

# SAFETY DATA SHEET

Creation Date 03-February-2010

Revision Date 18-December-2025

Revision Number 7

This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272

## 1. Identification

**Product Name** Silver Nitrate Solution (0.1N/Certified)

**Cat No. :** SS72-1; SS72-4; SS72-20; SS72-500; T000721000

**Synonyms** Nitric acid, silver salt solution

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

#### Company

**Importer/Distributor**  
Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

**Manufacturer**  
Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

#### **Emergency Telephone Number**

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

## 2. Hazard(s) identification

### Classification

**WHMIS 2015 Classification** This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

|  |            |
|--|------------|
| <b>Skin Corrosion/Irritation</b>         | Category 2 |
| <b>Serious Eye Damage/Eye Irritation</b> | Category 2 |

### Label Elements

**Signal Word**  
Warning

**Hazard Statements**  
Causes skin irritation  
Causes serious eye irritation

**Precautionary Statements****Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

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 skin irritation occurs: Get medical advice/attention

If eye irritation persists: Get medical advice/attention

Take off contaminated clothing and wash it before reuse

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Hazards**

Harmful to aquatic life with long lasting effects

### 3. Composition/Information on Ingredients

| Component      | CAS-No    | Weight % |
|----------------|-----------|----------|
| Water          | 7732-18-5 | 98.3     |
| Silver nitrate | 7761-88-8 | 1.7      |

### 4. First-aid measures

|  |   |
|--|---|
| <b>General Advice</b>                  | If symptoms persist, call a physician.  |
| <b>Eye Contact</b>                     | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.   |
| <b>Skin Contact</b>                    | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. |
| <b>Inhalation</b>                      | Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.      |
| <b>Ingestion</b>                       | Clean mouth with water and drink afterwards plenty of water.  |
| <b>Most important symptoms/effects</b> | None reasonably foreseeable.  |
| <b>Notes to Physician</b>              | Treat symptomatically   |

### 5. Fire-fighting measures

|                                       |   |
|---------------------------------------|---|
| <b>Suitable Extinguishing Media</b>   | Substance is nonflammable; use agent most appropriate to extinguish surrounding fire. |
| <b>Unsuitable Extinguishing Media</b> | No information available  |
| <b>Flash Point</b>                    | Not applicable  |
| <b>Method -</b>                       | No information available  |

|   |                          |
|---|--------------------------|
| <b>Autoignition Temperature</b>         | No information available |
| <b>Explosion Limits</b>                 |                          |
| <b>Upper</b>                            | No data available        |
| <b>Lower</b>                            | No data available        |
| <b>Sensitivity to Mechanical Impact</b> | No information available |
| <b>Sensitivity to Static Discharge</b>  | No information available |

**Specific Hazards Arising from the Chemical**

Non-combustible. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition. None reasonably foreseeable.

**Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>).

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**

|               |                     |                    |                         |
|---------------|---------------------|--------------------|-------------------------|
| <b>Health</b> | <b>Flammability</b> | <b>Instability</b> | <b>Physical hazards</b> |
| 2             | 0                   | 0                  | N/A                     |

**6. Accidental release measures**

|                                  |   |
|----------------------------------|---|
| <b>Personal Precautions</b>      | Use personal protective equipment as required. Ensure adequate ventilation. |
| <b>Environmental Precautions</b> | Do not flush into surface water or sanitary sewer system.                   |

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

**7. Handling and storage**

|                 |   |
|-----------------|---|
| <b>Handling</b> | Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid ingestion and inhalation. Do not get in eyes, on skin, or on clothing. |
| <b>Storage.</b> | Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents. Alcohols.                           |

**8. Exposure controls / personal protection****Exposure Guidelines**

| Component      | Alberta                     | British Columbia  | Ontario TWAEV               | Quebec                      |
|----------------|-----------------------------|---|-----------------------------|-----------------------------|
| Silver nitrate | TWA: 0.01 mg/m <sup>3</sup> | TWA: 0.01 mg/m <sup>3</sup><br>STEL: 0.03 mg/m <sup>3</sup> | TWA: 0.01 mg/m <sup>3</sup> | TWA: 0.01 mg/m <sup>3</sup> |

| Component      | Manitoba | New Brunswick               | Newfoundland and Labrador   | Nova Scotia                 |
|----------------|----------|-----------------------------|-----------------------------|-----------------------------|
| Silver nitrate |          | TWA: 0.01 mg/m <sup>3</sup> | TWA: 0.01 mg/m <sup>3</sup> | TWA: 0.01 mg/m <sup>3</sup> |

