

MSDS

SILVER NITRATE, 0.001 - 0.0500 Normal, <1% (w/v) Aqueous Solutions

## Material Safety Data Sheet

### Section 1: Chemical Product and Company Identification

<b>Catalog Number:</b> 6814, 6822, 6840, 6845, 6850, 6860, 6900, 6907, 6910, 6915, 6920, 6950, 6970, R6847000, R6965000, R6969000, S-150, S-155, S-158, S-159, S-160, S-175, S-185, S057, S083090, S083100, S083150, S083200, S083250, S083300, S083350, S083357, S083400, SS056000, SS057000, SS083090, SS083100, SS083150, SS083200, SS083250, SS083300, SS083350, SS083400, SX-910, SX-950, SX-971, SX-979, TXRC6915-32AP	
<b>Product Identity:</b> SILVER NITRATE, 0.001 - 0.0500 Normal, <1% (w/v) Aqueous Solutions	
<b>Manufacturer's Name:</b> RICCA CHEMICAL COMPANY LLC	<b>Emergency Contact(24 hr) -- CHEMTREC®</b> Domestic: 800-424-9300 International: 703-527-3887
<b>CAGE Code:</b> 0V553	
<b>Address:</b> 448 West Fork Dr Arlington, TX 76012	<b>Telephone Number For Information:</b> 817-461-5601
<b>Date Prepared:</b> 6/22/98	<b>Revision: 20</b> Last Revised: 03/13/2007 Date Printed: 06/15/2007 4:53:56 pm

### Section 2. Composition/Information on Ingredients

Component	CAS Registry #	Concentration	ACGIH TLV	OSHA PEL
Water, Deionized	7732-18-5	Balance	Not Available	Not Available
			Not Available	Not Available
Silver Nitrate	7761-88-8	< 1	Not Available	Not Available
			0.1 mg/m3	0.1 mg/m3

### Section 3: Hazard Identification

**Emergency Overview:** Non-flammable, non-toxic, non-corrosive. Does not present any significant health hazards at these low concentrations. Most assume that solutions of Silver Nitrate do not reach hazardous concentrations until approximately 5%. May cause irritation. Wash areas of contact with water.

**Target Organs:** nasal septum, eyes, skin.

**Eye Contact:** May cause slight irritation.

**Inhalation:** Not likely to be hazardous by inhalation.

**Skin Contact:** May cause irritation and temporary discoloration of skin.

**Ingestion:** Ingestion of large quantity may cause stomach upset. A poison at higher concentrations.

**Chronic Effects/Carcinogenicity:** None

**IARC** - No.

**NTP** - No.

**OSHA** - No.

## MSDS

SILVER NITRATE, 0.001 - 0.0500 Normal, <1% (w/v) Aqueous Solutions

**Reproductive Information:** Reproductive effects cited in 'Registry of Toxic Effects of Chemical Substances' for Silver Nitrate.

**Teratology (Birth Defect) Information:** Mutation data cited in 'Registry of Toxic Effects of Chemical Substances' for Silver Nitrate.

### Section 4: First Aid Measures - In all cases, seek qualified evaluation.

**Eye Contact:** Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops.

**Inhalation:** Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

**Skin Contact:** Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops.

**Ingestion:** Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

### Section 5: Fire Fighting Measures

**Flash Point:** Not Available.

**Method Used:** Not Available.

**LFL:** Not Available.

**UFL:** Not Available.

**Extinguishing Media:** Use water or water spray on small fires. Do not use dry chemicals or carbon dioxide.

**Fire & Explosion Hazards:** Not considered to be a fire or explosion hazard.

**Fire Fighting Instructions:** Use normal procedures/instructions. Poisonous gases may be produced in fire.

**Fire Fighting Equipment:** Use protective clothing and breathing equipment appropriate for the surrounding fire.

### Section 6: Accidental Release Measures

Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal. Do not flush to sewer. Dispose of in accordance with local regulations.

### Section 7: Handling and Storage

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Protect from light.

**Safety Storage Code:** General

### Section 8: Exposure Control/Personal Protection

**Engineering Controls:** No specific controls are needed. Normal room ventilation is adequate.

**Respiratory Protection:** Normal room ventilation is adequate.

**Skin Protection:** Chemical resistant gloves.

**Eye Protection:** Safety glasses or goggles.

### Section 9: Physical and Chemical Properties

**Appearance:** Clear, colorless Liquid

**Odor:** Odorless

**Solubility in Water:** Infinite

**Specific Gravity:** Approximately 1

**pH:** Not Available.

**Boiling Point(°C):** Approximately 100

**Melting Point(°C):** Approximately 0

**Vapor Pressure:** Not Applicable.

### Section 10: Stability and Reactivity

**Chemical Stability:** Stable under normal conditions of use and storage.

**Incompatibility:** Ammonium Hydroxide, Organic Materials, Sulfides, Charcoal, Acetylene, Calcium Carbide, Ethanol, reducing agents, alkalis, Antimony salts, Arsenites, Bromides, Carbonates, Chlorides, Iodides, Ferrous salts, Thiocyanates, Phosphates, Tannic Acid and Tartrates.

**Hazardous Decomposition Products:** Toxic fumes of Nitrogen Oxides may be emitted when heated to decomposition.

**Hazardous Polymerization:** Will not occur.

### Section 11. Toxicological Information

LD50, Oral, Rat: (Silver Nitrate) 1173 mg/kg. Toxic effects: behavioral - tetany; Lungs, throat or respiration - cyanosis; Gastrointestinal - hypermotility, diarrhea.

