



MATERIAL SAFETY DATA SHEET

Version Number:- 02

PRODUCT NAME: SILVER NITRATE 0.01 M SOLUTION

CAS Number: 7761-88-8

1. IDENTIFICATION:

Product Code : 97021

Company Name : ADVENT CHEMBIO PRIVATE LIMITED

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2. HAZARDS IDENTIFICATION:**Hazard classification****Physical hazards**

Corrosive to Metals : Category 1

Health hazards

Skin irritation : Category 2

Eye irritation : Category 2

Reproductive toxicity : Category 1B

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

Labels elements :

Hazard symbol

Signal word : Danger

Hazard statement

May be corrosive to metals
Causes skin irritation.
Causes serious eye irritation.
May damage the unborn child.
Very toxic to aquatic life with long lasting effects.

Precautionary statement**Prevention**

Obtain special instructions before use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.



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Response	Keep container tightly closed. Ground/ bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
	: IF exposed or concerned: Get medical advice/ attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF SWALLOWED: Immediately call a poison center or doctor/physician.
Storage	: Store in a dry & well-ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Disposal	: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification	: 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. Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Normality	Hazardous
Silver Nitrate 0.01 M Solution	7761-88-8	0.1 ± 0.002 N	Yes

4. FIRST AID MEASURES:

General information	: Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
Ingestion	: Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation	: Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms persist.
Skin contact	: Immediately flush with plenty of water for at least 15 minutes. Get medical attention.
Eye contact	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Most important symptoms/effects, acute and delayed	: The most important known symptoms and effects are described in the labelling.



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Indication of immediate
medical attention and
special treatment needed : No data available.

5. FIRE FIGHTING MEASURES:**General information****Suitable (and unsuitable) 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.

Specific hazards arising from the chemical : Nitrogen oxides (NO_x), Silver/silver oxides, Not combustible.
Ambient fire may liberate hazardous vapours.

Special protective equipment and precautions for firefighters

Special firefighting procedures : Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Special protective equipment for fire-fighters : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
Avoid breathing mists or vapors. Keep upwind. Keep unauthorized personnel away.

Methods and material for containment and cleaning up : Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures : Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

Environmental precautions : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE:

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities : Keep away from food, drink and animal feeding stuffs. Keep container tightly closed in a dry, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks.



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8. EXPOSURE CONTROLS PERSONAL PROTECTION:**Appropriate engineering****controls** : No data available**Individual protection measures, such as personal protective equipment****General information** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.**Eye/face protection** : Wear safety glasses with side shields (or goggles).**Hand protection** : Chemical resistant gloves.**Other** : Wear suitable protective clothing.**Respiratory protection** : Recommended Filter type: filter ABEK**Hygiene measures** : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.**9. PHYSICAL AND CHEMICAL PROPERTIES:****Appearance** : Clear, colorless liquid**Odor** : odorless**Solubility** : Miscible in water.**Formula** : AgNO_3 **Molecular Weight** : 169.87 g/mol**Density** : 1.01 g/cm³ at 20°C**pH** : 4 – 5 at 20°C**% Volatiles by volume @ 21C (70F)** : No data available**Boiling Point** : No data available**Melting Point** : No data available**Flash Point** : No data available**Vapor Density (Air=1)** : No data available**Vapor Pressure (mm Hg)** : No data available**Evaporation Rate (BuAc=1)** : No data available



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10. STABILITY AND REACTIVITY:

Reactivity	: No data available
Chemical stability	: Sensitivity to light. Material is stable under ambient conditions..
Possibility of hazardous reactions	: Violent reactions possible with: The generally known reaction partners of water.
Conditions to avoid	: Exposure to light.
Incompatible materials	: Aluminum, Mild steel Metals
Hazardous decomposition products	: In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION:

