

# Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations


Printing date: March 19, 2019

Revision: March 19, 2019

## 1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Silver Nitrate 0.5M
- **Product code:** S25874
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No further relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**  
AquaPhoenix Scientific, Inc.  
860 Gitts Run Road  
Hanover, PA 17331  
Phone: (717)632-1291  
Toll-Free: (866)632-1291  
info@aquaphoenixsci.com
- **Distributor:**  
Fisher Science Education  
6771 Silver Crest Road  
Nazareth, PA 18064  
(800) 955-1177
- **Emergency telephone number:**  
ChemTel Inc.  
(800)255-3924 (North America)  
+1 (813)248-0585 (International)

## 2 Hazards identification

- **Classification of the substance or mixture**  
Met. Corr.1 H290 May be corrosive to metals.  
Skin Corr. 1C H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.
- **Label elements**
- **GHS label elements**  
The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**  
  
GHS05
- **Signal word** Danger
- **Hazard statements**  
H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.
- **Precautionary statements**  
P234 Keep only in original container.  
P260 Do not breathe mist/vapours/spray.  
P264 Wash thoroughly after handling.

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P280 Wear protective gloves / eye protection.  
 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 victim to fresh air and keep at rest in a position 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.  
 P363 Wash contaminated clothing before reuse.  
 P390 Absorb spillage to prevent material damage.  
 P405 Store locked up.  
 P406 Store in corrosive resistant container /container with a corrosion resistant inner liner.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

## 3 Composition/information on ingredients

· **Chemical characterisation: Mixtures**

· **Components:**

7761-88-8	silver nitrate	 Ox. Sol. 2, H272  Met. Corr.1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318	8.494%
7732-18-5	Water		91.506%

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentages are being withheld as a trade secret.  
 For the wording of the listed Hazard Statements refer to section 16.

## 4 First aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

· **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

· **Most important symptoms and effects, both acute and delayed**

Gastric or intestinal disorders when ingested.

Caustic effect on skin and mucous membranes.

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Eye damage.

· **Hazards:**

Danger of gastric perforation.

Causes serious eye damage.

· **Indication of any immediate medical attention and special treatment needed**

Medical supervision for at least 48 hours.

If medical advice is needed, have product container or label at hand.

## 5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **For safety reasons unsuitable extinguishing agents:** No further relevant information available.

· **Special hazards arising from the substance or mixture**

Formation of toxic gases is possible during heating or in case of fire.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

· **Environmental precautions**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Methods and material for containment and cleaning up**

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).

Clean the affected area carefully; suitable cleaners are:

Water in flooding quantities.

Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Prevent formation of aerosols.

Use only in well ventilated areas.

Avoid splashes or spray in enclosed areas.

· **Information about fire - and explosion protection:** No special measures required.

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- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
  - Store only in the original receptacle.
  - Unsuitable material for receptacle: aluminium.
  - Unsuitable material for receptacle: steel.
  - Due to photo-sensitivity, store product in brown-glass receptacles.
- **Information about storage in one common storage facility:**
  - Store away from foodstuffs.
  - Store away from metals.
  - Do not store together with alkalis (caustic solutions).
  - Store away from oxidising agents.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Exposure controls**
- **General protective and hygienic measures:**
  - The usual precautionary measures are to be adhered to when handling chemicals.
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.
- **Engineering controls:** Provide adequate ventilation.
- **Respiratory protection:**
  - Not required under normal conditions of use.
  - For large spills, respiratory protection may be advisable.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

- **Material of gloves** Laminated film gloves.
- **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:**
  - No further relevant information available.

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## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · Appearance

· Form:	Liquid
· Colour:	Clear, colorless
· Odour:	Not determined.
· Odour threshold:	Not determined.

· pH-value:	Not determined.
· Melting point/freezing point:	Not determined.
· Initial boiling point and boiling range:	105-110 °C (221-230 °F)

· Flash point:	The product is not flammable.
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· Flammability (solid, gas):	Not applicable.
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· Auto/Self-ignition temperature:	Not determined.
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· Decomposition temperature:	Not determined.
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· Explosive properties:	Product does not present an explosion hazard.
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#### · Explosion limits

· Lower:	Not determined.
· Upper:	Not determined.

