, P.O. Box 492477, Redding, CA 96049-2477

Domestic Phone (800) 237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

International Phone (01) (530) 243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Chemtrec Emergency Number 1-800-424-9300 24 hrs a day.

Section 2: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m3	ACGIH TLV mg/m3	NTP	IARC	OSHA regulated
Silver Flake (7440-22-4)	50-75	0.01	0.1	No	No	No
Bisphenol F (28064-14-4)	30-55	ND	ND	No	No	No

Section 3: Hazard Identification

Emergency overview

Appearance: Silver paste.

Immediate effects: NIF

Potential health effects

Primary Routes of entry: NIF

Signs and Symptoms of Overexposure: NIF

Eyes: Irritating to the eyes. Can cause injury.

Skin: Can cause irritation and dermatitis.

Ingestion: Contains materials that may be moderately toxic.

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

Chronic Exposure: No specific information available. Can cause dermatitis and sensitization.

Chemical Listed As Carcinogen Or Potential Carcinogen: No

See Toxicological Information (Section 11)

Potential environmental effects

See Ecological Information (Section 12)

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact: In case of eye contact, flush with water for at least 15 minutes.

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

Inhalation: Remove person to fresh air. If discomfort persists, get medical attention.

Ingestion: Get medical attention immediately.

Note to physician

Treatment: NIF

Medical Conditions generally Aggravated by Exposure: NIF

Section 5: Fire Fighting Measures

Flash Point: >200°F

Flammable Limits: ND

Auto-ignition point: ND

Fire Extinguishing Media: Dry chemical, foam, carbon dioxide.

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.

Unusual Fire and Explosion Hazards: Avoid fumes liberated by heat.

Hazardous combustion products: Fumes produced when heated to decomposition may include carbon monoxide, carbon dioxide, and oxides of nitrogen.

DOT Class: NIF

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: Eliminate ignition sources. Use eye and skin protection. Place leaking containers in a well ventilated area. Absorb spillage with inert material for disposal.

Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage

Precautions to be Taken in Handling and Storage: Keep containers closed when not in use. Clean work habits should be practiced.

Storage temperature: Room temperature.

Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required: Locale exhaust recommended for exposure control.

Personal Protection Equipment

Respiratory protection: Wear an NIOSH approved respirator whenever high level exposure to vapors or mist anticipated.

Protective gloves: Impervious gloves, neoprene or equivalent. A combination of barrier cream and gloves is recommended.

Skin protection: Wear protective clothing and gloves.

Eye protection: Chemical splash goggles recommended.

Additional clothing and/or equipment: For other 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 container 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 and protective skin oil can be dissolved by solvents.

Exposure Guidelines

See Composition/Information on Ingredients (Section2)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Silver Paste

Odor (threshold): Mild

Specific Gravity (H₂O=1): 2.03 (See Technical Note)

Vapor Pressure (mm Hg): ND
Vapor Density (air=1): >Air
Percent Volatile by volume: ND

Evaporation Rate (butyl acetate=1): < BUAC
Boiling Point: ND
Freezing point / melting point: ND
pH: ND
Solubility in Water: Low.
Molecular Weight: ND

Section 10: Stability and Reactivity

Stability: Stable.

Conditions to Avoid: Excessive heat.

Materials to Avoid (Incompatibility): Strong oxidizing and reducing agents.

Hazardous Decomposition Products: Fumes produced when heated to decomposition may include carbon monoxide, carbon dioxide, and oxides of nitrogen.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Results of component toxicity test performed: Bisphenol F 100% : Acute oral effects (LD50): Rat: >10,000 mg /kg. Acute Dermal toxicity (LD50): Rabbit: 3,000 mg. Inhalation toxicity (LC50): LCLO = 1.7 mg.

Human experience: ND

This product **does not** contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information

Ecological Information: ND

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: None

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

US DOT Information: Not regulated

Section 15: Regulatory Information

United States Federal Regulations

MSDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.

SARA: Section 302: None

SARA Title III: Section 313: Silver flake.

RCRA: None

TSCA: All components are listed on the TSCA Inventory.

CERCLA: None

State Regulations

California Proposition 65: None

International Regulations

Canada WHMIS: ND

Europe EINECS Numbers: ND

Section 16: Other Information

Label Information: Toxic if Ingested. Irritant.

European Risk and Safety Phrases: ND

European symbols needed: ND

Canadian WHMIS Symbols: ND

HMIS Hazard Rating: Health: **2**; Fire: **1**; Reactivity: **0**

(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Abbreviations used in this document

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.

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