

ALADDIN SCIENTIFIC CORPORATION  
14078 Meridian Parkway, Riverside, CA. 92518

# SAFETY DATA SHEET

Version: v1  
Revision Date: 2023-10-12  
Print Date: 2023-12-05

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

### 1.1 Product identifiers

Product name : Silver nitrate  
Product Number : S433969  
Brand : aladdin  
CAS-No. : 7761-88-8

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Manufacture of substances.

### 1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION  
Address : 14078 Meridian Parkway,  
Riverside, CA. 92518  
Telephone : +1 (833) 552-7181  
Fax : no data available

### 1.4 Emergency telephone number

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

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing solid (category 2), H272

Metal Corrosion (Category 1), H290

Acute toxicity, oral (category 5), H303

Skin corrosion/irritation (category 1B), H314

Serious eye damage/eye irritation (category 1), H318

Acute (short-term) aquatic hazard (category 1), H400

Long-term aquatic hazard (category 1), H410

### 2.2 GHS Label elements, including precautionary statements

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Pictogram	
Signal word	Danger
Hazard statement(s)	
H272	May intensify fire; oxidizer
H290	May be corrosive to metals
H303	May be harmful if swallowed
H314	Causes severe skin burns and eye damage
H410	Very toxic to aquatic life with long lasting effects
Precautionary statement(s)	
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P220	Keep away from clothing and other combustible materials.
P221	Take any precaution to avoid mixing with combustibles/...
P234	Keep only in original container.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands [and ...] thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P310	Immediately call a POISON CENTER or doctor/physician.
P312	Call a POISON CENTER or doctor/... if you feel unwell.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep 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.
P370+P378	In case of fire: Use ... to extinguish.
P405	Store locked up.
P406	Store in corrosive resistant/... container with a resistant inner liner.
P410	Protect from sunlight.
P501	Dispose of contents/container to an approved waste disposal plant.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

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Synonyms	: Nitric acid silver(I) salt
Formula	: AgNO <sub>3</sub>
Molecular weight	: 169.87
CAS No.	: 7761-88-8
EC-NO.	: 231-853-9

Component	Classification	Concentration
Silver nitrate	Ox. Sol. 2; Met. Corr. 1; Skin Corr. 1B; Eye Dam. 1; Aquatic Acute 1; Aquatic Chronic 1; H272, H290, H314, H318, H400, H410 Concentration limits: >= 1 %: Met. Corr. 1, H290; M-Factor - Aquatic Acute: 1.000 - Aquatic Chronic: 100	Reagent Plus, ≥99.0% (titration)

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Call in physician.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

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## 5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO<sub>x</sub>) Silver/silver oxides Container explosion may occur under fire conditions. Not combustible. Has a fire-promoting effect due to release of oxygen. Ambient fire may liberate hazardous vapours.

## 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

## 5.4 Further information

Use water spray to cool unopened containers.

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

Do not store near combustible materials. Light sensitive.

### 7.3 Specific end use(s)

no data available

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## SECTION 8: Exposure controls/personal protection

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## 8.1 Control parameters

## 8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

If safety requires, prevent further leakage or spillage. Do not let the product enter the sewer.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

a) Appearance	form: Powder or Crystals color: Colorless or White
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	212°C
f) Initial boiling point and boiling range	444°C
g) Flash point	no data available
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available

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j) Upper/lower flammability or explosive limits	no data available
k) Vapour pressure	no data available
l) Vapour density	no data available
m) Relative density	no data available
n) Water solubility	no data available
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

## 9.2 Other safety information

no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) . Decomposes on exposure to light.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Light.

### 10.5 Incompatible materials

Aluminum, Mild steel, Metals

### 10.6 Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity

Acute toxicity estimate Oral-1,173 mg/kg

(Calculation method)

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LD50 Oral-Rat-Male and Female-3,804 mg/kg

(OECD Test Guideline 401)

LC50 inhalation-rat-male and female-4 h-> 0.075 mg/l

(OECD Test Guideline 403)

LD50 transdermal-rat-male and female-> 2,000 mg/kg

(OECD Test Guideline 402)

Skin corrosion/irritation

Skin - reconstructed human epidermis (RhE) Result: Corrosive - 3 - 60 min (OECD Test Guideline 431) (Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation

Causes serious eye damage. Risk of permanent damage due to staining of the cornea.

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

Test Type: Micronucleus test Test system: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 487 Result: negative Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD

Test Guideline 476 Result: Positive results were obtained in some in vitro tests.

Carcinogenicity

no data available

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

Repeated exposure toxicity-rat-male and female-oral-52 days-no harmful effect observed->= 250 mg/kg

Registration of Toxic Effects of Chemical Substances: VW4725000

May cause silver poisoning (the skin and deep tissues are blue or blue-gray due to the deposition of insoluble leuquin caused by silver).

From the formation of methemoglobin, a certain concentration causes paleness. Usually onset after 2 to 4 hours or more

As far as we know, the chemical, physical and toxic properties have not been fully studied.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish semi-static test LC50 - Pimephales promelas (fathead minnow) - 0.0012 mg/l - 96 h (US-EPA)

Toxicity to daphnia and other aquatic invertebrates semi-static test LC50 - Daphnia magna (Water flea) - 0.00022 mg/l - 48 h Remarks: (ECHA)

Toxicity to fish(Chronic toxicity) flow-through test NOEC - Pimephales promelas (fathead minnow) - 0.351 mg/l - 32 d Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) semi-static test EC10 - Ceriodaphnia dubia (water flea) - 0.00248 mg/l - 7 d (US-EPA)

### 12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

Bioaccumulation Cyprinus carpio (Carp) - 41 d at 20 °C(Silver nitrate) Bioconcentration factor (BCF): 70

### 12.4 Mobility in soil

no data available

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

no data available

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## SECTION 13:

### 13.1 Disposal considerations

Product

recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

DOT (US)



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UN number: 1493	Packing group: II	Class: 5.1
Proper shipping name: Silver nitrate	Reportable Quantity(RQ): no data available	Poison Inhalation Hazard: no data available
Environmental Hazards: yes		
IMDG		
UN number: 1493	Packing group: II	EMS-No: no data available
Proper shipping name: Silver nitrate		
IATA		
UN number: 1493	Packing group: II	Class: 5.1
Proper shipping name: Silver nitrate		

## SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

## SECTION 16: Other information

<b>Prepared By</b>	Regulatory Affairs ALADDIN SCIENTIFIC CORPORATION Email: <a href="mailto:QualityAssurance@aladdinsci.com">QualityAssurance@aladdinsci.com</a>
<b>Creation Date</b>	12-Oct-2023
<b>Revision Date</b>	12-Oct-2023
<b>Print Date</b>	05-Dec-2023
<b>Revision Summary</b>	SDS sections updated v1

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