

SAFETY DATA SHEET

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

Product Name: Silver nitrate
CAS: 7761-88-8
Application: Laboratory chemicals, Manufacture of substances
Manufacturer: Sinopharm Chemical Reagent Co., Ltd. No. 52 Ning Bo Road, Shanghai 200002, China
Fax: 86-021-6321403
Emergency Telephone: 86-0532-83889090
Email: sj_zjzx@sinopharm.com
Website: <http://www.reagent.com.cn>
MSDS No: SCRC CSDS7761-88-8 Silver nitrate

2. Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Oxidizing solids (Category 2) Corrosive to metals (Category 1) Skin corrosion/irritation (Category 1) Serious eye damage/eye irritation (Category 1) Acute aquatic toxicity (Category 1) Chronic aquatic toxicity (Category 1)

Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word: Danger

Hazard statement(s): H272 May intensify fire; oxidizer. H290 May be corrosive to metals. 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. P221 Take any precaution to avoid mixing with combustibles. P260 Do not breathe dust or mist. P264 Wash skin thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

not applicable

not applicable

Other hazards

none

3. Composition/information on ingredients

Substance/Mixture: Substance

Component	CAS RN	Concentration
Silver nitrate	7761-88-8	≤100

4. First aid measures

Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Indication of any immediate medical attention and special treatment needed

no data available

5. Firefighting measures

Extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x), Silver/silver oxides Container explosion may occur under fire conditions.

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

7. Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Light sensitive. Storage class (TRGS 510): Oxidizing hazardous materials

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure controls/personal protection

Control parameters

Components with workplace control parameters

MAC: No data available

PC-STEL: No data available

TLV-TWA: No data available

PC-TWA: No data available

TLV-C: No data available

TLV-STEL: No data available

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

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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

Do not let product enter drains.

9. Physical and chemical properties

Information on basic physical and chemical properties

a) Appearance	Form: solid Colour: colourless
b) Odour	odourless
c) Odour Threshold	No data available
d) pH	5.4-6.4(100g/L, H ₂ O, 20°C)
e) Melting point/freezing point	212°C (dec.)
f) Initial boiling point and boiling range	444°C/760mmHg(dec.)
g) Flash point	NA
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available

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	ρ (20) 4.352g/mL
o) Partition coefficient: noctanol/water	No data available
p) Auto-ignition temperature	5
q) Decomposition temperature	No data available
r) Viscosity	NA
s) Explosive properties	No data available
t) Oxidizing properties	The substance or mixture is classified as oxidizing with the category 2.

Other safety information

No data available.

10. Stability and reactivity

Reactivity

No data available

Chemical stability

Decomposes on exposure to light. Stable under recommended storage conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Light.

Incompatible materials

Strong reducing agents, Alcohols, Ammonia, Magnesium, Strong bases

Hazardous decomposition products

Other decomposition products - No data available In the event of fire: see section 5

11. Toxicological information

Information on toxicological effects

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

Eyes - Rabbit Result: Severe eye irritation

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

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

RTECS: VW4725000 May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver)., Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

Toxicity

Toxicity to fish semi-static test LC50 - Pimephales promelas (fathead minnow) - 0.0012 mg/l - 96 h Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 0.00121 mg/l - 48 h Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 0.0099 mg/l - 96 h

Persistence and degradability

No data available

Bioaccumulative potential

Bioaccumulation Cyprinus carpio (Carp) - 41 d Bioconcentration factor (BCF): 70

Mobility in soil

No data available

Results of PBT and vPvB assessment

No data available

Other adverse effects

Very toxic to aquatic life

13. Disposal considerations

Waste treatment methods

Product Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport information

UN number

ADR/RID:1493 IMDG:1493 IATA:1493

UN proper shipping name

ADR/RID:SILVER NITRATE IMDG:SILVER NITRATE IATA:Silver nitrate

Transport hazard class(es)

ADR/RID:5.1 IMDG:5.1 IATA:5.1

Packaging group

ADR/RID:II IMDG:II IATA:II

Environmental hazards

ADR/RID:ADR/RID:yes IMDG:ADR/RID:yes IMDGMarinepollutant:yes IATA:ADR/RID:yes IMDGMarinepollutant:yes
IMDGMarinepollutant:yes IATA-DGR:no IATA-DGR:no IATA-DGR:no

Special precautions for user

no data available

15. Regulatory information

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

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

No data available

Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H272 May intensify fire; oxidizer. H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H410 Very toxic to aquatic life with long lasting effects.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sinopharm Chemical Reagent Co., Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.