

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

1.1 Product identifier

Product name	SILVER NITRATE
CAS-No.	7761-88-8
Product code	AR1246

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

Identified uses	Chemical for analysis and production.
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1.3 Details of the supplier of the safety data sheet

Company	RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number	(662) 613-7911-4
Fax number	(662) 613-7915

1.4 Emergency Telephone Number

Emergency phone	(662) 613-7911-4
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SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Oxidizing solids (Category 2), H272
 Corrosive to metals (Category 1), H290
 Skin corrosion (Category 1B), H314
 Acute aquatic toxicity (Category 1), H400
 Chronic aquatic toxicity (Category 1), H410
 For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P234	Keep only in original packaging.
P260	Do not breathe dusts.
P264	Wash hand thoroughly after handling.

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302 + P361 + P354	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P354 + P338	IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P316	Get emergency medical help immediately.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P391	Collect spillage.
P405	Store locked up.
P406	Store in corrosive resistant/ container with a resistant inner liner.

2.3 Other hazards None

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms -

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
7761-88-8	231-853-9	047-001-00-2	AgNO ₃	169.87 g/mol	>99

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	Concentration	Classification
Silver nitrate		
CAS-No 7761-88-8 EC-No 231-853-9 EC-Index-No 047-001-00-2	>99%	Oxidizing solids (Category 2), H272 Corrosive to metals (Category 1), H290 Skin corrosion (Category 1B), H314 Acute aquatic toxicity (Category 1), H400 Chronic aquatic toxicity (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of dust.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. After swallowing make victim drink water (two glasses at the most), call in physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11

4.3 Indication of any immediate medical attention and special treatment needed

Not Available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

In adaption to materials stored in the immediate neighborhood.

5.2 Special hazards arising from the substance or mixture

Non-combustible . Fire-promoting. Keep away from combustible materials. Ambient fire may liberate hazardous vapors. The following may develop in event of fire: silver oxides, nitrogen oxides.

5.3 Advice for firefighters

Do not stay in dangerous zone without self-contained breathing apparatus. Avoid contact with skin and wear suitable protective clothing.

5.4 Further information

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid generation of dusts; do not inhale dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protective equipment see **Section 8**.

6.2 Environmental precautions

Do not allow to enter drinking water and sewerage system.

6.3 Methods and materials for containment and cleaning up

Carefully sweep up, gather and remove. Avoid generation of dusts. Keep in suitable, closed containers for disposal. Clean up affected area.

6.4 Reference to other sections

For disposal see **Section 13**.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of good ventilation in the working area. Do not leave container open. Avoid contact with organic
Avoid spillage. Avoid rising dust.

7.2 Conditions for safe storage, including any incompatibilities

Keep tightly closed in a dry, cool and well-ventilated place. Keep out of direct sunlight and away from heat, sources of ignition, water, moisture and incompatible materials.

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

The product should only be used in ventilation hoods and fans.

Individual protection measures (Personal protective equipment, PPE)**Eye/face protection**

Goggles giving complete protection to eyes.

Skin protection

Chemical resistant apron / corrosive protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from nitrile rubber material.
- Splash contact wears gloves from nitrile rubber material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Required when dusts are generated filter P3 (EN 143) or use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental exposure controls

Prevent liquid entering sewers, basements and workpits.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

Appearance: Form	Crystals
: Color	Colorless
Odour	Odorless
Odour Threshold	Not Available
pH	~5.4-6.4 at 100 g/l H ₂ O at 20°C
Melting point/range	212°C
Boiling point/range	444 °C at 1013 hPa (Decomposition)
Flash point	Not Available
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	Not Available
upper	Not Available
Vapor Pressure	Not Available
Relative Vapor Density	Not Available
Density	4.352 g/cm ³ at 20°C
Bulk density:	~2350 kg/m ³
Water solubility	2160 g/l at 20°C
Partition coefficient (n-octanol/water)	Not Available
Auto-ignition temperature	Not Available
Decomposition Temperature	Not Available
Viscosity	Not Available
Explosive properties	Not Explosive
Oxidizing properties	May intensify fire; oxidizer The substance or mixture is classified as oxidizing with the category 2.

