

MATERIAL SAFETY DATA SHEET

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SECTION 1 PRODUCT IDENTIFICATION

Product Name: **CHO-BOND 360**
General Chemical Description: Conductive Epoxy

SECTION 2 COMPOSITION INFORMATION

<u>Components & CAS. No.</u>	<u>Weight %</u>	<u>Exposure Limits</u>
Silver Coated Copper Copper 7440-50-8	>85	OSHA PEL TWA: 1 mg/m ³ ; ACGIH TLV TWA: 1 mg/m ³ .
Silver 7440-22-4	< 5	OSHA PEL TWA: 0.01 mg/m ³ ; ACGIH TLV TWA: 0.1 mg/m ³ .
Epoxy Resin 25068-38-6	<15	Not Established
o-Cresyl glycidyl ether 2210-79-9	< 5	Not Established

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview: Gray liquid with a mild odor. May cause severe irritation of eyes and skin as well as skin sensitization. May cause irritation of mucous membranes and respiratory tract. Chronic health hazards. Refer to other sections of the MSDS for more detailed information.

Routes of Entry: Inhalation, skin and eye contact.

HMIS Rating: Health: 3 Flammability: 1 Reactivity: 0

Acute Effects:

Eye: Contact may cause severe eye irritation.

Skin: Contact may cause severe skin irritation. Contact may cause sensitization, an allergic skin reaction, with symptoms including reddening, swelling, rash, scaling or blistering. Persons sensitized may exhibit these symptoms on subsequent contact with very small amounts of material or as a result of exposure to vapor.

Inhalation: This product contains o-cresyl glycidyl ether that upon inhalation may cause irritation of mucous membranes and respiratory tract and central nervous system depression.

Ingestion: Harmful if swallowed.

Chronic Effects: Prolonged or repeated contact with silver may result in argyria, a blue-gray discoloration of the eyes, skin or other body tissue. Once deposited, there is no known means by which the silver can be eliminated; the pigmentation is permanent.

o-Cresyl glycidyl ether has been reported to be mutagenic in in-vitro tests.

Special Condition Effects: Not applicable.

Aggravated Medical Conditions: No data is available for this product mixture.

SECTION 4 FIRST AID MEASURES:

Handle in accordance with good industrial hygiene and safety practices by avoiding unnecessary exposure and by removing material from the eyes, skin and clothing.

Eye: Immediately and gently flush the eyes with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention.

Skin: Remove contaminated clothing. Thoroughly wash skin with soap and water for at least 15 minutes. Get immediate medical attention if irritation persists or if symptoms of exposure develop (see SECTION 3 - HAZARDS IDENTIFICATION).

Inhalation: Remove to fresh air. Get immediate medical attention if irritation persists, breathing becomes difficult or if symptoms (as described in SECTION 3) develop.

Ingestion: Get medical attention. Never give anything by mouth to an unconscious, drowsy or convulsing person.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point: Not Established. >200°F

Autoignition Temp.: Not Established.

Flammable Limits: Not Established

Extinguishing Media: Carbon dioxide, water, water foam, dry chemical.

Fire Fighting Procedures: Use self-contained breathing apparatus and protective clothing. If large quantities of material are involved, evacuate area and fight fire from a safe distance.

Unusual Fire Hazards: Decomposition and combustion products may be toxic.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill response operations must be conducted in accordance with the provisions of 29 CFR 1910.120. Observe all recommendations identified in Sections 5 and 8.

Procedures: Limit access to spill area. Dike area to contain the release. Prevent release from entering sewers or waterways. Collect spill materials for reuse or salvage. Cover remaining spilled materials with inert material to absorb residue. Transfer liquids and absorbed materials to appropriate containers. Observe all applicable local, state and federal waste management regulations.

SECTION 7 HANDLING AND STORAGE

Handling: Do not allow contact with eyes. Do not allow skin contact. Avoid exposure by inhalation. Wash thoroughly after handling and before eating, drinking or smoking. Use with adequate ventilation.

Storage: Store in a cool dry location with adequate ventilation. Store in tightly closed container. Keep away from open flame and heat sources. Prevent contact and storage with incompatible materials.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

The recommendations described in this section are provided as general guidance for minimizing exposure. Because usage conditions vary with customer applications, specific exposure controls should be developed by a person knowledgeable in the intended usage condition and equipment.

Ventilation: Local exhaust ventilation should not be required at room temperature. However, when the product is processed at elevated temperatures, provide local exhaust ventilation to capture vapors, mists or fumes generated. Ventilation must be sufficient to maintain airborne levels of Section 2 ingredients below their exposure limits.

Eyes: Wear safety eye wear including safety glasses with side shields and chemical goggles.

Skin: Wear protective gloves and, if appropriate, chemical resistant clothing to prevent skin contact. Wash thoroughly after handling and before eating, drinking or smoking. Remove contaminated clothing or shoes as soon as practical and thoroughly clean before reuse.

Inhalation: No respiratory protection should be required. However, use NIOSH/MSHA approved respiratory protection if adequate exhaust ventilation is not provided or air sampling indicates exposure limits are exceeded. The type of respirator selected will depend on the condition of use. Respiratory protection programs must comply with 29 CFR 1910.134.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Gray liquid.
Specific Gravity: >1
Boiling Point : Not Established.
Vapor Pressure (25°C): Not Established.

Vapor Density: Not Established.
Solubility in Water: Insoluble.
Volatile Content (Wt%): Not Established.

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Will not occur.

Condition to Avoid: Avoid storage in open containers, exposure to open flame or exposure to incompatible substances.

Incompatibilities: Strong oxidizers, acids, bases, amines and mercaptans.

Hazardous Decomposition: Thermal or chemical decomposition may produce carbon monoxide, carbon dioxide, silver & copper compounds, and traces of incompletely burned carbon products.

SECTION 11 TOXICOLOGY INFORMATION

All available toxicology information has been provided in Section 3 of this document.

SECTION 12 ECOLOGICAL INFORMATION

No data on ecological effects is available.

SECTION 13 DISPOSAL INFORMATION

Since regulations vary, consult applicable regulations or authorities before disposing of this material.

SECTION 14 TRANSPORTATION INFORMATION

This product is not regulated as a hazardous material by the U.S. Department of Transportation.

SECTION 15 REGULATORY AND MISCELLANEOUS INFORMATION

TSCA: All components of this product are listed on the TSCA inventory.

SARA 313 Chemicals: Copper 7440-50-8 Silver 7440-22-4

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