

# SAFETY DATA SHEET

## 1. IDENTIFICATION

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**Product Name** Silver Nitrate

**Code** 8015

**Distributor** Sherri Haab Designs  
2476 Shorewood Drive  
Saratoga Springs, UT 84045  
Tel: 801-592-6007  
Web: Sherrihaab.com

**Emergency Contact** ChemTel contract #MIS1438437  
1-800-255-3924

## 2. HAZARDS IDENTIFICATION

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**Health Rating** 2 - Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury.

**Flammability Rating** 0 - None

**Reactivity Rating** 0 - Normally stable, even under fire exposure conditions, and is not reactive with water.

**Contact Rating** 3 - Severe (Corrosive)

**Lab Protective Equip** Safety goggles and/or face shield. Latex gloves. Good ventilation.

**Storage Color Code** Yellow (Reactive)

### Classification of substance

Ox. Sol. 2 H272  
Acute Tox. 4 (Oral) H302  
Skin Corr. 1B H314  
Eye Dam. 1 H318  
Aquatic Acute 1 H400  
Aquatic Chronic 1 H410

### GHS label elements

Hazard pictograms



**Signal word** Danger

**Hazard statements** H272 - May intensify fire; oxidiser  
H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects

**Precautionary statements**

P210 - Keep away from heat, open flames, sparks. - No smoking  
P220 - Keep/Store away from combustible materials  
P221 - Take any precaution to avoid mixing with combustibles  
P260 - Do not breathe dust  
P264 - Wash exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P273 - Avoid release to the environment  
P280 - Wear eye protection, face protection, protective gloves, protective clothing  
P301+P312 - IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell  
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER/doctor/...  
P321 - Specific treatment (see Personal precautions on this label)  
P330 - If swallowed, rinse mouth  
P363 - Wash contaminated clothing before reuse  
P370+P378 - In case of fire: Use carbon dioxide (CO2), powder, alcohol-resistant foam for extinction  
P391 - Collect spillage  
P405 - Store locked up  
P501 - Dispose of contents/container to comply with local, state and federal regulations

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

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Ingredient name	% by weight	CAS number
Silver Nitrate	99.9%	7761-88-8

### 4. FIRST-AID MEASURES

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Description of necessary first aid measures

**Inhalation** Remove to fresh air. Crystals will sting the nasal passages. Get medical attention as soon as possible.

**Ingestion** If swallowed, do not induce vomiting. Give a quantity of salt water. The salt water and/or stomach acid will immediately form Silver Chloride, which is much less harmful. Get medical attention immediately if the quantity ingested is more than a gram.

**Skin Contact** Rub skin with table salt and a little water. Skin will probably turn dark when exposed to sunlight. Stain will vanish in a few weeks.

**Eye Contact** Immediately flush eyes with plenty of distilled water. The salt in tears will form white Silver Chloride immediately. This Silver Chloride may attach to the eye. Get medical attention immediately.

## 5. FIRE-FIGHTING MEASURES

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**Fire** Use an extinguishing agent suitable for surrounding fires.

**Explosion** Reacts with ammonia to form an explosive Fulminating Silver when dry.

## 6. ACCIDENTAL RELEASE MEASURES

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**Small Spill** Use appropriate tools to put the spilled solid in a convenient waste disposal container. Wear protective equipment. Clean up in a way that doesn't disperse the crystals into the air. If it is released into water, add table salt to immediately form the less harmful Silver Chloride.

**Special Note** Disposal of even small quantities of silver nitrate in waste systems connected to a septic tank is guaranteed to destroy the septic bacteria and require pumping out, flushing and seeding with fresh bacteria.

## 7. HANDLING AND STORAGE

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Store in a closed container. Silver Nitrate is not very light sensitive; it does absorb air moisture.

Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**Exposure Limits; Airborne**

OSHA Permissible Exposure Limit (PEL): 0.01 mg/m<sup>3</sup> (TWA) as silver metal dust  
ACGIH Threshold Limit Value (TLV): 0.01 mg /m<sup>3</sup> (TWA) as soluble silver compounds

**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. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill** Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Physical state</b>	Solid.
<b>Color</b>	White.
<b>Odor</b>	Odorless
<b>pH</b>	6
<b>Melting point</b>	212°C (414°F) - Forms a brown, viscous liquid.
<b>Boiling point</b>	444°C (831°F) Decomposes.
<b>Vapor Density (Air=1)</b>	4.4
<b>Vapor Pressure (mm Hg)</b>	Very low.
<b>Solubility</b>	Easily soluble in cold water, hot water. Soluble in diethyl ether. Very slightly soluble in acetone. Solubility in water: 122 g/100 ml water @ 0 deg. C. Solubility in water: 952 g /100 ml water @ 190 deg. C Solubility in alcohol: 1 g/30 ml alcohol; 1g/ 6.5 ml boiling alcohol. Solubility in acetone: 1 g/ 253 ml acetone

## 10. STABILITY AND REACTIVITY

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**Stability** Stable at room temperature in sealed containers.