## MSDS

SILVER NITRATE, 0.001 - 0.0500 Normal, &lt;1% (w/v) Aqueous Solutions

**Section 12. Ecological Information**

**Ecotoxicological Information:** Toxicity of Silver to aquatic life is probably dependent on water hardness; the harder the water, the higher the concentration of silver needed to be considered toxic. Silver and its compounds have high chronic toxicity to aquatic life. Chronic toxic effects include shortened life span, reproductive problems, lower fertility, and changes in appearance or behavior in exposed animals.

**Chemical Fate Information:** The concentration of Silver found in fish is expected to be considerably higher than the average concentration of Silver in the water from which the fish was taken. Silver is highly persistent in the aquatic environment, with a half-life of greater than 200 days.

**Section 13. Disposal Considerations**

Absorb with suitable material and containerize for disposal with a RCRA approved waste disposal facility. Do not flush to the sewer. Always dispose of in accordance with local, state and federal regulations.

**Section 14. Transport Information**

Part Numbers: S-160 200-LT

D.O.T. Shipping Name: Environmentally Hazardous Substances, Liquid, n.o.s., RQ (Silver Nitrate)

D.O.T. Hazard Class: 9

U.N. / N.A. Number: UN3082

Packing Group: III

D.O.T. Label: 9

**Section 15. Regulatory Information (Not meant to be all inclusive - selected regulation represented)**

**OSHA Status:** The above items either do not contain any specifically hazardous material or the potentially hazardous material is present in such low concentration that the items do not present any immediate threat to health and safety. These items do not meet the OSHA Hazard Communication Standard (29 CFR 1910.1200) definition of a hazardous material.

**TSCA Status:** All components of this solution are listed on the TSCA Inventory or are mixtures (hydrates) of items listed on the TSCA Inventory.

Sara Title III:

**Section 302 Extremely Hazardous Substances:** Not Applicable.

**Section 311/312 Hazardous Categories:** Acute: Yes      Chronic, Fire, Pressure, Reactivity: No

**Section 313 Toxic Chemicals:** Not Applicable.

**California:** None Reported.

**Pennsylvania:** Silver Nitrate is listed as an Environmental Hazard on the state's Hazardous Substances List.

**RCRA Status:** D011

**CERCLA Reportable Quantity:** Silver Nitrate - 1 pounds.

**WHMIS:** Not Applicable.



## MSDS

SILVER NITRATE, 0.001 - 0.0500 Normal, &lt;1% (w/v) Aqueous Solutions

**Section 16. Other Information**

## NFPA Ratings:

Health: 1                      Flammability: 0                      Reactivity: 0                      Special Notice Key:None

## HMIS Ratings:

Health: 1                      Flammability: 0                      Reactivity: 0                      Protective Equipment:B (Protective Eyewear, Gloves)

Rev 1, 10-19-98: (Section 16) Removed periods from NFPA and HMIS, Added® to HMIS.  
Rev 2, 6-25-99: (Section 1) added catalog number 6822, added < 1% (w/v) to title; (Section 3) added mutation data; (Section 15) added Florida and Pennsylvania state listings, updated footer; (Section 16) changed Special Note Key from OX to None.  
Rev 3, 5-22-2000: Reformatted from WordPerfect® to Microsoft Word®; (Section 1) added catalog number 6907, revised emergency telephone number to CHEMTREC® 800-424-9300; (Section 3) Added "May cause...water." in emergency overview; (Section 5) revised fire and explosion hazards information; (Section 7) added storage code.  
Rev 4, 10-09-2001: Reformatted to electronic data format.  
Rev 5, 01-21-2002: (Section 1) added catalog number 6814.  
Rev 6, 09-19-2002: (Section 1) added Solutions Plus brand catalog number S083100.  
Rev 7, 09-24-2002: (Section 1) added Solutions Plus brand catalog number S083400.  
Rev 8, 10-08-2002: (Section 1) added Solutions Plus brand catalog number S083300.  
Rev 9, 11-11-2002: (Section 1) added Solutions Plus brand catalog numbers S083090, S083150, S083200, S083250, S083350, S083357.  
Rev 10, 03-09-2004: (Section 1) added catalog number TXRC6915-32AP.  
Rev 11, 09-17-2004: (Section 1) added Solutions Plus catalog number S057.  
Rev 12, 03-01-2005: revised title.  
Rev 13, 10-06-2005: (Section 1) added Red Bird catalog number S-185.  
Rev 14, 12-16-2005: (Section 1) added Red Bird catalog numbers S-158 and SX-950.  
Rev 15, 01-30-2006: (Section 1) added catalog number R6965000 and Red Bird catalog number SX-971.  
Rev 16, 02-13-2006: (Section 1) added SpectroPure catalog number SS056000.  
Rev 17, 02-21-2006: (Section 1) added Red Bird catalog number S-150.  
Rev 18, 04-06-2006: (Section 1) added Red Bird catalog number SX-910.  
Rev 19, 12-13-2006: (Section 1) added catalog numbers R6847000 and R6969000.  
Rev 20, 03-13-2007: (Section 1) added Red Bird catalog numbers S-155, S-159, S-175 and SX-979.

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.