SECTION 10: Stability and reactivity**10.1 Reactivity**

Not Available

10.2 Chemical stability

Sensitivity to light. Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Risk of explosion in contact with ammonia, combustable substances, sodium hydroxide, organic substances alkali metals, acetic aldehyde, acetylene, acrylonitrile, ammonium hydroxide, azides, calcium carbide, fluoroacetylene, hydrazine, copper carbide, magnesium powder (with water), metal acetylides, nitromethane, phosphorus/impact, sulfur, titan/nitric acid, zinc/ammonia/potassium hydroxide.

The substance can react dangerously with substances which can be oxidized, strong reducing agents, arsenic powder, chlorosulfonic acid, chlorine trifluoride, heat, charcoal (shock or heat), phosphonium iodide, mercury acetylide.

10.4 Conditions to avoid

Strong heating (decomposition). Exposure to light.

10.5 Incompatible materials

Alkali metals.

10.6 Hazardous decomposition products

Silver oxides, nitrogen oxides (Hazardous decomposition products from under fire condition).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD₅₀ (oral, rat): 3804 mg/kg.

Acute oral toxicity

Symptoms: severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute inhalation toxicity

Symptoms: mucosal irritations, cough, shortness of breath.

Skin corrosion/irritation

Causes skin burns.

Serious eye damage/eye irritation

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

Respiratory or skin sensitization

Not Available

Germ cell mutagenicity

Ames test (Salmonella typhimurium) is negative.

Carcinogenicity

Not Available

Reproductive toxicity

Not Available

Teratogenicity

Not Available

Specific target organ toxicity (STOT) - single exposure

Not Available

Specific target organ toxicity (STOT) - repeated exposure

Not Available

Aspiration hazard

Not Available

Further information

After swallowing of large amounts: vomiting, gastric spasms, diarrhoea, dizziness, unconsciousness, death.
The product should be handled with the care usual when dealing with chemicals.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish	LC ₅₀ <i>Leuciscus idus</i> : 0.029 mg/l/96 h. LC ₅₀ <i>Oncorhynchus mykiss</i> (rainbow trout): 0.006 mg/l/96 h.
Toxicity to daphnia and other aquatic invertebrates	EC ₅₀ <i>Daphnia magna</i> : 0.002 mg/l/48 h.
Toxicity to algae	IC ₅₀ <i>Desmodesmus subspicatus</i> (green algae): 0.008 mg/l/8d.
Toxicity to bacteria	EC ₁₀ <i>Pseudomonas putida</i> : 0.006 mg/l/16 h.

12.2 Persistence and degradability

Biodegradability	Method for the determination of biodegradability is not applicable to inorganic substance.
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12.3 Bioaccumulative potential

Partition coefficient (n-octanol/water)	Not Available
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12.4 Mobility in soil

Not Available

12.5 Other adverse effects

Do not allow to enter waters, waste water or soil.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

SECTION 14: Transport information

Land Transport (ADR/RID)

UN Number	1493
UN proper shipping name	SILVER NITRATE
Transport hazard class(es)	5.1
Packing group	II
Environmental hazards	Yes
Special precautions for user	Yes

Sea transport (IMDG)

UN Number	1493
UN proper shipping name	SILVER NITRATE
Transport hazard class(es)	5.1
Packing group	II
Marine pollutant	Yes
Special precautions for user	Yes
EmS	F-A S-Q

Air transport (IATA)

UN Number	1493
UN proper shipping name	SILVER NITRATE
Transport hazard class(es)	5.1
Packing group	II
Environmental hazards	Yes
Special precautions for user	No

River transport (AND/ADNR)

(Not examined)

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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

Not Available

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 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.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Recommended restrictions

Take notice of labels and safety data sheets for the working.

Reference

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.

Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.
Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany,
Source: IFA for Databases on hazardous substances (GESTIS).

Further information

Contact to RCI Labscan Limited.

Revision Date

01/09/2021

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 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.