



# Safety Data Sheet

## SECTION 1: Identification

### 1.1. Product Identifier

**Trade Name or Designation:** Silver Nitrate, 0.500 Normal (N/2)

**Product Number:** S-0047

**Other Identifying Product Numbers:** S-0047-1, S-0047-3

### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

### 1.3. Details of the Supplier of the Safety Data Sheet

**Company:** Reagents Inc.

**Address:** 4746 Sweden Road  
Charlotte, NC 28224 USA

**Telephone:** 800-732-8484

### 1.4. Emergency Telephone Number (24 hr)

CHEMTREC (USA) 800-424-9300  
CHEMTREC (International) 1+ 703-527-3887

## Safety Data Sheet

### SECTION 2: Hazard(s) Identification

#### 2.1. Classification of the Substance or Mixture (in accordance with OSHA HCS 29 CFR 1910.1200)

For the full text of the Hazard and Precautionary Statements listed below, see Section 16.

| Hazard Class                                                         | Category   | Hazard Statement | Precautionary Statements                      |
|----------------------------------------------------------------------|------------|------------------|-----------------------------------------------|
| Acute Toxicity - Oral                                                | Category 3 | H301             | P264, P270, P301+P310, P321, P330, P405, P501 |
| Skin Corrosion / Irritation                                          | Category 2 | H315             | P264, P280, P302+P352, P321, P332+P313, P362  |
| Eye Damage / Irritation                                              | Category 1 | H318             | P280, P305+P351+P338, P310                    |
| Reproductive Toxicity                                                | Category 2 | H361             | P201, P202, P280, P308+P313, P405, P501       |
| Specific Target Organs/Systemic Toxicity Following Single Exposure   | Category 1 | H370             | P260, P264, P270, P307+P311, P321, P405, P501 |
| Specific Target Organs/Systemic Toxicity Following Repeated Exposure | Category 1 | H372             | P260, P264, P270, P314, P501                  |
| Hazardous to the Aquatic Environment (Acute)                         | Category 2 | H401             | P273, P501                                    |
| Hazardous to the Aquatic Environment (Chronic)                       | Category 2 | H401             | P273, P501                                    |

#### 2.2. GHS Label Elements

Pictograms:



Signal Word: **Danger**

Hazard Statements:

| Hazard Number | Hazard Statement                                                |
|---------------|-----------------------------------------------------------------|
| H301          | Toxic if swallowed.                                             |
| H315          | Causes skin irritation.                                         |
| H318          | Causes serious eye damage.                                      |
| H361          | Suspected of damaging fertility or the unborn child.            |
| H370          | Causes damage to organs.                                        |
| H372          | Causes damage to organs through prolonged or repeated exposure. |
| H401          | Toxic to aquatic life.                                          |

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### Precautionary Statements:

| Precautionary Number | Precautionary Statement                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| P201                 | Obtain special instructions before use.                                                                                          |
| P202                 | Do not handle until all safety precautions have been read and understood.                                                        |
| P260                 | Do not breathe dust, fumes or mist.                                                                                              |
| P264                 | Wash arms, hands and face thoroughly after handling.                                                                             |
| P270                 | Do not eat, drink or smoke when using this product.                                                                              |
| P273                 | Avoid release to the environment.                                                                                                |
| P280                 | Wear protective gloves and eye protection.                                                                                       |
| P301+P310            | IF SWALLOWED: Immediately call a POISON CENTER or physician.                                                                     |
| P302+P352            | IF ON SKIN: Wash with plenty of soap and water.                                                                                  |
| P305+P351+P338       | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P307+P311            | IF exposed: Call a POISON CENTER or physician.                                                                                   |
| P308+P313            | IF exposed or concerned: Get medical attention.                                                                                  |
| P310                 | Immediately call a POISON CENTER or physician.                                                                                   |
| P314                 | Get medical attention if you feel unwell.                                                                                        |
| P321                 | Specific treatment (Wash areas of contact with water).                                                                           |
| P330                 | Rinse mouth.                                                                                                                     |
| P332+P313            | If skin irritation occurs: Get medical attention.                                                                                |
| P362                 | Take off contaminated clothing and wash it before reuse.                                                                         |
| P405                 | Store locked up.                                                                                                                 |
| P501                 | Dispose of contents in accordance with local, state, federal and international regulations.                                      |