· Oxidising properties	Not determined.
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· Vapour pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
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· Density at 20 °C (68 °F):	1.34 g/cm <sup>3</sup> (11.18 lbs/gal)
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· Relative density:	Not determined.
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· Vapour density:	Not determined.
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· Evaporation rate:	Not determined.
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· Solubility in / Miscibility with water:	Fully miscible.
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· Partition coefficient: n-octanol/water:	Not determined.
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#### · Viscosity

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Other information	No further relevant information available.
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## 10 Stability and reactivity

· **Reactivity** The product is non-reactive under normal conditions of use, storage and transport.

· **Chemical stability** Stable under normal temperatures and pressures.

#### · Thermal decomposition / conditions to be avoided:

Keep away from heat and direct sunlight.

No decomposition if used and stored according to specifications.

#### · Possibility of hazardous reactions

Reacts with strong alkali.

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Reacts with certain metals.  
Corrosive action on metals.  
Toxic fumes may be released if heated above the decomposition point.  
Reacts with strong oxidising agents.

· **Conditions to avoid**

Direct sunlight.  
Excessive heat.

· **Incompatible materials**

Strong acids.  
Alkalis

· **Hazardous decomposition products**

Under fire conditions only:  
Nitrogen oxides  
Toxic metal oxide smoke

## 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:** None.

· **Primary irritant effect**

· **Skin corrosion/irritation:** Caustic effect on skin and mucous membranes.

· **Serious eye damage/irritation:** Causes serious eye damage.

· **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **Probable routes of exposure:**

Ingestion.  
Inhalation.  
Eye contact.  
Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):** Causes severe skin burns and eye damage.

· **Repeated dose toxicity:** No further relevant information available.

· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Reproductive toxicity:** Based on available data, the classification criteria are not met.

· **STOT-single exposure:** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

· **Aspiration hazard:** Based on available data, the classification criteria are not met.

## 12 Ecological information

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- **Toxicity**
- **Aquatic toxicity:** Toxic for aquatic organisms
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.  
Danger to drinking water if even extremely small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

## 14 Transport information

- |                                       |   |
|---------------------------------------|---|
| · <b>UN-Number</b>                    |   |
| · <b>DOT, ADR/RID/ADN, IMDG, IATA</b> | UN3264  |
| · <b>UN proper shipping name</b>      |   |
| · <b>DOT</b>                          | Corrosive liquid, acidic, inorganic, n.o.s. (Silver nitrate)                            |
| · <b>ADR/RID/ADN</b>                  | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SILVER NITRATE), ENVIRONMENTALLY HAZARDOUS |
| · <b>IMDG, IATA</b>                   | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SILVER NITRATE)                            |
| · <b>Transport hazard class(es)</b>   |   |

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· **DOT**



· **Class** 8  
· **Label** 8

· **ADR/RID/ADN**



· **Class** 8 (C9)  
· **Label** 8

· **IMDG, IATA**



· **Class** 8  
· **Label** 8

· **Packing group**

· **DOT, ADR/RID/ADN, IMDG, IATA** III

· **Environmental hazards:** Product contains environmentally hazardous substances: silver nitrate

· **Special precautions for user** Warning: Corrosive substances.  
· **Danger code (Kemler):** 80  
· **EMS Number:** F-A,S-B  
· **Segregation groups** Acids

· **Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR/RID/ADN**  
· **Transport category** 3  
· **Tunnel restriction code** E

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

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· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7761-88-8 | silver nitrate

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65 (California):**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency)**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer)**

None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL) (Substances not listed)**

All ingredients are listed.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bio-accumulable, Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health Administration

Ox. Sol. 2: Oxidizing solids – Category 2

Met. Corr. 1: Corrosive to metals – Category 1

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

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Website, US EPA Substance Registry Services ([ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do](http://ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do))

Website, Chemical Abstracts Registry, American Chemical Society ([www.cas.org](http://www.cas.org))

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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