



# SAFETY DATA SHEET


According to 29 CFR 1910.1200 Hazard Communication Standard 2012 (HazCom 2012)

Revision: 11/11/2021

## SECTION 1: Identification

<b>Product identifier</b>	
Product name	Silver Nitrate Reagent
Product number	R-0718
<b>Recommended use and restrictions</b>	Water analysis. To be used in accordance with manufacturer instructions or under the direct guidance of the manufacturer.
<b>Manufacturer</b>	Taylor Technologies, Inc. 31 Loveton Circle Sparks, MD 21152 Local: (410) 472-4340 – 8am – 5pm EST Toll-free: (800) 837-8548 – 8am – 5pm EST
<b>Emergency phone number</b>	
CHEMTREC, United States	1-800-424-9300 – 24-hour service
CHEMTREC, International	+1 703-741-5970 – 24-hour service

## SECTION 2: Hazard(s) Identification

<b>Physical hazards</b>	Corrosive to metals	Category 1
<b>Health hazards</b>	Eye damage/irritation	Category 1
	Skin corrosion/irritation	Category 1B
<b>Environmental hazards</b>	Acute (short-term) aquatic toxicity hazard	Category 1
	Chronic (long-term) aquatic toxicity hazard	Category 1
<b>Environmental hazards</b>	Not currently regulated by OSHA. For additional information, refer to section 12 of the SDS.	
<b>Label elements</b>		
Hazard pictograms		
Signal word	Danger	
Hazard statements	Causes severe skin burns and serious eye damage. May be corrosive to metals. Very toxic to aquatic life with long lasting effects.	
<b>Precautionary statements</b>		
Prevention	Do not breathe dust or mists. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection if contact is likely to occur. Keep only in original container. Avoid release into the environment.	
Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a physician or poison control center. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (OR HAIR): Immediately take off all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a physician or poison control center.	
Storage	Absorb spillage to prevent material damage. Collect spillage. Store locked up. Store in corrosive-resistant container with corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F–85°F.	
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Hazards not otherwise classified</b>	Not applicable	
<b>Supplemental information</b>	CAUTION: Protect skin and work surface. Chemical may stain.	

### SECTION 3: Composition/Information on Ingredients

#### Mixture

Chemical name	Common name and synonyms	CAS number	% w/w
Water	Dihydrogen oxide	7732-18-5	80-100
Silver nitrate	Nitric acid silver(I) salt	7761-88-8	10-20

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

### SECTION 4: First-Aid Measures

#### If inhaled

Remove individual to fresh air. Seek medical attention if breathing becomes difficult or if respiratory irritation develops. Give oxygen or artificial respiration if needed.

#### In case of skin contact

Immediately flush skin with plenty of water for at least 20 minutes. If clothing comes in contact with the product, the clothing should be removed and laundered before reuse. Seek medical attention if irritation develops.

#### In case of eye contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. If symptoms persist or in all cases of concern, seek medical advice.

#### If swallowed

Immediately call a physician or poison control center. Rinse mouth. Give 1-2 glasses of water. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.

#### Most important symptoms and effects, both acute and delayed

Direct skin or eye contact may cause corrosive burns. Symptoms may include pain, redness, or swelling. Scarring or permanent damage, including blindness, could result. Contact may produce temporary discoloration of the skin. Inhalation may cause severe respiratory irritation, such as coughing and wheezing. Inhalation could result in pulmonary edema, symptoms—chest pain, shortness of breath—may be delayed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, and bleeding.

Refer to section 11 of the SDS for delayed and immediate effects and chronic effects from short- and long-term exposure.

#### Indication of any immediate medical attention and special treatment needed

Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.

#### General information

Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

### SECTION 5: Firefighting Measures

#### Extinguishing media

Suitable extinguishing media Use extinguishing media appropriate for surrounding fire.

Unsuitable extinguishing media Do not use a heavy water stream. Use of heavy stream of water may spread fire.

#### Specific hazards arising from the substance or mixture

Fire hazard Not flammable

Explosion hazard Not explosive

Reactivity May be corrosive to metals.

Hazardous combustion products Nitrogen oxides. During fire, gases hazardous to health may be formed.

#### Advice for firefighters

Precautionary measures Exercise caution when fighting any chemical fire; hazardous fumes will be present.

Firefighting equipment/instructions Use water spray or fog for cooling exposed containers.

Protection during firefighting Do not enter fire area without proper protective equipment, including respiratory protection.

Other information Refer to section 9 of the SDS for flammability properties.

### SECTION 6: Accidental Release Measures

#### Personal precautions, protective equipment, and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe dust or mists. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.

#### Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

### Methods and material for containment and cleaning up

Ventilate the area. Dike the spilled material where this is possible. Stop leak if it can be done without risk. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth, and place into containers. Prevent entry into waterways, sewers, basements, or confined areas. Following product recovery, flush area with water to remove residual contamination. Never return spills to original containers for reuse. Contaminated absorbent material may pose the same hazards as the spilled product. In the event of large spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

### Reference to other sections

For exposure controls and personal protection, refer to section 8 of the SDS. For waste disposal, refer to section 13 of the SDS.

## SECTION 7: Handling and Storage

### Personal precautions, protective equipment, and emergency procedures

Do not handle until all safety precautions have been read and understood. Do not breathe dust or mists. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

### Conditions for safe storage, including any incompatibilities

Store locked up. Store in corrosive-resistant container with corrosive-resistant inner liner. Keep tightly capped. Store out of direct sunlight between 36°F–85°F. Store away from incompatible materials (refer to section 10 of the SDS). Keep only in original container.

## SECTION 8: Exposure Controls/Personal Protection

### Occupational exposure limits

#### US ACGIH Threshold Limit Values

Components	Type	Value
Silver nitrate (CAS 7761-88-8) as Ag	TWA	0.01 mg/m <sup>3</sup>

#### US NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Silver nitrate (CAS 7761-88-8) as Ag	TWA	0.01 mg/m <sup>3</sup>
Silver nitrate (CAS 7761-88-8) as Ag	IDLH	10 mg/m <sup>3</sup>

#### US OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Silver nitrate (CAS 7761-88-8) as Ag	TWA	0.01 mg/m <sup>3</sup>

### Biological limit values

No biological exposure limits noted for the ingredient(s).

### Exposure controls

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

#### Personal protective equipment

Eye/face protection	Wear appropriate safety glasses with side shields (or goggles) if contact is likely to occur.
Skin protection	Wear appropriate chemical-resistant gloves and clothing if contact is likely to occur.
Body protection	Wear appropriate protective clothing if contact is likely to occur.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

## SECTION 9: Physical and Chemical Properties

### Information on basic physical and chemical properties

Physical state	Liquid
Form	Liquid
Color	Clear, colorless
Odor	Odorless
Odor threshold	No data available

pH	3-5
Evaporation rate	No data available
Melting point	No data available
Freezing point	No data available
Initial boiling point (boiling range)	No data available
Flash point	No data available
Specific gravity	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Flammability (solid, gas)	No data available
Upper Flammability Limit	No data available
Lower Flammability Limit	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility	Miscible with water
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available
Explosive properties	Not explosive
Oxidizing properties	

## SECTION 10: Stability and Reactivity

<b>Reactivity</b>	May be corrosive to metals.
<b>Chemical stability</b>	Stable under recommended handling and storage conditions (refer to section 7 of the SDS).
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials. Do not use in areas without adequate ventilation. Temperature extremes. Store away from combustible materials.
<b>Incompatible materials</b>	Strong oxidizing materials, strong acids. Acetylene, alcohols, ammonia, magnesium, metals, sulfur.
<b>Hazardous decomposition products</b>	No hazardous decomposition products known.

## SECTION 11: Toxicological Information

<b>Information on likely routes of exposure</b>	
Inhalation	Avoid inhalation of this product. Use in a well-ventilated area.
Skin contact	Protect exposed skin from contact. Use caution to avoid splashes.
Eye contact	Avoid close eye contact; use caution to avoid splashes. Wear eye protection.
Ingestion	Do not ingest. Avoid accidental ingestion by observing good hygiene practices. Wash hands thoroughly after handling this product.
<b>Symptoms related to the physical, chemical, and toxicological characteristics</b>	Corrosive skin/eye damage may occur. Contact may produce temporary discoloration of the skin. Refer to section 4 of the SDS for most important symptoms and effects.
<b>Delayed and immediate effects and chronic effects from short- and long-term exposure</b>	
<b>Acute toxicity</b>	This product is not classified as an acute oral toxicity hazard. Acute toxicity estimate (ATE) has been calculated based on chapter 3 of GHS. 0% of the mixture consists of ingredient(s) with unknown acute oral toxicity.
<b>Product acute toxicity estimate (ATE)</b>	
ATEmix (Oral)	> 2500 mg/kg
ATEmix (Dermal)	No data available
ATEmix (Inhalation)	No data available

Component(s)	Species	Acute toxicity data
<b>Silver nitrate (CAS 7761-88-8)</b>		
LD50 (Oral)	Rat	>2000 mg/kg (Source: ECHA)
LD50 (Dermal)	Rabbit	No data available
LC50 (Inhalation)	Rat	No data available
<b>Skin corrosion/irritation</b>	Causes severe skin burns.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<b>Respiratory sensitization</b>	No data available	
<b>Skin sensitization</b>	No data available	
<b>Germ cell mutagenicity</b>	No data available	
<b>Carcinogenicity</b>	May cause cancer	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Not listed		
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)</b>		
Not regulated		
<b>US National Toxicology Program (NTP) Report on Carcinogens</b>		
Not listed		
<b>Reproductive toxicity</b>	No data available	
<b>Specific target organ toxicity (single exposure)</b>	No data available	
<b>Specific target organ toxicity (repeated exposure)</b>	No data available	
<b>Aspiration hazard</b>	No data available	

