

**MATERIAL SAFETY DATA SHEET
FOR
THORN SMITH LABORATORIES
STUDENT REFERENCE STANDARDS AND REAGENT CHEMICALS**

Silver Nitrate
Catalog Number 81-1060

Manufacturer: Auric Enterprises, Inc.
d/b/a Thorn Smith Laboratories
Address: 7755 Narrow Gauge Road
Beulah, MI 49617
Phone Number: 231-882-4672
MSDS Number: TSL-109
Date Prepared: November 20, 1985
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SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION

COMPONENTS - Chemical Name & Common Names
(Hazardous Components 1% or greater; Carcinogens 0.1% or greater)

Silver Nitrate

Common Synonyms: Nitric Acid, Silver (I+) Salt; Lunar Caustic
Chemical Family: Chromium Compounds
Formula: AgNO_3
Formula Weight: 169.88
CAS No.: 7761-88-8
OSHA PEL: 0.01 mg/m^3
ACGIH TLV: 0.01 mg/m^3
63.5% Silver by Weight

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: 444°C (decomposes)
Specific Gravity ($\text{H}_2\text{O}=1$): 4.35 ()
Vapor Pressure (mm Hg and Temperature): N/A
Melting Point: 212°C
Vapor Density (Air-1): 5.8
Evaporation Rate (-1): N/A
Solubility in Water: 952 gr/100ml water @ 100°C
Water Reactive: No
Appearance and Odor: Colorless or white odorless crystals.

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

NFPA 704M Rating: 1-0-0 OXY

Flash Point and Method Used: N/A

Auto-Ignition Temperature: N/A

Flammability Limits in Air (% by volume): N/A

LEL: N/A UEL: N/A

Extinguisher Media: Use water spray.

Special Fire Fighting Procedures: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Move containers from fire area if it can be done without risk. Use water to keep fire-exposed containers cool.

Unusual Fire and Explosion Hazards: Strong Oxidizer. Contact with other material may cause fire. NOTE: Decomposes at boiling point.

Decomposition Products at 444° C to emit NO_x.

SECTION 4 - REACTIVITY HAZARD DATA

STABILITY: Stable Unstable

Conditions to Avoid: Heat, light.

Incompatibility (Materials to Avoid): Combustible materials, organic materials, strong reducing agents, strong bases, alkalies, halides, excessive temperatures.

Hazardous Decomposition Products: None identified.

HAZARDOUS POLYMERIZATION: May Occur Will Not Occur

SECTION 5 - HEALTH HAZARD DATA

TLV and PEL are listed for silver, soluble compounds, as Ag. There is no STEL value established for this product.

PRIMARY ROUTES OF ENTRY:

Inhalation Ingestion Skin Contact Eye Contact Not Hazardous

CARCINOGEN LISTED IN:

NTP OSHA IARC Monograph Not Listed

Threshold Limit Value (TLV/TWA): 0.01 mg/m³ (ppm)

Permissible Exposure Limit (PEL): 0.1 mg/m³ (ppm)

Toxicity: LD50 (ipr-mouse) (mg/kg) - 50

HEALTH HAZARDS - Acute:

Inhalation: May cause irritation of respiratory system.

Ingestion: Ingestion is harmful and may be fatal. May cause burns to mouth and stomach.

Skin Contact: May cause severe irritation or burns.

Eye Contact: Can cause severe irritation or burns.

HEALTH HAZARDS - Chronic: None identified.

Target Organs: Nasal septum, eyes, skin.

Signs and Symptoms of Exposure: No information found.

Medical Conditions Generally Aggravated by Exposure: None identified.

EMERGENCY FIRST AID PROCEDURES - CALL A PHYSICIAN

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: If conscious, give large amounts of water. Induce vomiting.

Skin Contact: Remove any contaminated clothing and shoes. Wipe off excess from skin. Immediately wash skin with soap and water for at least 15 minutes. Wash clothing before re-use.

Eye Contact: Immediately flush with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally.

SARA/TITLE III HAZARD CATEGORIES AND LISTS

Acute: Unknown Chronic: Yes Flammability: No Pressure: No Reactivity: Yes

Extremely Hazardous Substance: No

CERCLA Hazardous Substance: Yes

SARA 313 Toxic Chemicals: No

TSCA Inventory: Yes

SECTION 6 - CONTROL AND PROTECTIVE MEASURES

Respiratory Protection (Specify Type): None required where adequate ventilation conditions exist. If airborne concentration exceeds TLV, a high-efficiency particulate respirator is recommended. If concentration exceeds capacity of respirator, a self-contained breathing apparatus is advised.

Protective Gloves: Wear elbow-length neoprene gloves.

Eye Protection: Wear chemical safety goggles

VENTILATION TO BE USED: Use adequate general or local exhaust ventilation to keep fume or dust levels as low as possible.

Local Exhaust Mechanical (General) Special

Other(Specify)

Other Protective Clothing and Equipment: Wear clean body-covering clothing. Rubber or plastic apron.

Hygienic Work Practices: Avoid contact with eyes, skin, and clothing. Avoid breathing dust. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING & LEAK/USE PROCEDURES

Steps to be taken if material is spilled or released: Wear self-contained breathing apparatus and full protective clothing. Keep combustibles (wood, paper, oil, etc.) away from spilled material. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.

Waste Disposal Methods: Dispose in accordance with all applicable local, state, federal environmental regulations.

EPA Hazardous Waster Number: D001, D002 (Ignitable, Corrosive Waste)

Precautions to be taken in handling and storage: Keep in a tightly closed container. Store separately and away from flammable and combustible material. Store in light-resistant containers. Isolate for incompatibles. Store in accordance with all applicable local, state, and federal environmental regulations.

Other precautions and/or special hazards: No information available.
NFPA Rating: Health: **4** Flammability: **0** Reactivity: **0** Other: **Oxidizer**.
HMIS Rating: No information available.

SECTION 8 - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

Domestic (D.O.T.)

Proper Shipping Name: Silver Nitrate

Hazard Class: 5.1

UN/NA: UN1493

Labels: OXIDIZER

Reportable Quantity: 1 lb.

Packaging Group: II

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