



Centre Anti-Poison pour le Québec: (800) 463-5060

Tél. (Qc): (418) 660-8666 / 800-890-8666


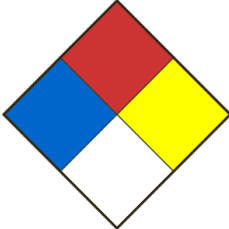
Fax. (Qc): (418) 660-8998

## SAFETY DATA SHEET

### SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

|  |                                    |   |   |
|--|------------------------------------|---|---|
| Product Identifier<br>SILVER NITRATE (0.171N)  |                                    | Product Use<br>Laboratory use               |   |
| Chemical formula<br>AgNO <sub>3</sub>  |                                    | Product code<br>AS-0171                     | Molar weight<br>169,88                    |
| Chemical name / Commercial name / Synonymous<br>SILVER NITRATE, NITRIC ACID SILVER SALT, LUNAR CAUSTIC, SILBERNITRAT |                                    |   |   |
| Supplier's name<br>Laboratoire MAT   |                                    | Address-Street<br>610, Adanac Street        |   |
| City<br>Québec   |                                    | Province<br>Québec                          |   |
| Postal code<br>G1C 7B7   | Internet<br>www.labmat.com         | Phone number<br>418-660-8666 / 800-890-8666 |   |
| Emergency phone  | CANUTEC: 613-996-6666              |   | CENTRE ANTI-POISON DU QUÉBEC 800-463-5060 |
| Date SDS<br>8/19/2022  | SDS Prepared by<br>Laboratoire MAT | E-Mail<br>labmat@labmat.com                 |   |

## SECTION 02 - HAZARDS IDENTIFICATION

|   |  |
|---|--|
| <b>Classification WHIMS / GHS</b>   | Skin corrosion/irritation - Skin corrosion category 1<br>Serious eye damage/eye irritation - Serious eye damage category 1   |
| <b>Signal Word</b>  | DANGER   |
| <b>Hazards statements (H)</b>   | H314 Causes severe skin burns and eye damage.<br>H318 Causes serious eye damage.   |
| <b>Precautionary statements (P)</b>   | P264 Wash the areas of the body that have been in contact with the product after handling.<br>P280 Wear protective gloves/protective clothing/eye protection/face protection.<br>P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P321 Specific treatment (see section 4 of the SDS and on this label).<br>P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company.<br>P260 Do not breathe dust / fume / gas / mist / vapors / spray.<br>P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.<br>P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.<br>P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>P310 Immediately call a POISON CENTER or doctor/physician.<br>P363 Wash contaminated clothing before reuse.<br>P405 Store locked up. |
| <b>PICTOGRAMS</b>   |    |
| <b>Other dangers</b>  | NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)  |
|  | <b>Health</b> 2<br><b>Fire</b> 0<br><b>Reactivity</b> 0<br><b>Special danger</b>   |

## SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

| Ingrédients (Dénomination chimique / synonymes) | Numéro CAS et tout identificateur unique | Concentration (%) P/P |
|---|--|-----------------------|
| Nitrate d'argent                                | 7761-88-8                                | 2.8                   |

## SECTION 04 - FIRST AID MEASURES

|  |  |
|--|--|
| <b>Eye contact</b>   | 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.                           |
| <b>Skin contact</b>  | Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.  |
| <b>Inhalation</b>  | Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.  |
| <b>Ingestion</b>   | If the person is conscious, give water to drink. Never give anything by mouth to an unconscious person. Consult a physician.   |
| <b>Most important symptoms and effects (acute and delayed)</b>         | 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. |
| <b>Immediate medical attention and special treatment, if necessary</b> | In case of medical consultation, keep this sheet available.  |
| <b>General advice</b>  | Show this safety data sheet to the doctor in attendance.   |

## SECTION 05 - FIREFIGHTING MEASURES

|  |  |
|--|--|
| <b>Flammability</b>  | No   |
| <b>Ignition conditions</b>   | Risk of fire or explosion if heated or crushed in presence of combustible products.  |
| <b>Suitable extinguishing media</b>                                  | Use water to extinguish the fire   |
| <b>Unsuitable extinguishing media</b>                                | Do not use dry chemicals or foam. CO2 or halon can provide limited control.  |
| <b>Hazardous combustion products</b>                                 | Hazardous combustion products formed under fire conditions: - Silver/silver oxides - nitrogen oxides (NOx).  |
| <b>Special fire and explosion hazards</b>                            | 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). |
| <b>Special protective equipment and precautions for firefighters</b> | 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

|  |  |
|--|--|
| <b>Methods and materials for containment and cleaning up /<br/>Personnel precautions, protective equipment</b> | 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

