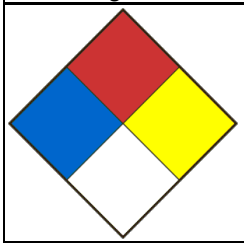
Centre Anti-Poison pour le Québec: (800) 463-5060
Tél. (Qc): (418) 660-8666 / 800-890-8666
Fax. (Qc): (418) 660-8998

SAFETY DATA SHEET

SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier SILVER NITRATE (0.0342M)		**Product Use** Laboratory use	
Chemical formula AgNO3		**Product code** AS-0342	**Molar weight** 169,88
Chemical name / Commercial name / Synonymous SILVER NITRATE, NITRIC ACID SILVER SALT, LUNAR CAUSTIC, SILBERNITRAT			
Supplier's name Laboratoire MAT		**Address-Street** 610, Adanac Street	
City Québec		**Province** Québec	
Postal code G1C 7B7	**Internet** www.labmat.com	**Phone number** 418-660-8666 / 800-890-8666	
Emergency phone	CANUTEC: 613-996-6666	CENTRE ANTI-POISON DU QUÉBEC 800-463-5060	
Date SDS 10/27/2023	**SDS Prepared by** Laboratoire MAT	**E-Mail** labmat@labmat.com	

SECTION 02 - HAZARDS IDENTIFICATION

Classification WHIMS / GHS	Not a hazardous substance according to WHMIS 2015
Signal Word	
Hazards statements (H)	LMH001 Not a dangerous substance or mixture according to the Canada WHIMS 2015.
Precautionary statements (P)	LMP001 The use of this product does not present any particular risk. However, standard laboratory safety precautions such as wearing gloves, clothing and eye protection should be followed.
PICTOGRAMS	
Other dangers	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	**Health** 1 **Fire** 0 **Reactivity** 0 **Special danger**

SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Nitrate d'argent	7761-88-8	0.6

SECTION 04 - FIRST AID MEASURES

Eye contact	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
Skin contact	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
Inhalation	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	If the person is conscious, give water to drink. Never give anything by mouth to an unconscious person. Consult a physician.
Most important symptoms and effects (acute and delayed)	Main symptoms of high exposure: Skin, eye and respiratory system irritation. Argyria (gray-blue discoloration of the skin, mucous membranes and eyes) if inhaled. Ref. section 11.
Immediate medical attention and special treatment, if necessary	In case of medical consultation, keep this sheet available.
General advice	Show this safety data sheet to the doctor in attendance.

SECTION 05 - FIREFIGHTING MEASURES

Flammability	No
Ignition conditions	Risk of fire or explosion if heated or crushed in presence of combustible products.
Suitable extinguishing media	Use water to extinguish the fire
Unsuitable extinguishing media	Do not use dry chemicals or foam. CO2 or halon can provide limited control.
Hazardous combustion products	Hazardous combustion products formed under fire conditions: - Silver/silver oxides - nitrogen oxides (NOx).
Special fire and explosion hazards	In the event of a fire, the water in the solution will evaporate, and the oxidizing base product will fuel the fire. Strong oxidizer Silver nitrate solutions mixed with ammonia alone or sodium carbonate combined with sodium hydroxide can cause an explosion. An explosion can occur by stirring silver nitrate which has been previously recrystallized with a mixture of water and ethanol. May react violently with incompatible products (Ref Section 10).
Special protective equipment and precautions for firefighters	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

SECTION 06 - ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up / Personnal precautions, protective equipment	Evacuate personnel to safe areas. Use a respirator as needed. Absorb the product with sand or vermiculite. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. Dispose of residues in a container for disposal of hazardous materials. When handling, wear suitable safety equipment. Use breathing apparatus if necessary. Do not use cellulose-based absorbent. Do not let product enter drains.

SECTION 07 - HANDLING AND STORAGE

Conditions for safe storage	Store in a cool, dry place. Keep container tightly closed and store away from heat, moisture, combustible and organic products. Protect from sunlight and light. Keep container tightly closed in a dry and well-ventilated place. Light sensitive.
Methods of handling	Bottle in amber glass containers. This product attacks certain plastics, rubbers and coatings. Avoid contact with the skin, eyes and clothes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust or vapor is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. Avoid ingestion and inhalation. Wear personal protective equipment when handling. Always ensure good ventilation. Transport according to TDG (ref Section 14)

SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Silver nitrate	7761-88-8	TWA	0.010000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
Remarks				
		TWAEV	0.010000 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	0.010000 mg/m3	Canada. British Columbia OEL
		STEL	0.030000 mg/m3	Canada. British Columbia OEL
		TWA	0.01 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWAEV	0.01 mg/m3	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	0.01 mg/m3	Canada. British Columbia OEL
		STEL	0.03 mg/m3	Canada. British Columbia OEL
		TWA	0.010000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		TWA	0.01 mg/m3	USA. ACGIH Threshold Limit Values (TLV)

Data source	Sigma-Aldrich (Millipore Sigma)
Ventilation	Fan.
Respiratory	If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
Gloves	Handle with gloves.
Eyes	Safety goggles with safety shutters.
Shoes	Use safety shoes.
Clothing	Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Engineering control	Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.

SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid.
Appearance	incolore-
Odour	Inodore.
Odour threshold	Data not available
pH	Solution aqueuse = pH ~6 (neutre).
Melting point / Freezing point	Data not available
Initial boiling point	Data not available
Boiling range	Data not available
Flash point	Data not available
Evaporation rate	Data not available
Flammability	No
Lower flammable / Explosive limit	Data not available
Upper flammable / Explosive limit	Data not available
Vapour pressure	Data not available
Solubility	Très soluble dans l'eau (2340g/L à 25°C AgNO3)..
Vapour density	Data not available
Relative density	Data not available
Partition coefficient water/n-octanol	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	Data not available

SECTION 10 - STABILITY AND REACTIVITY

Reactivity	Oxidizer: risk of fire in case of contact with combustible / organic substance.
Chemical stability	Stable under recommended storage conditions. Decomposes on exposure to light.
Possibility of hazardous reactions	May react violently with incompatible substances.
Conditions of instability (Including sensitivity to shock / static discharge / vibration)	This product may decompose if exposed to light. This product may darken if exposed to light. Sensitive to the air.
Incompatible material	Strong reducing agents, acetaldehyde, acetylene, chlorosulfonic acid, tannic acid, alkalis, alcohols, ammonia, strong bases, bromides, carbonates, coal, chlorides, formaldehyde, oils, hydrazine, hypophosphites, iodides, magnesium, phosphates, ferrous salts, sugars, tartrates, thiocyanates and light.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions. Toxic vapors of nitrogen oxides. - Silver/silver oxides

SECTION 11 - TOXICOLOGICAL INFORMATION

SILVER NITRATE

Routes of exposure	Ingestion, inhalation, skin and eyes.
Acute exposition effects / symptoms:	By exposure route below.
- Eyes	Irritation and may result in opacification of the cornea due to argyria (the epidermis and subcutaneous tissues become slate-gray due to silver albuminate deposits)
- Skin	Irritation and can cause argyria.
- Inhalation	Spasms, irritation and inflammation of the nose, throat and lungs. Edema of the larynx and bronchi. Chemical pneumonitis and pulmonary edema that can lead to death. Argyria (gray-blue discoloration of the skin, mucous membranes and eyes) if inhaled.
Acute toxicity (Ingestion)	Irritation and inflammation of the mouth, throat, esophagus and abdominal wall. Abdominal pain, blackening of the mucous membranes, cramps, diarrhea, salivation, nausea and vomiting, anuria, convulsions, hypotension, circulatory collapse, unconsciousness, coma and can lead to death
Chronic exposure effects / symptoms	Burning sensation, argyria, nervous disorders, chest pain, cough, dyspnoea, laryngitis, chronic bronchitis, headache, dizziness, irritability, sweating, salivation, fatigue, fever, weight loss and loss of appetite, convulsions, nausea and vomiting.
DL50 (specify species and route of entry)	LD50 - Rat (Oral): 1173 mg / kg LD50 Dermal - Data not available.
CL50 (specify species and route of entry)	LC50 - Inhalation - Data not available.

SUMMARY

Acute exposure effects / Symptoms:	By exposure routes below.
Ingestion	To our knowledge, the product has not been fully evaluated
Inhalation	To our knowledge, the product has not been fully evaluated
Skin	To our knowledge, the product has not been fully evaluated
Eyes	To our knowledge, the product has not been fully evaluated
Chronic exposure effects / Symptoms:	To our knowledge, the product has not been fully evaluated
ETA Mix (Estimated Acute Toxicity)	LD50 Oral: >5000 mg/kg - Rat LD50 Dermal: No data available LC50 Inhalation: No data available

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity	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: 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	Soluble in water. Persistence is unlikely based on the information provided.
Bioaccumulative potential	Bioaccumulation Cyprinus carpio (Carp) - 41 d Bioconcentration factor (BCF): 70.
Mobility in soil	Probable mobility in the environment due to its solubility in water.
Other adverse effects	Very toxic to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal Method	Dispose of contents / container in accordance with local / regional / national / international regulations / or contact a specialist waste disposal company.
Contaminated Packaging	Dispose of as unused product.

SECTION 14 - TRANSPORT INFORMATION

UN Number	N/R
UN Proper shipping name	
Transport hazard class(es)	
Packing group	
Limited quantity index	
ERAP Index	
Special precautions	

SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Not a hazardous substance according to WHMIS 2015

SECTION 16 - OTHER INFORMATION

Further information

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. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Last Update: 10/27/2023