### 2.3. WHMIS Classification

WHMIS classification is not included based on the recommended option (Option 4) found in the Canada Gazette Part II, Vol. 149, No.3, page 458

### 2.4. Hazards not Otherwise Classified or Covered by GHS

Data not available.

## SECTION 3: Composition / Information on Ingredients

### 3.1. Components of Substance or Mixture

| Chemical Name  | Formula           | Molecular Weight | CAS Number | Weight% |
|----------------|-------------------|------------------|------------|---------|
| Water          | H <sub>2</sub> O  | 18.01 g/mol      | 7732-18-5  | 92.03%  |
| Silver Nitrate | AgNO <sub>3</sub> | 169.87 g/mol     | 7761-88-8  | 7.97%   |



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### SECTION 4: First-Aid Measures

#### 4.1. General First Aid Information

**Eye Contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

**Inhalation:** Not expected to require first aid. If necessary, remove to fresh air.

**Skin Contact:** IF ON SKIN: Wash with plenty of soap and water. May cause irritation and temporary discoloration of skin.

**Ingestion:** IF SWALLOWED: Immediately call a POISON CENTER or physician. Dilute immediately with water or milk. Induce vomiting. Call a physician.

#### 4.2. Most Important Symptoms and Effects, Acute and Delayed

Hazards increase as concentration increases. Most assume that solutions of Silver Nitrate do not reach hazardous concentrations until approximately 5%. Will temporarily discolor skin. Wash areas of contact with water. May be fatal if swallowed. Can cause sore throat, vomiting, and diarrhea. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation and temporary discoloration of skin. CHRONIC EFFECTS / CARCINOGENICITY: Chronic exposure can cause permanent bluish discoloration of the skin.

#### 4.3. Medical Attention or Special Treatment Needed

Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water).

### SECTION 5: Fire-Fighting Measures

#### 5.1. Extinguishing Media

Use water or water spray on small fires. Do not use dry chemicals or carbon dioxide.

#### 5.2. Specific Hazards Arising from the Substance or Mixture

Silver Nitrate reactions may cause fire. Silver Nitrate is a strong oxidizer.

#### 5.3. Special Protective Equipment for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

### SECTION 6: Accidental Release Measures

#### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

#### 6.2. Cleanup and Containment Methods and Materials

Do not flush to sewer. Containerize for disposal with a hazardous waste disposal facility. Dispose of in accordance with local regulations.

### SECTION 7: Handling and Storage

#### 7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage.

## Safety Data Sheet

### SECTION 8: Exposure Controls / Personal Protection

#### 8.1. Control Parameters

| Chemical Name              | Limit Type | Country | Exposure Limit                     | Information Source                                                |
|----------------------------|------------|---------|------------------------------------|-------------------------------------------------------------------|
| Silver Nitrate (7761-88-8) | TWA        | USA     | 0.01 mg/m <sup>3</sup> TWA (as Ag) | U.S. - OSHA - Final PELs - Time Weighted Averages (TWAs)          |
| Silver Nitrate (7761-88-8) | TLV-TWA    | USA     | 0.01 mg/m <sup>3</sup> TWA (as Ag) | ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA) |

#### 8.2. Exposure Controls

**Engineering Controls:** No specific controls are needed. Normal room ventilation is adequate.

**Respiratory Protection:** Normal room ventilation is adequate.

**Skin Protection:** Wear protective gloves and eye protection. Chemical resistant gloves.

**Eye Protection:** Wear protective gloves and eye protection. Safety glasses or goggles.

#### 8.3. Personal Protective Equipment

Wear protective gloves and eye protection. Normal room ventilation is adequate. Chemical resistant gloves. Safety glasses or goggles.

