

## MATERIAL SAFETY DATA SHEET

PRODUCT NAME: SILVER NITRATE

CAS Number: 7761-88-8

**1. IDENTIFICATION:**

**Product Code** : 91621, 90231, 90536, 90790

**Company Name** : ADVENT CHEMBIO PRIVATE LIMITED

**Address** : W-279, MIDC, TTC INDUSTRIAL AREA, THANE-BELAPUR ROAD, RABALE,  
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**Company Phone Number** : 022-27690837

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

**Oxidizing solids** : Category 2

**Health hazards**

**Acute toxicity, Oral** : Category 4

**Skin corrosion/irritation** : Category 1

**Serious eye damage /Eye irritation** : Category 1

**Specific target organ toxicity - single exposure** : Category 3

**Specific target organ toxicity -repeated exposure** : Category 1

**Environmental hazards** :

**Acute hazards to the aquatic environment** : Category 1

**Chronic hazards to the aquatic environment** : Category 1

**Labels elements** :

**Hazard symbol** : 

**Signal word** : Danger

**Hazard statement** : Harmful if swallowed.  
Causes severe skin burns and eye damage.  
: Causes damage to organs through prolonged or repeated exposure.  
May intensify fire; oxidizer.  
Very toxic to aquatic life with long lasting effects.



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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.  
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.
- Response** : 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 at ambient temperature in a dry and well ventilated place. Keep container tightly closed.
- 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** : None.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Percent	Hazardous
Silver Nitrate	7761-88-8	99- 100%	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.  
Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.
- Inhalation** : Get medical attention if symptoms persist.
- Skin contact** : Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
- 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** : Irritating to eyes, respiratory system and skin.

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Indication of immediate medical attention and special treatment needed : Symptoms may be delayed. Treat symptomatically.

**5. FIRE FIGHTING MEASURES:**

General information : Oxidizing material. In case of fire and/or explosion do not breathe fumes.

**Suitable (and unsuitable) extinguishing media**

Suitable extinguishing media : Water Spray or Fog.

Unsuitable extinguishing media : Dry chemical, CO<sub>2</sub>, halon.

Specific hazards arising from the chemical : Contact with metals may evolve flammable hydrogen gas. Fire may produce irritating, corrosive and/or toxic gases.

**Special protective equipment and precautions for firefighters**

Special firefighting procedures : Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. 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. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up : Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. 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, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. 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



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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.  
Store at ambient temperature. store in well ventilated place.  
: Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

**8. EXPOSURE CONTROLS PERSONAL PROTECTION:****Control parameters****Occupational exposure limits**

Chemical identity	Type	Exposure Limit values	Source
Silver Nitrate	TWA	0.01 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values (2011)
	REL	0.01 mg/m <sup>3</sup>	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	0.01 mg/m <sup>3</sup>	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	0.01 mg/m <sup>3</sup>	US. OSHA Table Z-1-A (29 CFR 1910.1000)(1989)

**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. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. 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**

: In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.

**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.

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**9. PHYSICAL AND CHEMICAL PROPERTIES:**

<b>Appearance</b>	:	Colourless crystals.
<b>Odor</b>	:	Odorless
<b>Solubility</b>	:	Soluble in water.
<b>Formula</b>	:	AgNO <sub>3</sub>
<b>Molecular Weight</b>	:	169.87 g/mol
<b>Specific Gravity</b>	:	4.35 (20 °C)
<b>pH</b>	:	No data available.
<b>% Volatiles by volume @ 21C (70F)</b>	:	No data available
<b>Boiling Point</b>	:	440°C
<b>Melting Point</b>	:	212°C
<b>Flash Point</b>	:	Not applicable.
<b>Vapor Density (Air=1)</b>	:	No data available.
<b>Vapor Pressure (mm Hg)</b>	:	Estimated < 0.01 kPa (25 °C)
<b>Evaporation Rate (BuAc=1)</b>	:	No data available

**10. STABILITY AND REACTIVITY:**

<b>Reactivity</b>	:	No dangerous reaction known under conditions of normal use.
<b>Chemical stability</b>	:	The product is chemically stable under standard ambient conditions (room temperature) Decomposes on exposure to light.
<b>Possibility of hazardous reactions</b>	:	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	:	Heat, sparks, Sunlight.
<b>Incompatible materials</b>	:	Organic compounds. Sulfur oxides. Alkalies. Aluminum, mild steel metals.
<b>Hazardous decomposition products</b>	:	Nitrogen Oxides May decompose upon heating to produce corrosive and/or toxic fumes.

