



# SAFETY DATA SHEET

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## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Silver (I) Nitrate**  
PRODUCT NUMBER: 3236  
CAS NUMBER: 7761-88-8  
SYNONYMS: Nitric acid, silver (1+) salt

### MANUFACTURER:

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## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

**Danger**

### Hazard Statements

|      |   |
|------|---|
| H272 | May intensify fire; oxidizer.                         |
| H302 | Harmful if swallowed.                                 |
| H314 | Causes severe skin burns and eye damage.              |
| H318 | Causes serious eye damage.                            |
| H410 | Very toxic to aquatic life with long lasting effects. |

### Precautionary Phrases

|                |  |
|----------------|--|
| 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 or mist.   |
| P270           | Do not eat, drink, or smoke when using this product.   |
| P273           | Avoid released to the environment.   |
| P280           | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P301+P312+P330 | IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.  |
| P303+P361+P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.   |
| P304+P340+P310 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. |

## SECTION 2 HAZARDS IDENTIFICATION (Cont.)

|                |  |
|----------------|--|
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P370+P378      | In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.   |

### HMIS CLASSIFICATION:

Health: 3      Chronic: \*      Fire: 0      Reactivity Hazard: 2

### NFPA RATING:

Health: 3      Flammability: 0      Reactivity Hazard: 2      Special: OX

**EYE CONTACT:** Causes burns to the eyes.

**SKIN CONTACT:** Causes caustic burns to the skin. Contact with the skin can lead to formation of dark blotches (silver staining).

**INHALATION:** Causes burns to the nose, mucous membranes, and respiratory tract.

**INGESTION:** Harmful if swallowed. Ingestion may lead to dizziness, abdominal cramps, vomiting, bloody diarrhea. Weakness, and convulsions.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: AgNO<sub>3</sub>

Molecular Weight: 169.87

| CHEMICAL NAME  | CAS#      | %   |
|----------------|-----------|-----|
| Silver Nitrate | 7761-88-8 | 100 |

## SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

**SKIN EXPOSURE:** Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** Remove to fresh air and keep at rest. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases, seek immediate medical assistance.

**INGESTION:** Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

## SECTION 5 FIREFIGHTING MEASURES

**FLASH POINT:** Product is not flammable.

**AUTO IGNITION TEMPERATURE:** Not available

**EXPLOSION LIMITS:** Not available

**EXTINGUISHING MEDIUM:** Carbon dioxide, foam, or dry powder.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** Nitrogen oxides and silver oxides.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid the formation of dust. Avoid breathing vapors, mist, gas, or dust.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spillage from entering drains or allowing to be released into the environment.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Without creating dust, sweep up and keep in suitable, closed containers for disposal.

## SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Wear appropriate personal protective equipment. Use with adequate ventilation. Avoid contact with skin and eyes. Avoid formation of dust. Keep away from sources of ignition.

**CONDITIONS FOR SAFE STORAGE:** Store in cool, dry, and well-ventilated area. Light sensitive. Store away from heat and direct sunlight.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

### EXPOSURE CONTROLS:

| Component      | Exposure Limits        | Basis | Entity |
|----------------|------------------------|-------|--------|
| Silver nitrate | 0.01 mg/m <sup>3</sup> | TWA   | OSHA   |
|                | 0.01 mg/m <sup>3</sup> | TWA   | ACGIH  |

TWA: Time Weighted Average over 8 hours of work.

**EYE PROTECTION:** Wear chemical safety glasses or goggles and face shield.

**SKIN PROTECTION:** Wear nitrile or rubber gloves, apron, or lab coat.

**VENTILATION:** Provide local exhaust, preferably mechanical.

**RESPIRATOR:** Use an approved respirator.

**ADDITIONAL PROTECTION:** Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** White solid

**ODOR:** None

**MOLECULAR WEIGHT:** 169.87

**BOILING POINT:** 440° C (dec.)

**MELTING POINT:** 212° C

**SPECIFIC GRAVITY:** 4.350 gm/ml

**SOLUBILITY:** Soluble

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** Contact with strong reducing agents or organic matter. Some nitrates can explode if heated to high temperatures. Decomposes on exposure to light.

**INCOMPATIBILITY:** Reducing agents, organic matter, phosphorus, and sulfur.

**DECOMPOSITION PRODUCTS:** Nitrogen oxides and silver oxides.

## SECTION 11 TOXICOLOGICAL DATA

**ACUTE TOXICITY:** LD50 Oral – Rat – 1173 mg/kg.

**CARCINOGENIC EFFECTS:** No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

**MUTAGENIC EFFECTS:** Not available

**TETRATOGENIC EFFECTS:** Not available

**RTECS:** VW4725000

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

## SECTION 12 ECOLOGICAL DATA

**TOXICITY TO FISH:** Mortality NOEC – *Onorhynchus mykiss* (rainbow trout) – 0.108 mg/l – 96 h. Mortality NOEC – *Onorhynchus mykiss* (rainbow trout) – > 0.007 mg/l – 7.0 d. LC50 – *Leuciscus idus* (Golden orfe) – 0.029 mg/l – 96 h. LC50 – *Oncorhynchus mykiss* (rainbow trout) – 0.006 mg/l – 96.0 h.

**TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES:** EC50 – *Daphnia magna* (Water flea) – 0.0006 mg/l – 48 h.

## **SECTION 13 DISPOSAL CONSIDERATIONS**

Dispose of in according to local, state, and federal regulations.

## **SECTION 14 TRANSPORTATION DATA**

UN1493  
Silver Nitrate  
Class 5.1  
PG II

Marine Pollutant: No

## **SECTION 15 REGULATORY INFORMATION**

**TSCA:** Listed in the TSCA inventory  
**SARA 302/304:** Not listed  
**SARA 311/312:** Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard  
**SARA (TITLE 313):** Silver Nitrate  
**MASSACHUSETTS RIGHT TO KNOW:** Silver Nitrate  
**PENNSYLVANIA RIGHT TO KNOW:** Silver Nitrate  
**NEW JERSEY RIGHT TO KNOW:** Silver Nitrate  
**CALIFORNIA PROP. 65:** Not Listed

## **SECTION 16 OTHER INFORMATION**

**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

**DATE PREPARED:** 05/15  
**SDS DEPT.**