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### SECTION 9: Physical and Chemical Properties

#### 9.1. Basic Physical and Chemical Properties

**Appearance:** Colorless liquid

**Physical State:** Liquid

**Odor:** Data not available.

**Odor Threshold:** Data not available.

**pH:** Data not available.

**Melting/Freezing Point:** Approximately 0°C

**Initial Boiling Point /Range:** Approximately 100°C - Approximately 100°C

**Flash Point:** Data not available.

**Evaporation Rate:** Data not available.

**Flammability:** Data not available.

**Flammability/Explosive Limits:** Data not available.

**Vapor Pressure:** Data not available.

**Vapor Density:** Data not available.

**Relative Density:** 1.07

**Solubility:** Miscible

**Partition Coefficient (n-Octanol/Water):** Data not available.

**Auto-Ignition Temperature:** Data not available.

**Decomposition Temperature:** Data not available.

**Viscosity:** Data not available.

**Explosive Properties:** Data not available.

**Oxidizing Properties:** Data not available.

### SECTION 10: Stability and Reactivity

#### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

#### 10.2. Possibility of Hazardous Reactions

Data not available.

#### 10.3. Conditions to Avoid and Incompatible Materials

Ammonium Hydroxide, Organic Materials, Sulfides, Charcoal, Acetylene, Calcium Carbide, Ethanol, reducing agents, alkalis, Antimony salts,

#### 10.4. Hazardous Decomposition Products

Will not occur.



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### SECTION 11: Toxicological Information

#### 11.1. Information on Toxicological Effects

**Acute Toxicity - Oral Exposure:**

Toxic if swallowed. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF SWALLOWED: Immediately call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Rinse mouth. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Acute Toxicity - Dermal Exposure:**

Not applicable.

**Acute Toxicity - Inhalation Exposure:**

Not applicable.

**Acute Toxicity - Other Information:**

LD50, Oral, Rat: (Silver Nitrate) 1173 mg/kg. Toxic effects: behavioral - tetany; Lungs, throat or respiration - cyanosis; Gastrointestinal - hypermotility, diarrhea.

**Skin Corrosion and Irritation:**

Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

**Serious Eye Damage and Irritation:**

Causes serious eye damage. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

**Respiratory Sensitization:**

Not applicable.

**Skin Sensitization:**

Not applicable.

**Germ Cell Mutagenicity:**

Not applicable.

**Carcinogenicity:**

Not applicable.

**Reproductive Toxicity:**

Suspected of damaging fertility or the unborn child. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves and eye protection. IF exposed or concerned: Get medical attention. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Specific Target Organ Toxicity from Single Exposure:**

Causes damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed: Call a POISON CENTER or physician. Specific treatment (Wash areas of contact with water). Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.



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### **Specific Target Organ Toxicity from Repeated Exposure:**

Causes damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

### **Aspiration Hazard:**

Not applicable.

### **Additional Toxicology Information:**

Data not available.

## SECTION 12: Ecological Information

### **12.1. Ecotoxicity**

Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations. Toxic to aquatic life. Avoid release to the environment. Dispose of contents in accordance with local, state, federal and international regulations.

### **12.2. Persistence and Degradability**

Data not available.

### **12.3. Bioaccumulative Potential**

Data not available.

### **12.4. Mobility in Soil**

Data not available.

### **12.5. Other Adverse Ecological Effects**

Data not available.

## SECTION 13: Disposal Considerations

### **13.1. Waste Treatment Methods**

Data not available.





## Safety Data Sheet

### SECTION 14: Transportation Information

#### 14.1. Transportation by Land - Department of Transportation (DOT, United States of America)

Not regulated according to DOT Regulations.

