



SH5025  
SDS Version 2.0

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## SAFETY DATA SHEET

### Section 1: Identification of the substance / mixture and of the company / undertaking

**Product Identifier:** SH5025

**Other Means of Identification:** Stretchable Resistive Conductor

**Recommended use of the chemical and restrictions on use:** None identified

**Supplier:**

ACI Materials, Inc.  
44 Castilian Drive  
Goleta, CA 93117  
1 (805) 324-4486

**Emergency Phone Number:**

For emergency health, safety and environmental information, call 1 (805) 570-1071.

### Section 2: Hazards Identification

**Classification of the substance or mixture:**

Warning: Flammable Liquids  
Serious Eye Damage / Eye Irritation  
Toxic to aquatic life

Category 4

Category 2



**Symbols:**

**Signal word:** Danger

#### Hazard Statements:

H227 Combustible Liquid  
H319 Causes serious eye irritation.  
H401 Toxic to aquatic life.

#### Precautionary Statements:

P264 Wash face, hands, and any exposed skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves / protective clothing / eye protection / face protection.  
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337 + P313: If eye irritation persists: Get medical advice / attention.  
P403+235: Store in a well-ventilated place. Keep cool.  
P501 Dispose of contents/container to an approved waste disposal plant.

Describe any hazards not otherwise classified: None known.

#### Section 3: Composition / Information on ingredients

Chemical Name	CAS Number	Concentration, %
Silver	7440-22-4	50 – 70
Component "A"	Proprietary	5 – 15
Ethyl Phenyl Ketone	93-55-0	1 – 10
Graphite	7782-42-5	1 – 5

Remaining components are non-hazardous or present in amounts below reportable limits. Exact percentage values for components are proprietary in accordance with 29 CFR 1910.1200(i).

#### Section 4: First-aid measures

##### Description of First aid measures

**Inhalation:** Remove from exposure, lie down. Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

**Skin contact:** Remove all contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

**Eye contact:** Rinse immediately with plenty of water also under the eyelids, for at least 15 minutes. Get medical attention.

**Ingestion:** Clean mouth with water and drink afterwards plenty of water. Seek medical attention.

**Most important symptoms/effects, acute and delayed:** Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

**Indication of immediate medical attention and special treatment needed:** None known. Treat symptomatically.

#### **Section 5: Fire-fighting measures**

**Suitable extinguishing media:** Water spray. Dry chemical. Carbon Dioxide. Alcohol resistant foam.

**Unsuitable extinguishing media:** Water jet.

**Specific hazards arising from the mixture:** Potential combustible material. Keep product and empty container away from heat and sources of ignition.

**Unusual Fire and Explosion Hazards:** Carbon monoxide. Carbon dioxide.

**Specific protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

#### **Section 6: Accidental release measures**

**Personal precautions, protective equipment, and emergency procedures:** Ensure adequate ventilation. Wear appropriate personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges.

**Methods and materials for containment and cleaning up:** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Avoid release to the environment.

## Section 7: Handling and storage

**Precautions for safe handling:** Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Do not breathe vapors or spray mist. Keep away from open flames, hot surfaces and sources of ignition

**Conditions for safe storage, including any incompatibilities:** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from heat and sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place.

## Section 8: Exposure controls/personal protection

**Control Parameters:** Exposure limits are listed below.

### Components with workplace control parameters

Component	CAS No.	Value	Control Parameter	Basis
Silver (metallic)	7440-22-4	TWA	0.1 mg/m <sup>3</sup>	ACGIH Threshold Limit Values (TLV)
		TWA	0.01 mg/m <sup>3</sup>	OSHA Permissible Exposure Limit (PEL)
Graphite	7782-42-5	TWA	15 mppcf* mg/m <sup>3</sup>	OSHA Permissible Exposure Limit (PEL)
		TWA	2* mg/m <sup>3</sup>	ACGIH Threshold Limit Values (TLV)
		TWA	2.5* mg/m <sup>3</sup>	NIOSH Recommended Exposure Limit (REL)

**Appropriate engineering controls:** Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.



**Individual protection measures, such as personal protective equipment:**

**General Information:** Ensure eye wash station and safety shower are readily available.

**Individual protection measures:**

**Eye/face protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin protection:** Chemical-resistant gloves and long-sleeved clothing should be worn whenever this material is handled.

**Respiratory protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirators if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene measures:** Handle in accordance with good industrial hygiene and safety practice.