|                                    |  |
|------------------------------------|--|
| <b>Conditions for safe storage</b> | 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.  |
| <b>Methods of handling</b>         | 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/m <sup>3</sup> | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)   |
| Remarks        |           |       |                            |   |
|                |           | TWAEV | 0.010000 mg/m <sup>3</sup> | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
|                |           | TWA   | 0.010000 mg/m <sup>3</sup> | Canada. British Columbia OEL  |
|                |           | STEL  | 0.030000 mg/m <sup>3</sup> | Canada. British Columbia OEL  |
|                |           | TWA   | 0.01 mg/m <sup>3</sup>     | Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)   |
|                |           | TWAEV | 0.01 mg/m <sup>3</sup>     | Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants |
|                |           | TWA   | 0.01 mg/m <sup>3</sup>     | Canada. British Columbia OEL  |
|                |           | STEL  | 0.03 mg/m <sup>3</sup>     | Canada. British Columbia OEL  |
|                |           | TWA   | 0.010000 mg/m <sup>3</sup> | USA. ACGIH Threshold Limit Values (TLV)   |
|                |           | TWA   | 0.01 mg/m <sup>3</sup>     | USA. ACGIH Threshold Limit Values (TLV)   |

|                            |  |
|----------------------------|--|
| <b>Data source</b>         | Sigma-Aldrich (Millipore Sigma)  |
| <b>Ventilation</b>         | Fan.   |
| <b>Respiratory</b>         | If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.  |
| <b>Gloves</b>              | Handle with gloves.  |
| <b>Eyes</b>                | Safety goggles with safety shutters.   |
| <b>Shoes</b>               | Use safety shoes.  |
| <b>Clothing</b>            | Labcoat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.                                     |
| <b>Engineering control</b> | 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

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

## SECTION 10 - STABILITY AND REACTIVITY

|  |  |
|--|--|
| <b>Reactivity</b>  | Oxidizer: risk of fire in case of contact with combustible / organic substance.  |
| <b>Chemical stability</b>  | Stable under recommended storage conditions. Decomposes on exposure to light.  |
| <b>Possibility of hazardous reactions</b>  | May react violently with incompatible substances.  |
| <b>Conditions of instability (Including sensitivity to shock / static discharge / vibration)</b> | This product may decompose if exposed to light. This product may darken if exposed to light. Sensitive to the air.   |
| <b>Incompatible material</b>   | 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. |
| <b>Hazardous decomposition products</b>  | Hazardous decomposition products formed under fire conditions. Toxic vapors of nitrogen oxides. - Silver/silver oxides   |

## SECTION 11 - TOXICOLOGICAL INFORMATION

### SILVER NITRATE

|  |  |
|--|--|
| <b>Routes of exposure</b>                        | Ingestion, inhalation, skin and eyes.  |
| <b>Acute exposition effects / symptoms:</b>      | By exposure route below.   |
| <b>- Eyes</b>                                    | 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)   |
| <b>- Skin</b>                                    | Irritation and can cause argyria.  |
| <b>- Inhalation</b>                              | 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.                                  |
| <b>Acute toxicity (Ingestion)</b>                | 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 |
| <b>Chronic exposure effects / symptoms</b>       | 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.                                   |
| <b>DL50 (specify species and route of entry)</b> | LD50 - Rat (Oral): >5000 mg / kg LD50 Dermal - Data not available.   |
| <b>CL50 (specify species and route of entry)</b> | LC50 - Inhalation - Data not available.  |

### SUMMARY

|   |   |
|---|---|
| <b>Acute exposure effects / Symptoms:</b>   | By exposure routes below.   |
| <b>Ingestion</b>                            | To our knowledge, the product has not been fully evaluated  |
| <b>Inhalation</b>                           | To our knowledge, the product has not been fully evaluated  |
| <b>Skin</b>                                 | To our knowledge, the product has not been fully evaluated  |
| <b>Eyes</b>                                 | To our knowledge, the product has not been fully evaluated  |
| <b>Chronic exposure effects / Symptoms:</b> | To our knowledge, the product has not been fully evaluated  |
| <b>ETA Mix (Estimated Acute Toxicity)</b>   | LD50 Oral: >5000 mg/kg - Rat<br>LD50: Dermal: Data not available<br>LC50 Inhalation: Data not available |

## SECTION 12 - ECOLOGICAL INFORMATION

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

## SECTION 13 - DISPOSAL CONSIDERATIONS

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

## SECTION 14 - TRANSPORT INFORMATION

|                                   |  |
|-----------------------------------|--|
| <b>UN Number</b>                  | 3082   |
| <b>UN Proper shipping name</b>    | MATIÈRE DANGEREUSE DU POINT DE VUE DE L'ENVIRONNEMENT, LIQUIDE, N.S.A. |
| <b>Transport hazard class(es)</b> | 9 Miscellaneous dangerous goods/hazardous material                     |
| <b>Packing group</b>              | III  |
| <b>Limited quantity index</b>     | 5L   |
| <b>ERAP Index</b>                 | -  |
| <b>Special precautions</b>        | 16, 99 (Nitrate d'argent)  |

## SECTION 15 - REGULATORY INFORMATION

|                     |  |
|---------------------|--|
| <b>WHIMS CANADA</b> | Skin corrosion/irritation - Skin corrosion category 1<br>Serious eye damage/eye irritation - Serious eye damage category 1 |
|---------------------|--|

## 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.

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