

# Material Safety Data Sheet

## Section 1 – Chemical Product and Company Identification

Catalog Numbers: KEMSN3375-AA, KEMSS3375-B  
Product Identity: Silver Nitrate Solution, 0.05M

**Chemical Family:** Not Applicable  
**Synonyms:** Silver Nitrate 0.05M  
**Recommended Use:** Laboratory chemicals

Manufacturer's Name: AquaPhoenix Scientific, Inc., 9 Barnhart Dr., Hanover, PA 17331, (866) 632-1291  
Emergency Contact Number (24hr): Chemtel (800) 255-3924

Issue Date: 06/19/12  
Revision Date:

## Section 2 – Hazard Identification

### **Emergency Overview**

May cause eye, skin, and respiratory tract irritation. The toxicological properties have not been fully investigated. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Appearance:** Clear, colorless liquid                      **Odor:** Odorless

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

### **Potential Health Effects/ Routes of Exposure:**

**Eyes:** May cause slight irritation.

**Skin:** May cause slight irritation and temporary discoloration.

**Ingestion:** Large quantities may cause upset stomach. At higher concentrations considered a poison.

**Inhalation:** Not likely to be a hazard by inhalation.

**Chronic Effect / Carcinogenicity:** Tumorigenic effects have been reported in experimental animals. Experiments have shown reproductive toxicity effects on laboratory animals. May cause adverse liver effects. May cause adverse kidney effects. (IARC, NTP, OSHA)

**Aggravated Medical Conditions** No information available

These chemicals are not considered hazardous by OSHA.

See section 11 for toxicological information. See section 12 for potential environmental effects.

## Section 3 – Composition, Information on Ingredients

Silver Nitrate, CAS# 7761-88-8, < 2% w/v  
Water, purified, CAS# 7732-18-5, >98% w/v

## Section 4 – First Aid

**Eyes:** Immediately flush eyes with water for at least 15 minutes. Immediately get medical assistance.

**Skin:** Flush with water for 15 minutes. Get medical assistance if irritation develops.

**Ingestion:** DO NOT induce vomiting. Dilute with water or milk. Get medical assistance.

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

**Notes to Physician** Treat symptomatically.

## Section 5 – Fire Fighting Measures

**Flash Point:** Not Applicable    **Autoignition Temperature** No information available.

**Explosion Limits Upper** No data available                      **Lower** No data available

**Extinguishing Media:** Use water or water spray.

**Unsuitable Extinguishing Media:** No information available

**Fire & Explosion Hazards:** Not considered to be a fire or explosion hazard.  
**Fire Fighting Instructions / Equipment:** Use normal procedures. Poisonous gas may be produced in fire. Use protective clothing. Use NIOSH-approved breathing equipment.  
**Hazardous Combustion Products:** No information Available  
**Sensitivity to mechanical impact** No information available.  
**Sensitivity to static discharge** No information available.  
**Specific Hazards Arising from the Chemical:** Thermal decomposition can lead to release of irritating gases and vapors  
**NFPA Rating:** (estimated) Health: 1; Flammable: 0; Reactivity: 0

## **Section 6 – Accidental Release Measures**

**Personal Precautions** Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

**Environmental Precautions** Should not be released into the environment.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable and closed containers for disposal

## **Section 7 – Handling and Storage**

**Handling:** Wash hands after handling. Avoid contact with skin and eyes.

**Storage:** Keep Protect from freezing and physical damage. Protect from light.

## **Section 8 – Exposure Controls, Personal Protection**

Silver Nitrate, CAS# 7761-88-8, ACGIH TLV: 0.1mg/m<sup>3</sup>, OSHA PEL: 0.1mg/m<sup>3</sup>

Water, purified, CAS# 7732-18-5, ACGIH TLV: NA, OSHA PEL: NA

**Engineering Measures/ General Hygiene:** Normal ventilation is adequate. Ensure eyewash and safety showers are available.

