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# Mallinckrodt

SILVER NITRATE

## Material Safety Data Sheet

Emergency Telephone Number  
314-982-5000

Mallinckrodt Inc.  
Science Products Division  
P.O. Box M  
Paris, Kentucky 40361

Effective Date: 11-14-85

### PRODUCT IDENTIFICATION:

Synonyms: Lunar caustic

Formula CAS No.: 7761-88-8

Hazardous Ingredients:  
Not applicable.

Molecular Weight: 169.87

Chemical Formula: AgNO<sub>3</sub>

### PRECAUTIONARY MEASURES

**DANGER! MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED.  
CORROSIVE. CAUSES SEVERE BURNS.**

Do not get in eyes, on skin, or on clothing.  
Avoid breathing dust.  
Keep container closed.  
Use with adequate ventilation.  
Wash thoroughly after handling.  
This substance is classified as a POISON under the Federal Caustic Poison Act.

### EMERGENCY/FIRST AID

If swallowed, DO NOT INDUCE VOMITING! Give large quantities of water. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.  
In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes.  
In all cases call a physician.  
SEE SECTION 5.

DOT Hazard Class: Oxidizer

### Physical Data

#### SECTION 1

Appearance: Colorless transparent crystals.

Odor: Odorless.

Solubility: 219g/100g water @ 20°C (68°F).

Boiling Point: 444°C (831°F) decomposes.

Melting Point: 212°C (441°F)

Specific Gravity: 4.352

Vapor Density (Air=1): 4.4  
Vapor Pressure (mm Hg): Very low.  
Evaporation Rate: No information found.

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### Fire and Explosion Information

#### SECTION 2

Fire:

This oxidizing material can increase the flammability of adjacent combustible materials.

Explosion:

Many reactions may cause explosion. Reacts with ammonite to form compounds that are sensitive to mechanical shock.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.  
Use water spray or fog on surrounding combustible materials. If fire is massive, fight fire upwind and from a distance.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

### Reactivity Data

#### SECTION 3

Stability:

Stable at room temperature in sealed containers. Discolor on exposure to light. Hygroscopic.

Hazardous Decomposition Products:

Oxides of nitrogen upon heating to decomposition.

Hazardous Polymerization:

This substance does not polymerize.

Incompatibilities:

Ammonite, alkalies, antimony salts, arsenites, bromides, carbonates, chlorides, iodides, thiocyanates, ferrous salts, phosphates, tartaric acid and tartrates.

### Leak/Spill/Disposal Information

#### SECTION 4

Ventilate area of leak or spill. Clean-up personnel require protective clothing and respiratory protection from dust.

Spills: Cover spill with dry sand, pick up and place in a suitable container for reclamation or disposal in a method that does not generate dust.

Disposal: Whatever cannot be saved for reclamation may be disposed in a RCRA approved hazardous waste facility.

Reportable Quantity (RQ)(CMA/CERCLA) : 1 lb.

Ensure compliance with local, state and federal regulations.

*Silver Nitrate*

**Health Hazard Information**

**SECTION 3**

**A. Exposure/Health Effects**

**Inhalation:**

An irritant to respiratory tract. May cause sore throat, coughing, shortness of breath. Dust deposits in the lungs may resemble a form of pneumoconiosis.

**Ingestion:**

Toxic/Poison: Symptoms include pain and burning in the mouth, blackening of the skin and mucous membranes, throat, and abdomen, salivation, vomiting of black material, diarrhea, collapse, shock, coma and death.

**Skin Contact:**

May cause local corrosive effects, including skin irritation and pain.

**Eye Contact:**

May cause corrosive effects, pain, irritation, and possibly eye damage.

**Chronic Exposure:**

Repeated application or ingestion causes a permanent bluish discoloration of the skin, conjunctiva, and mucous membranes. Repeated inhalation may cause lung disease.

**Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

**B. FIRST AID**

**Inhalation:**

Remove to fresh air. Get medical attention for any breathing difficulty.

**Ingestion:**

If swallowed, do NOT induce vomiting. Give large quantities of water. Never give anything by mouth to an unconscious person. Call a physician immediately.

**Skin Exposure:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.

**Eye Exposure:**

Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**C. TOXICITY DATA**

(RTECS, 1982)

Oral mouse LD50: 50 mg/kg.  
Irritation data: eye rabbit 1 mg severe.  
Mutation references cited.  
Reproductive effects references cited.

**Occupational Control Measures**

**SECTION 6**

**Airborne Exposure Limits:**

-OSHA Permissible Exposure Limit (PEL):  
10 ug (Ag)/m<sup>3</sup> (TWA).  
-ACGIH Threshold Limit Value (TLV):  
10 ug (Ag)/m<sup>3</sup> (TWA).

**Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

**Personal Respirators (NIOSH Approved)**

If the TLV is exceeded, a dust/mist respirator with chemical goggles may be worn, in general, up to ten times the TLV. Consult respirator supplier for limitations. Alternatively, a supplied air full facepiece respirator or supplied hood may be worn.

**Skin Protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls to prevent skin contact.

**Eye Protection:**

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Contact lenses should not be worn when working with this material. Malincol eye wash fountain and quick-drench facilities in work area.

**Storage and Special Information**

**SECTION 7**

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Protect from light. Separate from combustible organic or other readily oxidizable materials.

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