



Safety Data Sheet

Date of Issue: 29.06.2021

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1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : ECP Limited
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Emergency phone number : 0800 243 622 (24 hours)

Product	Silver Nitrate		Code	45101
CAS#	UN #	DG Class/es	Packing group #	
7761-88-8	1493	5.1	II	

Recommended use : Laboratory Investigations

2: Hazard's identification

2.1 GHS Classification

Oxidizing liquids or solids (Category B), H272
Acute toxicity, Oral (Category D), H302
Skin corrosion (Category B), H314
Serious eye damage (Category A), H318
Aquatic toxicity (Acute or Chronic) (Category A), H400

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H400 Very toxic to aquatic life.

Precautionary statement(s)

Prevention

P210 Keep away from heat.
P220 Keep/Store away from clothing/ combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
P260 Do not breathe dusts or mists.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

- P301 + P312 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
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.
P321 Specific treatment (see supplemental first aid instructions on this label).
P363 Wash contaminated clothing before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P391 Collect spillage.

Storage

- P405 Store locked up.

Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

- none

3: Composition/information on ingredients

3.1 Substances

Formula	:	AgNO ₃
Molecular weight	:	169.87 g/mol
CAS-No.	:	7761-88-8
EC-No.	:	231-853-9
Index-No.	:	047-001-00-2

Hazardous Ingredients

Component	Classification	Concentration
Silver Nitrate	5.1.1 B; 8.1 A; 6.1 E; 8.2 B; 8.3 A; 9.1 A; H272, H290, H303, H314, H318, H410 Concentration limits: >= 1 %: Met. Corr. 1, H290; M-Factor - Aquatic Acute: 1,000 - Aquatic Chronic: 100	<= 100 %

4: First aid measures

4.1 Description of first-aid measures

General advice

First aider needs to protect himself. 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

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.

5.2 Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x), 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

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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.

7: Handling and storage

7.1 Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition.

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)

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

8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Silver Nitrate	7761-88-8	WES-TWA	0.01 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

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

Body Protection

protective clothing

Respiratory protection

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains.

9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Molecular mass : 169.87 g/mol
Colour : White crystalline.

Odour	: odourless.
Odour threshold	: No data available
pH	: 6
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 212 °C
Freezing point	: No data available
Boiling point	: 440 °C
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20°C	: 4.4
Relative density	: No data available
Density	: 4.352 g/cm ³
Solubility	: Water : 219 g/100ml @ 200C
Log Pow	: 5
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: The substance or mixture is classified as oxidizing with the subcategory 2.
Explosive limits	: No data available

9.2. Other information

No additional information available

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.

no information available

10.5 Incompatible materials

Aluminium, Mild steel, Metals

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Nitrogen oxides (NO_x),
Silver/silver oxides

Other decomposition products - No data available

In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

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 Dermal - 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 sensitization

No data available

Germ cell mutagenicity

Micronucleus test
Human lymphocytes
Result: negative
In vitro mammalian cell gene mutation test
mouse lymphoma cells
Result: Positive results were obtained in some in vitro tests.

Carcinogenicity

IARC: No ingredient 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

Repeated dose toxicity - Rat - male and female - Oral - 52 Days - NOAEL (No observed adverse effect level) - \geq 250 mg/kg

RTECS: VW4725000

May cause argyria (a slate-grey 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 methaemoglobin 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

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)

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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

13: Disposal considerations

13.1 Waste treatment methods

Product

Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

14: Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1493	1493	1493
14.2	UN Proper Shipping name	SILVER NITRATE	SILVER NITRATE	Silver nitrate
14.3	Transport Hazard Class	5.1	5.1	5.1
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	Yes	Yes	No
14.6	Special precautions for user	None		
14.7	Incompatible materials	Aluminium, Mild steel, Metals		
	Hazchem Code	1Y		

15: Regulatory information

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

National regulatory information

HSNO Approval Code: HSR001345

HSNO Group Standard Approval: HSR002693 - Laboratory Chemicals and Reagent Kits (Oxidising [5.1.1]) Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16: Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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