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Acute toxicity	Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Symptoms: Possible symptoms:, mucosal irritations Dermal: No data available
Repeated dose toxicity Product	: No data available.
Skin corrosion/irritation Product	: Mixture causes skin irritation.
Serious eye damage/eye irritation Product	: Mixture causes serious eye irritation.
Respiratory or skin sensitization Product	: No data available
Carcinogenicity Product	: No data available
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans	: No data available
US. National Toxicology Program (NTP) Report on Carcinogens	: No data available
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050	: No data available
Germ cell mutagenicity	: No data available.
Reproductive toxicity Product	: No data available
Specific target organ toxicity - single exposure Product	: No data available
Specific target organ toxicity - repeated	: No data available



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exposure Product

Aspiration hazard Product : No data available

Other effects : No data available

ComponentsSilver nitrate**Acute toxicity Oral:** No data available**Inhalation:** No data available**Dermal:** No data available**Skin corrosion/irritation :**

Skin - reconstructed human epidermis (RhE) Result: Causes severe burns. - 3 - 60 min

Serious eye damage/eye irritation:

Eyes - Rabbit

Result: Causes serious eye damage.

Remarks: Risk of permanent damage due to staining of the cornea.

Respiratory or skin sensitization: No data available**Germ cell mutagenicity:**

: Test Type: Micronucleus test

Test system: Human lymphocytes

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Result: Positive results were obtained in some in vitro tests.

Method: OECD Test Guideline 474

Species: Rat - male and female

Result: Positive results were obtained in some in vivo tests.

Carcinogenicity: No data available**Reproductive toxicity:** May damage the unborn child.**Specific target organ toxicity - single exposure:** No data available**Specific target organ toxicity - repeated exposure****Aspiration hazard:** No data available**12. ECOLOGICAL INFORMATION:**

Ecotoxicity

Acute hazards to the aquatic environment

Fish Product : No data available

Aquatic invertebrates
Product : No data available

Chronic hazards to the aquatic environment

Fish Product : No data available.

Aquatic invertebrates
Product : No data available.Toxicity to Aquatic Plants
Product: : No data available.



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Persistence and degradability**Biodegradation Product** : No data available**BOD/COD ratio Product** : No data available.**Bioaccumulative potential****Bioconcentration factor (BCF) Product** : No data available**Partition coefficient n-octanol / water (log Kow) Product** : No data available.**Mobility in soil** : No data available**Other adverse effects** : No data available**Components****Silver nitrate****Toxicity to fish:**

semi-static test LC50 - Pimephales promelas (fathead minnow) - 0,0012 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates:

semi-static test EC50 - Daphnia magna (Water flea) - 0,00022 mg/l - 48 h

Toxicity to algae:

static test ErC50 - Raphidocelis subcapitata (freshwater green alga) - 0,00252 mg/l - 72 h

static test EC10 - Raphidocelis subcapitata (freshwater green alga) - 0,00046 mg/l - 72 h

Toxicity to fish(Chronic toxicity):

flow-through test NOEC - Pimephales promelas (fathead minnow) - 0,000351 mg/l - 34 d

Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity):

semi-static test EC10 - Daphnia magna (Water flea) - 0,0027 mg/l - 21 d

13. DISPOSAL CONSIDERATION:**Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.**Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.**14. TRANSPORT INFORMATION:**

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
ADR/RID	UN 1760	Silver Nitrate 0.01 M Solution	8	III	No
IMDG	UN 1760	Silver Nitrate 0.01 M Solution	8	III	No
IATA	UN 1760	Silver Nitrate 0.01 M Solution	8	III	No

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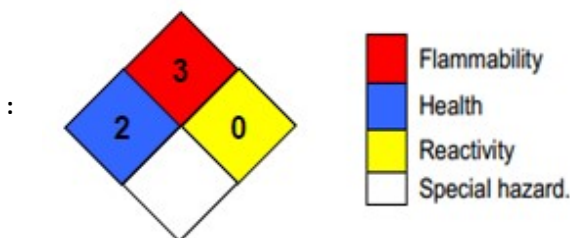
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15. REGULATORY INFORMATION:

This safety datasheet 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.

16. OTHER INFORMATION:

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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