

MATERIAL SAFETY DATA SHEET

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SECTION 1 PRODUCT IDENTIFICATION

Product Name: **CHO-BOND 592, Part B**
General Chemical Description: Conductive Hardener

SECTION 2 COMPOSITION INFORMATION

<u>Components & CAS. No.</u>	<u>Weight %</u>	<u>Exposure Limits</u>
Silver 7440-22-4	60 - 70	OSHA PEL TWA: 0.01 mg/m ³ ; ACGIH TLV TWA: 0.1 mg/m ³ .
Polyamide 68953-36-6	25 - 35	Not Established
Tetraethylenepentamine (TEPA) 112-57-2	3 - 6	Not Established

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview: Silver liquid with an amine odor. Flammable liquid. Keep away from heat, sparks and other sources of ignition. May cause chemical burns of eyes and skin. May cause respiratory sensitization. Chronic health hazards. Refer to other sections of the MSDS for more detailed information.

Routes of Entry: Inhalation, skin and eye contact.

Acute Effects:

Eye: Contact may cause chemical burns which may result in permanent eye damage.

Skin: Contact may cause severe chemical burns, blistering, and destruction of skin tissue. 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: Inhalation may cause chemical burns of the mucous membranes and respiratory tract. Contains materials which may cause sensitization, allergic respiratory reactions, with symptoms including chest tightness, wheezing, cough, shortness of breath or other signs of a non-specific asthmatic response. These symptoms may develop immediately or be delayed up to several hours after exposure.

Respiratory sensitization may develop as a result of a previous repeated overexposure or a single large dose. Once sensitized, certain individuals may exhibit signs of an asthmatic response even when exposures are well below TLV or PEL values.

Ingestion: Ingestion may be corrosive to mouth, throat and stomach.

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.

Repeated exposures to high vapor concentrations of TEPA may cause injury to the liver, kidney and respiratory tract. TEPA has exhibited evidence for weak mutagenic activity in standard in vitro test systems.

Special Condition Effects: Not Applicable.

Aggravated Medical Conditions: Preexisting respiratory conditions may be aggravated.

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 but 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: Immediately remove contaminated clothing. Immediately, continuously and gently wash skin for at least 15 minutes. Use soap and water if skin is intact; use only water if skin is not intact. Get immediate medical attention.

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. DO NOT induce vomiting. 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. Do not allow 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: Provide local exhaust ventilation to capture vapors or mist generated by the process. 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: Silver 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 and bases.

Hazardous Decomposition: Thermal or chemical decomposition may produce carbon monoxide, carbon dioxide, nitrogen oxide, silver 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

Proper Shipping Name: Polyamines, Liquid, Corrosive, N.O.S. (Tetraethylenepentamine)

Class: 8

UN Number: 2735

Packing Group: II

SECTION 15 REGULATORY AND MISCELLANEOUS INFORMATION

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

SARA 313 Chemicals: Silver 7440-22-4

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Prepared By: Chomerics Safety Department

Revision Information: Change in CAS# for Polyamide and ingredients ranges in Section 2. Text consistency changes made.

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