

MATERIAL SAFETY DATA SHEET

SS 161
July 1, 1986

SECTION I NAME

SILVER NITRATE SOLUTION

Product: SILVER NITRATE SOLUTION
Chemical Synonyms: 10X; 1.0 Normal; 0.1 Normal
Formula: AgNO₃/water
Units/Size: 500, 1000 ml.
C.A.S. No.: 7761-88-8

CHEMTREC
800-424-9300
Dry: 716-226-6177
Night: 716-334-4222

Health	3
Fire	0
Reactivity	0

NFPA
HAZARD RATING
0 1 2 3 4

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)	%	TLV Units
Silver Nitrate 10% Solution	10%	See Section V
1.0 Normal Solution	1/2%	
0.1 Normal Solution	1.7%	

SECTION III PHYSICAL DATA

DANGER! MAY BE HARMFUL IF SWALLOWED-MAY CAUSE BURNS.

Melting Point (°F)	Liquid (NA)	Specific Gravity (H ₂ O = 1)	1.0-1.1 at 20°C
Boiling Point (°F)	Approx. 100°C (water)	Percent Volatile by Volume (%)	83-98%
Vapor Pressure (mm Hg)	14 (water)	Evaporation Rate (Ether = 1)	Greater than 1
Vapor Density (Air = 1)	0.7 (water)		
Solubility in Water	Complete		
Appearance and Odor	Clear, colorless liquid; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Flammable Limits in Air % by Volume (NA)	Lower	Upper
Non-combustible (NA)			

SPECIAL FIREFIGHTING PROCEDURES

Use any media suitable for extinguishing supporting fire.

Wear a NIOSH-approved self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes. TOXIC. Dangerous to eyes in solid or dust form; skin and respiratory irritation. Wear goggles.

UNUSUAL FIRE AND EXPLOSION HAZARDS

Will not support fire when wet. When dry increases flammability of combustible, organic or other readily oxidizable materials. Fire or excessive heat may produce hazardous decomposition products.

D.O.T. NON-REGULATED

FREY SCIENTIFIC

905 HICKORY LANE MANSFIELD OHIO 44905

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

MSDS No. Effective Date

NOV 1989

RECEIVED BOVA SUPPLY CENTER

NOV 1989

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SECTION V HEALTH HAZARD DATA

Threshold Limited Value

Effects of Overexposure

INGESTION: May cause burns to skin and eyes. Discolor's skin.
INHALATION: May be harmful if swallowed.

Emergency and First Aid Procedures

INGESTION: If swallowed, if conscious, give one or two glasses of water and call a physician immediately.
EYES: Flush with water for at least 15 minutes. Get immediate medical attention.
SKIN: Flush thoroughly with water.

SECTION VI REACTIVITY DATA

Stability	Conditions to Avoid
Unstable	
Stable	

Incompatibility (Materials to avoid)

When dry, reducing materials: charcoal, ammonium hydroxide, alcohol and organic materials can cause a reaction.

Hazardous Decomposition Products

Thermal decomposition produces metallic silver, nitrogen, oxygen and oxides of nitrogen.

Hazardous Polymerization

Will Not Occur

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Absorb in vermiculite, sand or earth. Scoop up and place in a suitable container.

Waste Disposal Method

Dispose of in an approved chemical landfill or contract an approved and licensed disposal agency. Discharge, treatment or disposal may be subject to federal, state or local laws.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection	None should be needed in normal laboratory use. If liquid spray is used, work in a fume hood.
Ventilation	Local Exhaust: Not required Mechanical/General: Not required
Protective Gloves	Rubber
Other Protective Equipment	Goggles, smock, apron, proper gloves and eye wash station.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing

Store in a cool place and protect from light. Wash thoroughly after handling.

Other Precautions

Read label on container before using. Discolor's skin on contact.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No. 1 Date 11/28/87 Approved *Wendell C. Russell* Chemical Safety Coordinator

Mallinckrodt Material Safety Data

Emergency Phone Number: 314-982-5000

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

Addendum to Material Safety Data Sheet

REGULATORY STATUS

This Addendum Must Not Be Detached from the MSDS
Identifies SARA 313 substance(s)
Any copying or redistribution of the MSDS must include a copy of this addendum
(Chem.Key: TRATE)

Hazard Categories for SARA
 Section 311/312 Reporting
 Acute Chronic Fire Pressure Reactive

 X

Product or Components
 of Product: SILVER NITRATE VOLUMETRIC SOLUTIONS codes:
 H383 H394 H386 H387 6142 H391 H393 The
 following percentages correspond one to one
 with the product codes given here:
 Silver nitrate (7761-88-8) 0.24%, 0.3%, 0.5%, 1.5%, 1.7%,
 3%, 4.8%

SARA EHS Sect. 302 RQ (lbs.)	TPQ (lbs.)	SARA Section 313 Chemicals Name List	Chemical Category	CERCLA Sec.103 RQ (lbs.)	RCRA Sec. 261.33
No	No	No	Silver compound	1	No

SARA Section 302 EHS RQ: Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

SARA Section 302 EHS TPQ: Threshold Planning Quantity of Extremely Hazardous Substance. An asterisk (*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers, the Threshold Planning Quantity = 10,000 LBS.

SARA Section 313 Chemicals: Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

CERCLA Sec. 103: Comprehensive Environmental Response, Compensation and Liability Act (Superfund). Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center, (800-424-8802). Listed at 40 CFR 302.4

RCRA: Resource Conservation and Reclamation Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.33

Effective Date: 09-05-86 Supersedes 11-08-85

SILVER NITRATE VOLUMETRIC SOLUTIONS