**Section 9: Physical and chemical properties**

**Appearance:** Silver paste.

**Odor:** Mild.

**Odor Threshold:** No data available

**pH:** No data available

**Melting point/freezing point:** No data available

**Initial boiling point and boiling range:** No data available.

**Flash point:** 87°C (188.6°F) (Lowest flash point value of any component.)

**Evaporation rate:** No data available

**Flammability (solid, gas):** No data available

**Upper/lower flammability or explosive limits:** No data available

**Vapor pressure:** No data available

**Vapor density:** No data available

**Relative density:** No data available

**Solubility:** No data available

**Partition coefficient: n-octanol/water:** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No data available

**Viscosity:** No data available.

**Other Information:** Amounts listed are typical and do not represent a specification.

#### Section 10: Stability and reactivity

**Reactivity:** None known, based on information available.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** None under normal processing.

**Conditions to avoid:** Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

**Incompatible materials:** Reducing agents. Strong oxidizing agents. Strong bases. Strong alkalis

**Hazardous decomposition products:** Carbon Dioxide, Carbon Monoxide. May also include isocyanates and small amounts of hydrogen cyanide.

#### Section 11: Toxicological information

**Information on the likely routes of exposure:** Product test data is not available. Toxicological information appears in this section when the constituent data is available.

##### Numerical measures of toxicity:

Component	LD50 Oral - Rat	LD50 Dermal - Rabbit	LC50 Inhalation
Component "A"	4,290 mg/kg	5,990 µL/kg	No data available
Ethyl Phenyl Ketone	4,490 µL/kg	4,490 µL/kg	No data available

##### Delayed and immediate effects as well as chronic effects from short and long-term exposure:

**Irritation:** No data available.

**Sensitization:** No data available.

##### **Carcinogenicity:**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### **Symptoms / effects, both acute and delayed**

Ethyl Phenyl Ketone – Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.

### **Section 12: Ecological Information**

**Ecotoxicity (aquatic and terrestrial, where available):** There is no data available for this product.

Ecotoxicological information appears in this section when such data is available for the components of the mixture.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Component "A"	Not listed	LC50 = 280 mg/L, 96h static (Poecilia reticulata)	EC50 = 1260 mg/L 16h	Not listed

#### **Persistence and Degradability**

Component "A" – Soluble in water. Persistence is unlikely based on information available.

Ethyl Phenyl Ketone – Insoluble in water. May persist based on information available.

**Bioaccumulation /Accumulation:** No information available.

#### **Mobility:**

Ethyl Phenyl Ketone – Is not likely mobile in the environment due to its low water solubility.

#### **Silver:**

Silver is very toxic for aquatic organisms.

### **Section 13: Disposal Considerations**

Dispose of container and unused contents in accordance with federal, state and local requirements.

#### Section 14: Transport Information

- (a) UN Number UN3077
- (b) UN proper shipping name Environmentally Hazardous Substance, Solid, N.O.S. (Contains Silver)
- (c) Transport hazard class 9
- (d) Packing group III

#### Section 15: Regulatory Information

##### Safety, health and environmental regulations / legislation specific for the product:

##### U.S. Federal and State regulations / legislation:

This SDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

##### U.S. Superfund Amendments and Reauthorization Act (SARA) – SARA Section 313.

This product contains the following toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and 40 CFR 372:

Silver

##### SARA 311/312 Hazard Categories:

Component "A" – Acute hazard

##### U.S. TSCA Inventory (TSCA):

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

##### California Proposition 65:

This product does contain chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Contains trace amounts of "Quartz (SiO<sub>2</sub>)", which is known to cause cancer.

#### Section 16: Other Information

Revision date: June 6, 2023.

**Nomenclature:**

ACGIH = American Conference of Governmental Industrial Hygienists  
BCF = Bioconcentration Factor  
C = Ceiling Value  
EC50 = Effective Concentration  
LC = Lethal concentration  
LD = Lethal dose  
ND = No Data  
NIOSH = The National Institute for Occupational Safety and Health  
NOEC = No Observed Effect Concentration  
Pow = Partition Coefficient  
REL = Recommended Exposure Limit  
STEL = Short Term Exposure Limit  
TWA = Time weighted average

**Other Information**

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**Disclaimer Notice**

This product is a complex mixture of liquids and solids. This SDS was prepared based upon the SDS of the raw materials used in the mixture.

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