**11. TOXICOLOGICAL INFORMATION:****Information on likely routes of exposure**

<b>Ingestion</b>	:	Harmful if swallowed.
<b>Inhalation</b>	:	May be harmful if inhaled. May cause drowsiness or dizziness.

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<b>Skin contact</b>	:	Causes mild skin irritation
<b>Eye contact</b>	:	Causes serious eye irritation.
<b>Information on toxicological effects</b>		
<b>Acute toxicity (list all possible routes of exposure)</b>		
<b>Oral Product</b>	:	Rat -male and female - 3.804 mg/kg
<b>Dermal Product</b>	:	Rat - male and female - > 2.000 mg/kg
<b>Inhalation Product</b>	:	Rat - male and female - 4 h - > 0,075 mg/l - aerosol
<b>Repeated dose toxicity Product</b>	:	No data available.
<b>Skin corrosion/irritation Product</b>	:	Causes severe skin burns.
<b>Serious eye damage/eye irritation Product</b>	:	Causes serious eye damage.
<b>Respiratory or skin sensitization Product</b>	:	Not a skin sensitizer.
<b>Carcinogenicity Product</b>	:	This substance has no evidence of carcinogenic properties
<b>IARC Monographs on the Evaluation of Carcinogenic Risks to Humans</b>	:	No carcinogenic components identified.
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>	:	No carcinogenic components identified.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050 Germ cell mutagenicity</b>	:	No carcinogenic components identified.
<b>In vitro Product</b>	:	No data available.
<b>Reproductive toxicity Product</b>	:	No components toxic to reproduction .
<b>Specific target organ toxicity - single exposure Product</b>	:	Respiratory tract irritation.
<b>Specific target organ toxicity - repeated exposure Product</b>	:	Liver, Blood, Kidney
<b>Aspiration hazard Product</b>	:	Not classified.
<b>Other effects</b>	:	None known.

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**12. ECOLOGICAL INFORMATION:****Ecotoxicity****Acute hazards to the aquatic environment**

Fish Product : No data available.

Specified substance(s):  
SILVER NITRATE : LC 50 (Bluegill (Lepomis macrochirus), 96 h): 0.009 - 0.02 mg/l Mortality.Aquatic invertebrates  
Product : No data available.Specified substance(s)  
SILVER NITRATE : LC 50 (Water flea (Daphnia magna), 48 h): 0.000987 - 0.001752 mg/l Mortality.**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.Specified substance(s):  
SILVER NITRATE : EC 50 (Green algae (Scenedesmus dimorphus), 48 h): 0.003 - 0.015 mg/l, Intoxication**Persistence and degradability**

Biodegradation Product : The product is not expected to be biodegradable.

BOD/COD ratio Product : No data available.

**Bioaccumulative potential**Bioconcentration factor  
(BCF) Product : No data available on bioaccumulation.Partition coefficient n-  
octanol / water (log Kow)  
Product : No data available.

Mobility in soil : The product is water soluble and may spread in water systems.

Other adverse effects : Very toxic to aquatic life with long lasting effects.

**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.

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## 14. TRANSPORT INFORMATION:

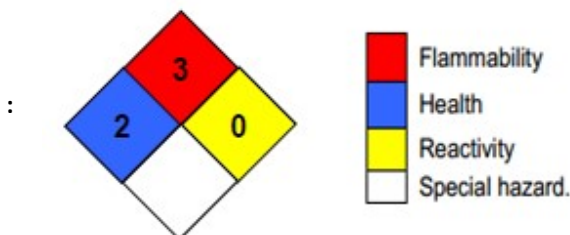
	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 1493	Silver nitrate	5.1	II	No
IMDG	UN 1493	Silver nitrate	5.1	II	No
IATA	UN 1493	Silver nitrate	5.1	II	No

## 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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