

# Safety Data Sheet

## SILVER NITRATE, 2% in Acidulated Water pH 4.0

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Silver Nitrate, 2% in Acidulated Water pH 4.0

**Catalog Numbers:** A-111-2, A-118-3, SO-1237

**Company Identification:** Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

### Section 2 - Hazards Identification

#### GHS Classifications

H272-Oxidizing liquids: 3

H302-Acute toxicity, oral: 4

H312-Acute toxicity, dermal: 4

H315-Skin corrosion/irritation: 2

H319-Serious eye damage/eye irritation: 2A

H373-Specific target organ toxicity, repeated exposure: 2

#### Pictograms or Hazard symbols and Hazard statement(s):



Signal word: Warning

## Hazard Statements:

H272-May intensify fire; oxidizer  
H302-Harmful if swallowed  
H312-Harmful in contact with skin  
H315-Causes skin irritation  
H319-Causes serious eye irritation  
H373-May cause damage to organs through prolonged or repeated exposure (target organs: kidney and liver.)

## Precautionary Statements:

P210-Keep away from heat.  
P220-Keep/Store away from clothing/combustible materials.  
P221-Take any precaution to avoid mixing with combustibles.  
P260-Do not breathe dust/fume/gas/mist/vapours/spray.  
P264-Wash thoroughly after handling.  
P270-Do not eat, drink, or smoke when using this product.  
P280-Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P312-If swallowed: Call a Poison Center or doctor/physician if you feel unwell.  
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.  
P312-Call a Poison Center or doctor/physician if you feel unwell.  
P314-Get medical advice/attention if you feel unwell.  
P330-Rinse mouth.  
P332+P313-If skin irritation occurs: Get medical advice/attention.  
P337+P313-If eye irritation persists: Get medical advice/attention.  
P362-Take off contaminated clothing and wash before reuse.  
P363-Wash contaminated clothing before reuse.  
P370+P378-In case of fire: Use dry chemical, dry sand, water spray or alcohol-resistant foam to extinguish.  
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7761-88-8	Silver Nitrate	2 w/v
77-92-9	Citric Acid	<0.1 w/v
7732-18-5	Water	balance

#### Section 4 - First Aid Measures

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek immediate medical attention.

**Oral Exposure:** If swallowed, seek immediate medical advice. Do not induce vomiting. Drink water.

**Inhalation Exposure:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

#### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use dry chemical, dry sand, water spray, or alcohol-resistant foam.

**Hazardous Combustion Products:** Nitrogen oxides, silver oxides.

**Flash Point:** Not available

**Autoignition Temperature:** Not available

**Explosion Limits, Lower:** Not available

**Upper:** Not available

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

#### Section 6 - Accidental Release Measures

**Procedure(s) of Personal Precaution(s):**

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation.

**Methods for Cleaning up:** Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Do not release to the environment. Do not release to drains.

## Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Avoid ingestion and inhalation. **Store in a refrigerator.** Keep away from direct sunlight. Light sensitive. Keep in a tightly closed and non-metal container. Keep away from incompatible materials. Do not store near combustible materials.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Personal Protective Equipment

**Eyes:** 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:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

### Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA – Vacated PELs
Silver Nitrate CAS#7761-88-8	0.01 mg/m <sup>3</sup> TWA	0.01 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> IDLH	0.01 mg/m <sup>3</sup> TWA

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Clear

**Odor:** Odorless

**Vapor Pressure:** Not available

**Odor threshold:** Not available

**Vapor Density:** Not available

**pH:** 3.9-4.5

**Relative density:** Not available

**Melting point/freezing point:** Not available

**Solubility:** Soluble in water

**Boiling Point:** Not available

**Flash point:** Not available

**Evaporation Rate:** Not available

**Flammability (solid, gas):** Not available

**Partition coefficient: n-octanol/water:** Not available

**Auto-ignition temperature:** Not available

**Decomposition temperature:** Not available

**Viscosity:** Not available

**Specific Gravity/Density:** Not available

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. Light sensitive. Store in a refrigerator.

**Conditions to Avoid:** Incompatible materials, ignition sources, excess heat, freezing, combustible material, and exposure to light.

**Incompatibilities with Other Materials:** Strong oxidizing agents, strong reducing agents, combustible material, metals, amines, aluminum, alkalis, metals, and halogenated compounds.

**Hazardous Decomposition Products:** Nitrogen oxides, silver oxides.

## Section 11 - Toxicological Information

**CAS#7761-88-8 Silver Nitrate: RTECS#: VW4725000**

LD50 Oral: >2000 mg/kg (rat)

LD50 Dermal: >2000 mg/kg (rat)

LC50 Inhalation: >750 µg/m<sup>3</sup> 4h (rat)

**Carcinogenicity:** Silver Nitrate CAS#7761-88-8 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

**Epidemiology:** Not available

**Teratogenicity:** Not available

**Reproductive Effects:** Not available

**Developmental Effects:** Not available

**Neurotoxicity:** Not available

**Mutagenicity:** Not available

**Specific Organ Toxicity, Single Exposure:** Not available

**Specific Organ Toxicity, Repeated Exposure:** Kidney and liver.

**The toxicological properties of this material have not been thoroughly investigated.**

## Section 12 - Ecological Information

**Ecotoxicity:** Do not release to the environment. Do not release to drains. Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**CAS#7761-88-8 Silver Nitrate:**

LC50, freshwater fish: 0.029 mg/L 96h (leuciscus idus)

EC50, water flea: 0.0006 mg/L 48h

EC50, microtox: 0.038 mg/L 24h (photobacterium phosphoreum)

EC50, microtox: 0.395 mg/L 15min (photobacterium phosphoreum)

**Persistence and degradability:** Not available

**Bio-accumulative potential:** Not available

**Mobility:** Will likely be mobile in the environment due to its water solubility.

## Section 13 - Disposal Considerations

**DISPOSAL:** Dispose of in accordance with all federal, state, and local regulations.

## Section 14 - Transport Information

**DOT**

Non-regulated

## Section 15 - Regulatory Information

### Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information
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**SDS Creation Date:** 1-22-04

**Revision #1** 7-18-14 YM

**Revision #2** 12-14-18

**Revision #3** 3-3-22

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