**Personal Protection Equipment: Skin Protection:** Chemical resistant gloves.

**Eye/Face Protection:** Safety Glasses or goggles. **Respiratory Protection:** Normal ventilation is adequate

## **Section 9 – Physical and Chemical Properties**

**Appearance/Physical State:** Clear, colorless liquid

**Odor:** Odorless

**Boiling Point:** Approx 100C

**Melting Point:** Approx 0C

**Vapor Density:** 0.7

**Evaporation Rate:** > 1

**pH:** No Information Available

**Flammability:** No Information Available

**Solubility:** Soluble in water available

**Relative Density:** No Information Available

**% Volatility:** No Information Available

**Specific Gravity:** Approx 1

**Vapor Pressure:** 14mmHg @ 20C

**Flash Point:** Not Applicable

**Coefficient of water/oil distribution:** Not Available

**Odor Threshold:** Not Available

**Decomposition Temperature:** No Information Available

**Partition Coefficient n-octanol/water:** No data

**Molecular Weight:** Not available

## **Section 10 – Stability and Reactivity**

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

**Incompatible Materials:** Ammonium Hydroxide, organic materials, sulfides, charcoal, acetylene, ethanol, reducing agents, calcium carbide, alkalis, antimony salts, carbonates, bromides, arsenites, chlorides, ferrous salts, thiocyanates, Iodides, tartrates, tannic acid and phosphates.

**Conditions to Avoid:** Excess heat.

**Hazardous Decomposition Products:** Oxides of Nitrogen.

**Hazardous Polymerization:** Does not occur

**Hazardous Reactions:** None under normal processing.

## **Section 11 – Toxicological Information**

**Routes of Exposure/Symptoms/Corrosiveness** – See Section 2

LD50 orl-rat: 1173mg/kg (Silver Nitrate) LC50 inhalation-rat: NA

**Irritation:** No Information Available

**Toxicologically Synergistic:** No Information Available

**Chronic Exposure**

**Carcinogenicity** There are no known carcinogenic chemicals in this product

**Sensitization** No information available.

**Mutagenic Effects** Mutagenic effects have occurred in experimental animals.

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

**Developmental Effects (Immediate/Delayed)** No information available.

**Teratogenicity** No information available.

**Other Adverse Effects** Tumorigenic effects have been reported in experimental animals.

**Endocrine Disruptor Information** No information available

**Section 12 – Ecological Information**

**Ecotoxicity:** Toxicity of Silver to aquatic life depends on hardness: the higher the concentration of hardness, the higher the concentration of silver needed to be considered toxic. Has high chronic toxicity to aquatic life which can cause shorten life span, reproductive problems, lower fertility, and changes in appearances and behavior.

**Persistence and Degradability:** No Information Available

**Mobility:** No Information Available

**Bioaccumulation/ Accumulation:** No Information Available

**Section 13 – Disposal Considerations**

**Waste Disposal/Waste Disposal of Packaging:** Do not flush to sewer. Absorb with suitable material and containerize for disposal.

All chemical waste generators must determine whether a discarded chemical is classified as hazardous waste. Comply with all local, state, and federal regulations.

**Section 14 – Transport Information**

**DOT - Not Regulated**

**Section 15 – Regulatory Information (not meant to be all inclusive)**

**OSHA Status:** These chemicals are not considered hazardous by OSHA.

**Canada DSL:** CAS# 7732-18-5 & 7761-88-8 are listed on Canada's DSL list.

**TSCA:** The components of this solution are listed on the TSCA Inventory

**SARA Title III Section 313:** Not Applicable

**RCRA Status:** Not Applicable

**CERCLA Reportable Quantity:** Silver Nitrate – 1000 lbs

**WHMIS:** Non-controlled

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.

**Section 16 – Additional Information**

**Disclaimer:** The information on this MSDS applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to determine the suitability and completeness of this information for his own particular use. No warranty is implied regarding the accuracy of the data or the results to be obtained from the products use.