| Component      | Nunavut   | Prince Edward Island        | Saskatchewan  | Yukon   |
|----------------|---|-----------------------------|---|---|
| Silver nitrate | TWA: 0.01 mg/m <sup>3</sup><br>STEL: 0.03 mg/m <sup>3</sup> | TWA: 0.01 mg/m <sup>3</sup> | TWA: 0.01 mg/m <sup>3</sup><br>STEL: 0.03 mg/m <sup>3</sup> | TWA: 0.01 mg/m <sup>3</sup><br>STEL: 0.03 mg/m <sup>3</sup> |

| Component                           | ACGIH TLV                   | OSHA PEL                              | NIOSH  |
|-------------------------------------|-----------------------------|---------------------------------------|--|
| Silver nitrate<br>7761-88-8 ( 1.7 ) | TWA: 0.01 mg/m <sup>3</sup> | (Vacated) TWA: 0.01 mg/m <sup>3</sup> | IDLH: 10 mg/m <sup>3</sup><br>REL = 0.01 mg/m <sup>3</sup> (TWA) |

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists  
OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.  
Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment**

**Eye Protection**

Goggles

**Hand Protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

| Glove material | Breakthrough time                 | Glove thickness | Glove comments         |
|----------------|-----------------------------------|-----------------|------------------------|
| Natural rubber | See manufacturers recommendations | -               | Splash protection only |
| Nitrile rubber |                                   |                 |                        |
| Neoprene       |                                   |                 |                        |
| PVC            |                                   |                 |                        |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Recommended Filter type:** Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**

Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

**9. Physical and chemical properties**

**Appearance**

**Physical State**

Liquid

**Color**

Colorless

**Odor**

Odorless

**Odor Threshold**

No information available

**Property**

**Values**

**Remarks**

**Method**

**Melting Point/Range**

No data available

**Softening Point**

No data available

**Boiling Point/Range**

No information available

**Flash Point**

Not applicable

**Method -** No information available

**Flammability (liquid)**

No data available

**Flammability (solid,gas)**

Not applicable

Liquid

**Explosion Limits**

No data available

**Autoignition Temperature**

No data available

|  |                          |             |
|--|--------------------------|-------------|
| <b>Decomposition Temperature</b>               | No data available        |             |
| <b>pH</b>                                      | No information available |             |
| <b>Viscosity</b>                               | No data available        |             |
| <b>Water Solubility</b>                        | Soluble                  |             |
| <b>Solubility in other solvents</b>            | No information available |             |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |             |
| <b>Component</b>                               | <b>log Pow</b>           |             |
| Silver nitrate                                 | 0.19                     |             |
| <b>Vapor Pressure</b>                          | 14 mmHg @ 20 °C          |             |
| <b>Density / Specific Gravity</b>              | 1.0 - 1.1                |             |
| <b>Bulk Density</b>                            | Not applicable           | Liquid      |
| <b>Vapor Density</b>                           | 0.7 (Air = 1.0)          | (Air = 1.0) |
| <b>Particle characteristics</b>                | Not applicable (liquid)  |             |
| <b>Other Information</b>                       |                          |             |
| <b>Evaporation Rate</b>                        | > 1 (Ether = 1.0)        |             |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactive Hazard</b>                  | None known, based on information available             |
| <b>Stability</b>                        | Light sensitive.                                       |
| <b>Conditions to Avoid</b>              | Incompatible products. Excess heat. Exposure to light. |
| <b>Incompatible Materials</b>           | Strong oxidizing agents, Alcohols                      |
| <b>Hazardous Decomposition Products</b> | Nitrogen oxides (NOx)                                  |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.               |
| <b>Hazardous Reactions</b>              | None under normal processing.                          |

## 11. Toxicological information

### Information on expected route of exposure

|                   |  |
|-------------------|--|
| <b>Inhalation</b> | Inhalation of vapors in high concentration may cause irritation of respiratory system. |
| <b>Ingestion</b>  | May be harmful if swallowed.   |
| <b>Eyes</b>       | Avoid contact with eyes. Irritating to eyes.   |
| <b>Skin</b>       | Avoid contact with skin. May cause irritation.   |

### Toxicology data for the components

| Component      | LD50 Oral            | LD50 Dermal               | LC50 Inhalation                          |
|----------------|----------------------|---------------------------|--|
| Water          | -                    | -                         | -  |
| Silver nitrate | > 2000 mg/kg ( Rat ) | LD50 > 2000 mg/kg ( Rat ) | LC50 > 750 µg/m <sup>3</sup> ( Rat ) 4 h |

|   |                          |
|---|--------------------------|
| <b>Toxicologically Synergistic Products</b>   | No information available |
| <b>(b) skin corrosion/irritation;</b>         | Category 2               |
| <b>(c) serious eye damage/irritation;</b>     | Category 2               |
| <b>(d) respiratory or skin sensitization;</b> |                          |

**Respiratory** No data available  
**Skin** No data available

**(e) germ cell mutagenicity;** No data available  
 Mutagenic effects have occurred in experimental animals

**(f) carcinogenicity;**  
 The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component      | CAS-No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|----------------|-----------|------------|------------|------------|------------|------------|
| Water          | 7732-18-5 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Silver nitrate | 7761-88-8 | Not listed | Not listed | Not listed | Not listed | Not listed |

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available  
**Target Organs** No information available.

