

# SILVER NITRATE

SVN

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Lunar caustic	Solid crystals Colorless to grayish black Odorless
Sinks and mixes with water.	
Notify local health and pollution control agencies. Protect water intakes.	
<b>Fire</b>	Not flammable.
<b>Exposure</b>	CALL FOR MEDICAL AID.  SOLIDS Irritating to skin and eyes. Harmful if swallowed. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
<b>Water Pollution</b>	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

<b>1. CORRECTIVE RESPONSE ACTIONS</b> Dilute and disperse Stop discharge Clean shore line	<b>2. CHEMICAL DESIGNATIONS</b> 2.1 CG Compatibility Group: Not listed. 2.2 Formula: AgNO <sub>3</sub> 2.3 IMO/UN Designation: 5.1/1493 2.4 DOT ID No.: 1493 2.5 CAS Registry No.: 7761-88-8 2.6 NAERG Guide No.: 140 2.7 Standard Industrial Trade Classification: 52359
<b>3. HEALTH HAZARDS</b> 3.1 Personal Protective Equipment: Goggles or face shield; rubber gloves. 3.2 Symptoms Following Exposure: Concentrated solutions will produce irritation, ulceration, and discoloration of the skin; also causes severe irritation of the eyes. Ingestion will produce violent abdominal pain and other gastroenteric symptoms. 3.3 Treatment of Exposure: INGESTION: gastric lavage with dilute solution of sodium chloride, followed by cathartics and demulcents. Other treatment is symptomatic. SKIN: wash promptly. 3.4 TLV-TWA: 0.01 mg Ag/m <sup>3</sup> 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 3; LD <sub>50</sub> = 50 to 500 mg/kg 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Currently not available 3.10 Vapor (Gas) Irritant Characteristics: Non-volatile 3.11 Liquid or Solid Characteristics: Burns skin on prolonged contact. 3.12 Odor Threshold: Odorless 3.13 IDLH Value: 10 mg Ag/m <sup>3</sup> 3.14 OSHA PEL-TWA: 0.01 mg Ag/m <sup>3</sup> 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed	

## 4. FIRE HAZARDS

- 4.1 Flash Point: Not flammable  
4.2 Flammable Limits in Air: Not flammable  
4.3 Fire Extinguishing Agents: Not pertinent  
4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent  
4.5 Special Hazards of Combustion Products: Not pertinent  
4.6 Behavior in Fire: Increases flammability of combustibles.  
4.7 Auto Ignition Temperature: Not flammable  
4.8 Electrical Hazards: Not pertinent  
4.9 Burning Rate: Not flammable  
4.10 Adiabatic Flame Temperature: Currently not available  
4.11 Stoichiometric Air to Fuel Ratio: Not pertinent.  
4.12 Flame Temperature: Currently not available  
4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent.  
4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed

## 5. CHEMICAL REACTIVITY

- 5.1 Reactivity with Water: No reaction  
5.2 Reactivity with Common Materials: No reaction  
5.3 Stability During Transport: Stable  
5.4 Neutralizing Agents for Acids and Caustics: Not pertinent  
5.5 Polymerization: Not pertinent  
5.6 Inhibitor of Polymerization: Not pertinent

## 6. WATER POLLUTION

- 6.1 Aquatic Toxicity:  
0.44 mg/148 hr/salmon fry/decidedly toxic/fresh water  
0.01-0.1 ppm\*/paracentrotus/inhibit egg develop./salt water  
\*Time period not specified.  
6.2 Waterfowl Toxicity: Currently not available  
6.3 Biological Oxygen Demand (BOD): None  
6.4 Food Chain Concentration Potential: Currently not available  
6.5 GESAMP Hazard Profile: Not listed

## 7. SHIPPING INFORMATION

- 7.1 Grades of Purity: Reagent 99.8+%  
7.2 Storage Temperature: Ambient  
7.3 Inert Atmosphere: No requirement  
7.4 Venting: Open  
7.5 IMO Pollution Category: Currently not available  
7.6 Ship Type: Currently not available  
7.7 Barge Hull Type: Currently not available

## 8. HAZARD CLASSIFICATIONS

- 8.1 49 CFR Category: Oxidizer  
8.2 49 CFR Class: 5.1  
8.3 49 CFR Package Group: II  
8.4 Marine Pollutant: No  
8.5 NFPA Hazard Classification:
- | Category                  | Classification |
|---------------------------|----------------|
| Health Hazard (Blue)..... | 0 1            |
| Flammability (Red).....   | 0 0            |
| Instability (Yellow)..... | 0 0            |
| Special (White).....      | OX OX          |

- \* First column refers to non-fire situation.  
8.6 EPA Reportable Quantity: 1 pound  
8.7 EPA Pollution Category: X  
8.8 RCRA Waste Number: Not listed  
8.9 EPA FWPCA List: Yes

## 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 Physical State at 15° C and 1 atm: Solid  
9.2 Molecular Weight: 169.87  
9.3 Boiling Point at 1 atm: Decomposes  
9.4 Freezing Point: 414°F = 212°C = 485°K  
9.5 Critical Temperature: Not pertinent  
9.6 Critical Pressure: Not pertinent  
9.7 Specific Gravity: 4.35 at 19°C (solid)  
9.8 Liquid Surface Tension: Not pertinent  
9.9 Liquid Water Interfacial Tension: Not pertinent  
9.10 Vapor (Gas) Specific Gravity: Not pertinent  
9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent  
9.12 Latent Heat of Vaporization: Not pertinent  
9.13 Heat of Combustion: Not pertinent  
9.14 Heat of Decomposition: Not pertinent  
9.15 Heat of Solution: Not pertinent  
9.16 Heat of Polymerization: Not pertinent  
9.17 Heat of Fusion: 16.2 cal/g  
9.18 Limiting Value: Currently not available  
9.19 Reid Vapor Pressure: Currently not available

## NOTES

# SILVER NITRATE

SVN

9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T		N O T  P E R T I N E N T

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
34	126.299		N		N		N
36	131.599		O		O		O
38	136.900		T		T		T
40	142.299		P		P		P
42	147.599		E		E		E
44	152.900		R		R		R
46	158.299		T		T		T
48	163.599		I		I		I
50	168.900		N		N		N
52	174.299		E		E		E
54	179.599		N		N		N
56	184.900		T		T		T
58	190.299		P		P		P
60	195.599		E		E		E
62	200.900		R		R		R
64	206.299		T		T		T
66	211.599						
68	216.900						
70	222.299						
72	227.599						
74	232.900						
76	238.299						
78	243.599						
80	248.900						
82	254.299						
84	259.599						