**Hazardous Decomposition Products** Oxides of nitrogen.

**Incompatibilities** Ammonia. Forms explosive when dry.

**Conditions to Avoid** Do not allow solutions of Silver Nitrate and Ammonia to dry out.

## 11. TOXICOLOGICAL INFORMATION

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

**Toxicity to Animals** Acute oral toxicity (LD50): 50 mg/kg [Mouse].

**Chronic Effects on Humans** Causes damage to the following organs: lungs. May cause damage to the following organs: mucous membranes, skin, eyes.

**Other Toxic Effects on Humans** Very hazardous in case of skin contact (irritant), of ingestion. Hazardous in case of skin contact (permeator), of inhalation. Slightly hazardous in case of skin contact (corrosive).

**Special Remarks on Chronic Effects on Humans** May affect genetic material (mutagenic). May cause cancer based on animal test data. May cause adverse reproductive effects.

**Special Remarks on other Toxic Effects on Humans** Acute Potential Health Effects: Skin: Causes severe irritation and burns. It may cause dermatitis. It may be absorbed through the skin. Eyes: Causes severe irritation, corneal opacification, bleeding conjunctiva, burns of conjunctiva, argyria, blindness Inhalation: Causes irritaiton of the respiratory tract and mucous membranes with possible chemical burns. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting. Ingestion: Severe gastrointestinal tract irritation and burns, pain and burning in the mouth, violent abdominal pain, argyria - grayish/blackening of skin and mucous membranes, throat and abdomen, salivation, vomiting of black material, diarrhea, hypermotility, ulcerative gingivitis. May affect kidneys (lesions of kidneys, anuria, ), lungs

## 12. ECOLOGICAL INFORMATION

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**Toxicity** 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 less toxic than the product itself.

## 13. DISPOSAL CONSIDERATIONS

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**Waste Disposal** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## 14. TRANSPORT INFORMATION

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**Domestic Hazard Class** (Land, DOT)  
5.1

**Packing Group** II  
**UN/NA** USPS Publication 52, Silver Nitrate is their item number **UN1493**  
**ORM-D** USPS Can ship within United States only.  
**ORM-D Packaging instruction 5A** Consumer Commodity ORM-D AIR - the weight of the contents of the primary packing container cannot exceed 1 kg.  
**Outer Packaging** A strong outer packaging that is capable of firmly and securely holding the primary receptacle and cushioning material is required.  
**Mailability:**  
International Mail: Prohibited.  
Domestic Mail: Permitted via air transportation (i.e., Express Mail, Priority Mail, and First-Class Mail rates) or surface transportation (i.e., Standard Mail rates).

## 15. REGULATORY INFORMATION

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### Federal and State Regulations

Connecticut hazardous material survey.: Silver nitrate Illinois chemical safety act: Silver nitrate New York acutely hazardous substances: Silver nitrate Rhode Island RTK hazardous substances: Silver nitrate Pennsylvania RTK: Silver nitrate Massachusetts RTK: Silver nitrate Massachusetts spill list: Silver nitrate New Jersey: Silver nitrate New Jersey spill list: Silver nitrate Louisiana spill reporting: Silver nitrate California Director's List of Hazardous Substances: Silver nitrate TSCA 8(b) inventory: Silver nitrate

### 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 C: Oxidizing material. CLASS E: Corrosive solid.

#### **DSCL (EEC)**

R8- Contact with combustible material may cause fire. R20/22- Harmful by inhalation and if swallowed. R34- Causes burns. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. S24/25- Avoid contact with skin and eyes. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28- After contact with skin, wash immediately with plenty of water. S36/37/39- Wear suitable protective clothing, gloves and p. 6 eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S46- If swallowed, seek medical advice immediately and show this container or label. S60- This material and its container must be disposed of as hazardous waste. S61- Avoid release to the environment. Refer to special instructions/ Safety data sheets.

## 16. OTHER INFORMATION

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Revision

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