



Health	2
Fire	1
Reactivity	0
Personal Protection	J

## Material Safety Data Sheet

### Silver MSDS

#### Section 1: Chemical Product and Company Identification

**Product Name:** Silver

**Catalog Codes:** SLS4222, SLS2005, SLS3427, SLS1210, SLS2632, SLS4054, SLS1837

**CAS#:** 7440-22-4

**RTECS:** VW3500000

**TSCA:** TSCA 8(b) inventory: Silver

**CI#:** Not applicable.

**Synonym:**

**Chemical Formula:** Ag

**Contact Information:**

**Sciencelab.com, Inc.**

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Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**  
1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Silver	7440-22-4	100

**Toxicological Data on Ingredients:** Silver: ORAL (LD50): Acute: 100 mg/kg [Mouse].

#### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Very hazardous in case of eye contact (irritant), of ingestion, of inhalation. Severe over-exposure can result in death. Inflammation of the eye is characterized by redness, watering, and itching.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated exposure to an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

#### Section 4: First Aid Measures

**Eye Contact:** Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

**Skin Contact:** No known effect on skin contact, rinse with water for a few minutes.

**Serious Skin Contact:** Not available.

**Inhalation:** Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

**Ingestion:**

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** May be combustible at high temperature.

**Auto-Ignition Temperature:** Not available.

**Flash Points:** Not available.

**Flammable Limits:** Not available.

**Products of Combustion:** Some metallic oxides.

**Fire Hazards in Presence of Various Substances:** Not available.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:**

Use a shovel to put the material into a convenient waste disposal container. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

**Precautions:**

Keep locked up Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Avoid contact with eyes In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label.

**Storage:**

Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Highly toxic or infectious materials should be stored in a separate locked safety storage cabinet or room.

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Splash goggles. Lab coat.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### Exposure Limits:

TWA: 0.01 (mg/m<sup>3</sup>) from OSHA (PEL) TWA: 0.01 (mg/m<sup>3</sup>) from OSHA NIOSH Australia: TWA: 0.1 (mg/m<sup>3</sup>) Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Solid metallic powder. Metal solid.)

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** 107.87 g/mole

**Color:** Not available.

**pH (1% soln/water):** Not applicable.

**Boiling Point:** 2212°C (4013.6°F)

**Melting Point:** 961°C (1761.8°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 10.4 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** Is not dispersed in cold water, hot water.

**Solubility:** Insoluble in cold water, hot water.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Not available.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** No.

### Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 100 mg/kg [Mouse].

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on Humans:** Very hazardous in case of ingestion, of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

### Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are as toxic as the original product.

**Special Remarks on the Products of Biodegradation:** Not available.

### Section 13: Disposal Considerations

**Waste Disposal:**

### Section 14: Transport Information

**DOT Classification:**

**Identification:**

**Special Provisions for Transport:** Not available.

### Section 15: Other Regulatory Information

**Federal and State Regulations:**

Rhode Island RTK hazardous substances: Silver Pennsylvania RTK: Silver Minnesota: Silver Massachusetts RTK: Silver New Jersey: Silver TSCA 8(b) inventory: Silver TSCA 8(a) PAIR: Silver TSCA 8(d) H and S data reporting: Silver SARA 313 toxic chemical notification and release reporting: Silver: 1% CERCLA: Hazardous substances.: Silver: 1000 lbs. (453.6 kg)

**Other Regulations:**

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

**Other Classifications:**

**WHMIS (Canada):**

CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).

**DSCL (EEC):** R41- Risk of serious damage to eyes.

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 1

**Reactivity:** 0

**Personal Protection:** j

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 1

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Not applicable. Lab coat. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

**Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

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