

# SAFETY DATA SHEET

## AMMONIACAL SILVER SOLUTION

### Section 1 - Chemical Product and Company Identification

**SDS Name:** Ammoniacal Silver Solution

**Catalog Numbers:** SO-134

**Company Identification:** ROWLEY BIOCHEMICAL  
10 ELECTRONICS AVENUE  
DANVERS, MA 01923

**For information, call:** 978-739-4883

**Emergency Number:** 800-424-9300

**For CHEMTREC assistance, call:** 800-424-9300

### Section 2 - Hazards Identification

#### GHS Classifications

##### HEALTH HAZARDS

H302-Acute Oral Toxicity: 4

H315-Skin Corrosion/Skin Irritation: 2

H320-Eye damage/Irritation: 2BS

##### PHYSICAL HAZARDS

H290-Corrosive to Metals: 1

##### ENVIRONMENTAL HAZARDS

**Aquatic acute environmental Hazards:** Not classified

**Chronic environmental Hazards:** Not classified

**Pictograms or Hazard symbols and Hazard statement.**



Warnig: Causes skin irritation.  
Causes eye irritation.  
Harmful If swallowed.

## Precautionary Statement

H315

**P264**-Wash thoroughly after handling.

**P280**-Wear protective gloves.

**P302+P352**-IF ON SKIN: Wash with plenty of soap and water.

**P332+P313**-If skin irritation occurs: Get medical advice/attention.

**P362**-Take off contaminated clothing and wash before reuse

H320

**P305+P351+P338**-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**P337+P313**-If eye irritation persists: Get medical advice/attention.

H290

**P234**-Keep only in original container.

**P390**-Absorb spillage to prevent material damage.

**P406**-Store in corrosive resistant/container with a resistant inner liner.

H302

**P264** Wash thoroughly after handling.

**P270** Do not eat, drink, or smoke when using this product.

**P301 + P312** If swallowed, call a physician if you feel unwell.

**P501** Dispose of contents/container in accordance with local/regional/national/international regulations.

**P330** Rinse mouth.

### Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7761-88-8	Silver Nitrate	1.02 w/v
1336-21-6	Ammonium Hydroxide	Approx. 1 v/v
1310-73-2	Sodium Hydroxide	0.31 v/v
7732-18-5	Water	99 v/v

### Section 4 - First Aid Measures

**Eye Exposure:** In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Dermal Exposure:** In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

**Oral Exposure:** If Swallowing seek immediate medical advice.

**Inhalation Exposure:** If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

## Section 5 - Fire Fighting Measures

Firefighters should wear proper protective clothing and self contained breathing apparatus with full piece operated in positive pressure mode to prevent contact with skin and eyes.

**Extinguishing Media:** Use water spray, dry chemical powder, or appropriate foam.

**Flash Point:** N/A

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

### **Procedure(s) of Personal Precaution(s):**

Wear protective gear.

**Methods for Cleaning up:** Absorb with sand, earth or vermiculite. Carefully sweep up and containerize for proper disposal.

## Section 7 - Handling and Storage

Use care when handling. Wash thoroughly after handling. Store capped at room temperature. Keep away from incompatible materials.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### **Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** Clear

**Odor:** Ammonia

**pH:** 13.8 (29% solution)

**Vapor Pressure:** 115 @ 20C for 10% solution; 580 @ 20C for 28% solution.

**Vapor Density:** 0.60 NH<sub>3</sub>

**Evaporation Rate:** N/A

**Viscosity:** N/A

**Boiling Point:** 118 C

**Solubility:** Infinitely soluble

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under ordinary conditions of use and storage. Heat and sunlight can contribute to instability.

**Conditions to Avoid:** Heat, freezing.

**Incompatibilities with Other Materials:** Chromic Acid, ethylene glycol, perchloric acid, phosphorous trichloride, oxidizers, sodium peroxide, strong caustics, most metals (except aluminum), carbonates, hydroxides, oxides, and phosphates.

**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes.

**Hazardous Polymerization:** Will not occur.

## Section 11 - Toxicological Information

**RTECS#:**

**LD50/LC50:**

CAS#1336-21-6

Rat LD50: 350mg/kg

**Carcinogenicity:**

CAS#1336-21-6 : Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**LD50/LC50:**

CAS# 1310-73-2:

Skin, rabbit: 500 mg/24H severe

Eye, rabbit: 50 ug/24H, investigated as a mutagen

**Carcinogenicity:**

CAS# 1310-73-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65

**LD50/LC50:**

CAS#: 7761-88-8 Silver Nitrate ORAL (LD50): Acute: 1173mg/kg [Rat] 50mg/kg [Mouse]  
473mg/kg [Guinea pig]  
LC50: Not Listed

**Carcinogenicity:**

CAS#7761-88-8 : Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 - Ecological Information
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**Ecotoxicity:**

**CAS#1336-21-6.** This material is expected to be slightly toxic to aquatic life. The LC50 0.1ppm 24 hours [Rainbow trout] 8.2mg/l 96 hours [Fathead minnow]. 0.1 ppm 48 hours [Bluegill]

**Environmental:** When released into the air, this material may be moderately degraded by reaction with photochemically produced hydroxyl radicals.

**Physical:** No information available.

**Other:** No information available.

Section 13 - Disposal Considerations
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**Appropriate method of disposal of substance or preparation:**

Handled as hazardous waste and sent to an RCRA approved incinerator or disposed in an RCRA approved wasted facility.

Section 14 – Transport Information
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**DOT**

Non-Regulated

Section 15 - Regulatory Information
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## Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

**European/International Regulations**

**European Labeling in Accordance with EC Directives**

**Risk Phrases:**

R22 Harmful by inhalation, in contact with skin and if swallowed  
R36/38 Irritating to eyes and skin

**Safety Phrases:**

S20/21 When using do not eat, drink or smoke  
S2 Keep out of the reach of children.  
S 7 Keep container tightly closed.  
S 9 Keep container in a well-ventilated place

Section 16 - Additional Information
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**MSDS Creation Date:** 10/15/12

**Revision #1. YM 5/15/2014-Co-sign RC**

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