

MATERIAL SAFETY DATA SHEET

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SECTION 1 PRODUCT IDENTIFICATION

Product Name: **Cho-Bond 1035**
General Name: Conductive Sealant

SECTION 2 COMPOSITION INFORMATION

<u>Components & CAS. No.</u>	<u>Weight %</u>	<u>Exposure Limits</u>
Silver Coated Glass		
Glass 65997-17-3	< 70	OSHA PEL TWA: 15 mg/m ³ Total dust, 5 mg/m ³ Respirable fraction; ACGIH TLV TWA: 10 mg/m ³ .
Silver 7440-22-4	< 10	OSHA PEL TWA: 0.01 mg/m ³ ; ACGIH TLV TWA: 0.1 mg/m ³ .
Silicone Compound 70131-67-8	< 15	Not Established
Xylene 1330-20-7	< 10	OSHA PEL TWA: 100 ppm; ACGIH TLV TWA: 100 ppm, STEL: 150 ppm
Trimethylated Silica 68909-20-6	< 10	Supplier recommended TWA 5 mg/m ³ .
Methyltrimethoxysilane 1185-55-3	< 5	Supplier recommended TWA 50 ppm.
Ethyl benzene 100-41-4	< 2	OSHA PEL TWA: 100 ppm; ACGIH TLV TWA: 100 ppm, STEL: 125 ppm

Note: Methyl alcohol may form upon contact with water or humid air. OSHA PEL TWA: 200 ppm;
ACGIH TLV TWA (skin) 200 ppm; ACGIH STEL (skin) 250 ppm

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview: Gray paste with a mild odor. May cause moderate irritation of the eyes, mucous membranes and respiratory tract. Avoid skin contact; prolonged or repeated contact may cause blue-gray discoloration of the skin.

Routes of Entry: Inhalation, skin and eye contact.

Acute Effects

Eye: Contact may cause moderate eye irritation.

Skin: Prolonged or repeated contact may cause defatting or drying of the skin which may lead to irritation and /or dermatitis (rash).

Inhalation: Inhalation may cause moderate irritation of the mucous membranes and upper respiratory tract.

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.

This product contains ethyl benzene. Prolonged or repeated overexposure to ethyl benzene by inhalation may damage the liver, kidneys and bone marrow.

Special Condition Effects:

When heated to temperatures above 150°C, in the presence of air, this product may form traces of formaldehyde. Formaldehyde is a potential cancer hazard, sensitizer and irritant. When handling at elevated temperatures, provide ventilation to control vapor exposure within OSHA guidelines. Review the OSHA Formaldehyde regulation for details.

This product may generate methanol on contact with water or moisture on skin, eyes and mucous membranes causing an irritating or defatting effect. Overexposure to methanol by inhalation or skin absorption may cause effects including: respiratory irritation and central nervous system effects progressing from headache, dizziness, staggering gait and confusion to unconsciousness, coma and death. The severity of these effects will be dependent on the methanol concentration and length of exposure.

Aggravated Medical Conditions: No data 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 thoroughly flush the eyes with large amounts of water occasionally lifting the upper and lower eyelids. Get medical attention if irritation persists.
- Skin: Remove contaminated clothing. Remove material from skin and wash area thoroughly with soap and water. Get medical attention if irritation persists.
- 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 immediate medical attention. DO NOT induce vomiting, potential aspiration hazard. Never give anything by mouth to an unconscious, drowsy, or convulsing person.

SECTION 5 FIRE FIGHTING MEASURES

- Flash Point: Not Applicable.
Product has been tested per ASTM D4359-84 and determined to be a solid; therefore flash point testing does not apply to this product.
- Autoignition Temp: Not Established.
- Flammability Limits: Not Applicable.
- 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: Prevent contact with eyes. Avoid skin contact. Avoid exposure by inhalation. Avoid exposure to vapors at elevated temperatures. 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 heat, sparks, flames and other ignition 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. However, if the product is processed at elevated temperatures, provide local exhaust ventilation to capture vapors, mists or fumes 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: 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 conditions of use. Respiratory protection programs must comply with 29 CFR 1910.134.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Gray paste.
Specific Gravity: >1
Boiling Point: Not established.
Vapor Pressure (25°C): Not Established.
Vapor Density: Heavier than air.
Solubility in Water: Insoluble.
Volatile Content (Wt%): <12%

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: Will not occur.

Condition to Avoid: Avoid storage in open containers, exposure to heat/sparks/open flame or exposure to incompatible substances. Avoid exposure to moist air or water.

Incompatibilities: Oxidizers, acids, bases, water, and moist air.

Hazardous Decomposition: Thermal or chemical decomposition may produce carbon monoxide, carbon dioxide, silicon dioxide, titanium dioxide, silver compounds, formaldehyde 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: Silver 7440-22-4 Xylene 1330-20-7

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Revision Information: Product has been reclassified as a solid per ASTM test methods. References to product being a flammable liquid and flammable hazards and properties removed.

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