## SECTION 12: Ecological Information

<b>Ecotoxicity</b>	Very toxic to aquatic life with long lasting effects.	
<b>Silver nitrate (CAS 7761-88-8)</b>		
EC50	Aquatic invertebrates	0.00022 mg/L, 48 hours (ECHA)
LC50	Fish	0.0012 mg/L, 96 hours (ECHA)
<b>Persistence and degradability</b>	No data available	
<b>Bioaccumulative potential</b>	No data available	
<b>Mobility in soil</b>	No data available	
<b>Other adverse effects</b>	Large or frequent spills can have a harmful or damaging effect on the environment.	

## SECTION 13: Disposal Considerations

Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. This material and its container must be disposed of in a safe manner. Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 14: Transport Information

DOT	
UN number	3264
UN Proper shipping name	Corrosive liquid, acidic, inorganic, N.O.S. (Silver nitrate solution)
Reportable Quantity	1lb, Silver nitrate
Class (Subsidiary risk)	8
Label(s)	8
Packing group	II
Special provisions	386, B2, IB2, T11, TP2, TP27
Packaging exceptions	154
Packaging, non-bulk	202
IATA	
UN number	3264
UN Proper shipping name	Corrosive liquid, acidic, inorganic, N.O.S. (Silver nitrate solution)

Class (Subsidiary risk) 8  
Packing group II  
Special provisions A3, A803

#### IMDG

UN number 3264  
UN Proper shipping name Corrosive liquid, acidic, inorganic, N.O.S. (Silver nitrate solution)  
Class (Subsidiary risk) 8  
Packing group II  
Environmental hazards  
Marine pollutant Yes  
Special provisions 274  
EmS F-A, S-B

Special precautions for user Read safety instructions, SDS, and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code This substance/mixture is not intended to be transported in bulk.

DOT hazard pictograms



IATA; IMDG hazard pictograms



## SECTION 15: Regulatory Information

### US federal regulations

#### CERCLA Hazardous Substance (40 CFR 302.4)

Chemical name	CAS number	Reportable Quantity
Silver nitrate	7761-88-8	1 lb

#### SARA 302 Extremely Hazardous Substance (40 CFR 355 Appendices A / B)

Not regulated

#### SARA 304 Emergency Release Notification

Not regulated

#### SARA 311/312 Hazardous Chemical

Chemical name	CAS number
Silver nitrate	7761-88-8

#### SARA 313 (TRI reporting)

Chemical name	CAS number
Silver nitrate	7761-88-8

#### TSCA Section 8(b) Chemical Inventory

All components are on the U.S. EPA TSCA Inventory list.

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated

### Other federal regulations

#### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs)

Not regulated

#### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated

**Clean Water Act, Toxic and Priority Pollutants (40 CFR 401.15 and CFR 423, Appendix A)**

<u>Chemical name</u>	<u>CAS number</u>
Silver nitrate	7761-88-8

**Safe Drinking Water Act (SDWA)**

Not regulated

**US state regulations****California Safe Drinking Water and Toxic Enforcement Act of 1986 (California Proposition 65)**

Not regulated

**Massachusetts Right-to-Know Act**

<u>Chemical name</u>	<u>CAS number</u>
Silver nitrate	7761-88-8

**New Jersey Worker and Community Right-to-Know Act**

<u>Chemical name</u>	<u>CAS number</u>
Silver nitrate	7761-88-8

**Pennsylvania Worker and Community Right-to-Know Act**

<u>Chemical name</u>	<u>CAS number</u>
Silver nitrate	7761-88-8

**Rhode Island Right-to-Know Act**

<u>Chemical name</u>	<u>CAS number</u>
Silver nitrate	7761-88-8

**SECTION 16: Other Information****NFPA Rating**

Health hazard	3
Fire hazard	0
Reactivity	1
Specific	N/A

**Disclaimer**

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**Issue date:**

May 2015

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11/11/2021

**Revision information:**

This document embodies significant change(s) that may impact classification, safe handling, or health information for the associated product(s). The information contained herein should be reviewed in its entirety before handling material.

Identification: Emergency response

Hazard identification: Classification

First-aid: Most important symptoms and effects, both acute and delayed

Toxicological Information: Information on likely routes of exposure

*Supersedes revision dated April 2018.*