**(j) aspiration hazard;** No data available

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.

**Symptoms / effects,both acute and delayed** No information available.

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

### Ecotoxicity

The product contains following substances which are hazardous for the environment. Contains a substance which is: Very toxic to aquatic organisms.

| Component      | Freshwater Algae | Freshwater Fish                      | Microtox   | Water Flea            |
|----------------|------------------|--------------------------------------|--|-----------------------|
| Silver nitrate | -                | Leuciscus idus: LC50: 0.029 mg/L/96h | Photobacterium phosphoreum: EC50: 0.038 mg/L/24h<br>Photobacterium phosphoreum: EC50: 0.395 mg/l/15min<br>Photobacterium phosphoreum: EC50: 0.44 mg/L/30 min as Ag++<br>Photobacterium phosphoreum: EC50: 0.86 mg/L/15 min as Ag++ | EC50: 0.0006 mg/L/48h |

**Persistence and Degradability** Soluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

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

| Component      | log Pow |
|----------------|---------|
| Silver nitrate | 0.19    |

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

**UN-No** UN3082  
**Proper Shipping Name** Environmentally hazardous substances, liquid, n.o.s.  
**Hazard Class** 9  
**Packing Group** III

#### TDG

**UN-No** UN3082  
**Proper Shipping Name** Environmentally hazardous substances, liquid, n.o.s.  
**Hazard Class** 9  
**Packing Group** III

#### IATA

**UN-No** UN3082  
**Proper Shipping Name** Environmentally hazardous substances, liquid, n.o.s.  
**Hazard Class** 9  
**Packing Group** III

#### IMDG/IMO

**UN-No** UN3082  
**Proper Shipping Name** Environmentally hazardous substances, liquid, n.o.s.  
**Hazard Class** 9  
**Packing Group** III

### 15. Regulatory information

#### International Inventories

| Component      | CAS-No    | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS    | ELINCS | NLP |
|----------------|-----------|-----|------|------|---|-----------|--------|-----|
| Water          | 7732-18-5 | X   | -    | X    | ACTIVE  | 231-791-2 | -      | -   |
| Silver nitrate | 7761-88-8 | X   | -    | X    | ACTIVE  | 231-853-9 | -      | -   |

| Component      | CAS-No    | IECSC | KECL     | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|----------------|-----------|-------|----------|------|------|------|------|-------|-------|
| Water          | 7732-18-5 | X     | KE-35400 | X    | -    | X    | X    | X     | X     |
| Silver nitrate | 7761-88-8 | X     | KE-31281 | X    | X    | X    | X    | X     | X     |

#### Legend:

X - Listed '-' - Not listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

#### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous

Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

| Component      | Canada - National Pollutant Release Inventory (NPRI) | Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances | Canada's Chemicals Management Plan (CEPA) |
|----------------|--|--|---|
| Silver nitrate | Part 1, Group A Substance                            |  |   |

**Legend** NPRI - National Pollutant Release Inventory

#### Other International Regulations

#### Authorisation/Restrictions according to EU REACH

| Component      | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------|---|---|---|
| Silver nitrate | -   | Use restricted. See entry 75. (see link for restriction details)              | -   |

#### REACH links

<https://echa.europa.eu/substances-restricted-under-reach>

#### Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

#### Safety, health and environmental regulations/legislation specific for the substance or mixture

| Component      | CAS-No    | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|----------------|-----------|----------|------------------------------|---------------------------|--|
| Water          | 7732-18-5 | Listed   | Not applicable               | Not applicable            | Not applicable                             |
| Silver nitrate | 7761-88-8 | Listed   | Not applicable               | Not applicable            | Not applicable                             |

| Component      | CAS-No    | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|----------------|-----------|---|--|----------------------------|------------------------------------|
| Water          | 7732-18-5 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |
| Silver nitrate | 7761-88-8 | Not applicable  | Not applicable   | Not applicable             | Not applicable                     |

## 16. Other information

#### Prepared By

Product stewardship (Regulatory Affairs)  
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18-December-2025

#### Print Date

18-December-2025

#### Revision Summary

This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals.

#### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information

relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**