#### 14.2. Transportation by Air - International Air Transport Association (IATA)

UN Number: N/A

Proper Shipping Name:

Hazard Class:

Packing Group:

Hazard Placard Labels:

### SECTION 15: Regulatory Information

#### 15.1. Occupational Safety and Health Administration (OSHA) Hazards

Not listed.

#### 15.2. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Not listed.

#### 15.3. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Silver Nitrate (CAS # 7761-88-8): 1 lb final RQ; 0.454 kg final RQ

#### 15.4. Superfund Amendments and Reauthorization Act (SARA) 313 Toxic Release Inventory (TRI)

Silver Nitrate (CAS # 7761-88-8): 1.0 % de minimis concentration (listed under Chemical Category N740)

Silver Nitrate (CAS # 7761-88-8): 1.0 % de minimis concentration (reportable only when in aqueous solution, Chemical Category N511)

#### 15.5. Massachusetts Right-to-Know Substance List

Silver Nitrate (CAS # 7761-88-8): Present



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### 15.6. Pennsylvania Right-to-Know Hazardous Substances

Water (CAS # 7732-18-5): Present

Silver Nitrate (CAS # 7761-88-8): Environmental hazard

Silver Nitrate (CAS # 7761-88-8): Present

### 15.7. New Jersey Worker and Community Right-to-Know Components

Silver Nitrate (CAS # 7761-88-8): corrosive

Silver Nitrate (CAS # 7761-88-8): sn 1672

Silver Nitrate (CAS # 7761-88-8): sn 3008

Silver Nitrate (CAS # 7761-88-8): SN 3008 TPQ: 500 lb (Category Code N740. Includes any unique chemical substance that contains the named metal as part of that chemical structure)

Silver Nitrate (CAS # 7761-88-8): sn 3722

Silver Nitrate (CAS # 7761-88-8): SN 3722 TPQ: 500 lb (water dissociable, Category Code N511)

### 15.8. California Proposition 65

Not listed.

### 15.9. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Water (CAS # 7732-18-5): Present

Silver Nitrate (CAS # 7761-88-8): Present

### 15.10. United States of America Toxic Substances Control Act (TSCA) List

Water (CAS # 7732-18-5): Present

Silver Nitrate (CAS # 7761-88-8): Present

### 15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Not listed.

## Safety Data Sheet

### SECTION 16: Other Information

#### 16.1. Full Text of Hazard Statements and Precautionary Statements

Toxic if swallowed. Causes skin irritation. Causes serious eye damage. Suspected of damaging fertility or the unborn child. Causes damage to organs. Causes damage to organs through prolonged or repeated exposure. Toxic to aquatic life.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. Wear protective gloves and eye protection.

IF SWALLOWED: Immediately call a POISON CENTER or physician. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed: Call a POISON CENTER or physician. Get medical attention if you feel unwell. Specific treatment (Wash areas of contact with water). Rinse mouth. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

Store locked up.

Dispose of contents in accordance with local, state, federal and international regulations.

#### 16.2. Miscellaneous Hazard Classes

**Canadian Carcinogenicity Hazard Class:** Not Applicable.

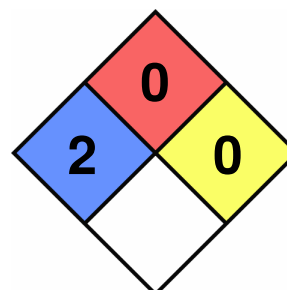
**Physical Hazards Not Otherwise Classified (PHNOC):** Not Applicable.

**Health Hazards Not Otherwise Classified (HHNOC):** Not Applicable.

**Biohazardous Infectious Materials Hazard Class:** Not Applicable.

#### 16.3. National Fire Protection Association (NFPA) Rating

**Health:** 2  
**Flammability:** 0  
**Reactivity:** 0  
**Special Hazard:**



#### 16.4. Document Revision

**Last Revision Date:** 6/23/2015



## Safety Data Sheet

### DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and REAGENTS, INC. assumes no legal responsibility or liability whatsoever resulting from its use.