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# SAFETY DATA SHEET

Revision Date 20-Aug-2015

Version 1

## 1. IDENTIFICATION

**Product Name** Silver Nitrate Solution, 10% w/v  
**Product Code** 11452  
**Recommended Use** For laboratory, scientific, R&D or manufacturing use.  
**Company** E K Industries, Inc.  
1403 Herkimer St.  
Joliet, IL 60432  
Tel. (800) 283-4244  
**Emergency Telephone** Call CHEMTREC 1-800-424-9300 (EKI CCN 7453)

## 2. HAZARDS IDENTIFICATION

### Classification

#### OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

### Label elements

#### Signal word

Danger

#### Hazard statements

Harmful if swallowed. Causes severe skin burns and eye damage. Very toxic to aquatic life with long lasting effects.



#### Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

#### Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated

clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Collect spillage.

#### Precautionary Statements - Storage

Store locked up.

#### Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%
Silver nitrate	7761-88-8	10

### 4. FIRST AID MEASURES

#### Description of first aid measures

<b>Eye contact</b>	Immediately flush with plenty of water for at least 15 minutes, separating eyelids occasionally. Remove contact lenses if present. Get immediate medical attention.
<b>Skin contact</b>	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
<b>Inhalation</b>	Remove to fresh air. Get medical attention for any breathing difficulty.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Drink 1 or 2 glasses of water. Immediate medical attention is required.

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

<b>Symptoms</b>	Causes skin and eye irritation.
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### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

#### Specific hazards arising from the chemical

No information available.

#### Hazardous combustion products

No information available.

#### Protective equipment and precautions for firefighters

Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive pressure mode.

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Physical and Chemical Properties</b> -
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### 6. ACCIDENTAL RELEASE MEASURES

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

**Personal precautions** Ensure adequate ventilation, especially in confined areas.

**Environmental precautions** Prevent entry into waterways, sewers, basements or confined areas.

#### **Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Absorb spill with inert material, scoop up and containerize for disposal.

### **7. HANDLING AND STORAGE**

**Precautions for safe handling** Use personal protective equipment as required  
Handle in accordance with good industrial hygiene and safety practice.

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible materials** Strong reducing agents. Amines. Alcohols. Bases. Metals.

### **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### **Occupational exposure limits**

<b>Chemical Name</b>	<b>ACGIH TLV</b>	<b>OSHA PEL</b>	<b>NIOSH IDLH</b>
Silver nitrate 7761-88-8	TWA: 0.01 mg/m <sup>3</sup> Ag	TWA: 0.01 mg/m <sup>3</sup> Ag (vacated) TWA: 0.01 mg/m <sup>3</sup> Ag	IDLH: 10 mg/m <sup>3</sup> Ag TWA: 0.01 mg/m <sup>3</sup> Ag

#### **Appropriate engineering controls**

**Engineering Controls** Emergency showers, eyewash stations, ventilation systems.

#### **Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Wear protective gloves and protective clothing.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

### **9. PHYSICAL AND CHEMICAL PROPERTIES**

#### **Information on basic physical and chemical properties**

**Physical state** Liquid  
**Appearance** Clear, colorless  
**Odor** Odorless  
**Odor threshold** No information available

**pH** No information available  
**Melting point / freezing point** No information available  
**Boiling point / boiling range** No information available  
**Flash point** No information available  
**Evaporation rate** No information available  
**Flammability (solid, gas)** No information available  
**Flammability Limit in Air**  
**Upper flammability limit:** No information available

<b>Lower flammability limit:</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Relative density</b>	No information available
<b>Water solubility</b>	Soluble in water
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Kinematic viscosity</b>	No information available

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Possibility of Hazardous Reactions</b>	None under normal processing.
<b>Conditions to avoid</b>	Extremes of temperature and direct sunlight.
<b>Incompatible materials</b>	Strong reducing agents. Amines. Alcohols. Bases. Metals.
<b>Hazardous Decomposition Products</b>	Nitrogen oxides (NOx). Silver/Silver oxides.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation of respiratory tract. May be harmful if inhaled.
<b>Eye contact</b>	Risk of serious damage to eyes.
<b>Skin contact</b>	Contact causes severe skin irritation and burns.
<b>Ingestion</b>	Harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Silver nitrate 7761-88-8	= 1173 mg/kg ( Rat )	-	-

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	Causes severe burns.
<b>Serious eye damage/eye irritation</b>	Risk of serious damage to eyes.
<b>Irritation</b>	Irritating to eyes, respiratory system and skin.
<b>Sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	This chemical does not contain any carcinogens or potential carcinogens as listed by ACGIH, OSHA, IARC or NTP

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Silver nitrate 7761-88-8	-	0.00512 - 0.00787: 96 h Poecilia reticulata mg/L LC50 semi-static 0.009 - 0.02: 96 h Lepomis macrochirus mg/L LC50	0.0006: 48 h Daphnia magna mg/L EC50 0.0008 - 0.001: 48 h Daphnia magna mg/L EC50 Flow through 0.0008 - 0.0011: 48 h Daphnia

		flow-through 0.0242 - 0.0484: 96 h Lepomis macrochirus mg/L LC50 semi-static 0.05 - 0.07: 96 h Lepomis macrochirus mg/L LC50 static 0.001339 - 0.001637: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 0.0075: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 0.00839 - 0.1802: 96 h Oncorhynchus mykiss mg/L LC50 static 0.00452 - 0.00638: 96 h Pimephales promelas mg/L LC50 flow-through 0.00181 - 0.00214: 96 h Pimephales promelas mg/L LC50 static 0.0064 - 0.0106: 96 h Pimephales promelas mg/L LC50 semi-static 0.009: 96 h Pimephales promelas mg/L LC50 0.0027: 96 h Cyprinus carpio mg/L LC50 semi-static	magna mg/L EC50 Static
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**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated packaging**

Do not reuse container. Emptied containers may contain residue. Continue to follow label warnings after container is emptied.

Chemical Name	California Hazardous Waste Status
Silver nitrate 7761-88-8	Toxic

**14. TRANSPORT INFORMATION**

Transportation information is provided as a general reference only and may not be applicable in all situations. This information applies to non-bulk shipments only. Per 49 CFR §173.22, it is the shipper's responsibility to ensure that all materials are properly packaged, classified and labeled prior to shipment.

**DOT**

Not regulated

**IATA**

Not regulated

**15. REGULATORY INFORMATION**

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
Silver nitrate - 7761-88-8	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard	Yes
Chronic Health Hazard	Yes
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Silver nitrate 7761-88-8	1 lb	X	-	X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Silver nitrate 7761-88-8	1 lb	-	RQ 1 lb final RQ RQ 0.454 kg final RQ

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Silver nitrate 7761-88-8	X	X	X

<b>16. OTHER INFORMATION</b>
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Prepared By EKI Regulatory Affairs (Email: reg@eki-chem.com)  
Revision Date 20-Aug-2015

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**End of Safety Data Sheet**