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# SAFETY DATA SHEET

Revision Date 14-Jul-2015

Version 1

## 1. IDENTIFICATION

**Product Name** Silver Nitrate  
**Product Code** 7844  
**CAS No.** 7761-88-8  
**Chemical Formula** AgNO<sub>3</sub>  
**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
Oxidizing solids	Category 2

### Label elements

#### **Signal word**

Danger

#### **Hazard statements**

Harmful if swallowed. Causes severe skin burns and eye damage.  
May intensify fire; oxidizer.



#### **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. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep/Store away from clothing/ combustible materials. Take any precaution to avoid mixing with combustibles.

**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.

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction.

**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	100

### 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>	Wash thoroughly with soap and water while removing contaminated garments. Get medical attention if irritation develops.
<b>Inhalation</b>	Remove to fresh air. Get medical attention for any breathing difficulty.
<b>Ingestion</b>	Do NOT induce vomiting unless instructed to do so by medical personnel. If conscious, rinse mouth and give several glasses of water to drink. Never give anything by mouth to an unconscious person. Get immediate medical attention.

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

**Symptoms** Causes skin and eye irritation/burns. If swallowed, causes GI disturbances.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Water spray (fog) Carbon dioxide (CO<sub>2</sub>) Dry chemical Foam

**Specific hazards arising from the chemical**

Strong oxidizer - will react vigorously or explosively with many materials including fuels.

**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.

**NFPA****Health hazards** 3**Flammability** 0**Instability** 2**Physical and Chemical Properties** OX

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation, especially in confined areas. Avoid creating dust.

### 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** Sweep up and shovel into suitable containers for disposal.

## 7. HANDLING AND STORAGE

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

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

**Incompatible materials** Strong acids. Bases. Alcohols. Ammonia.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Occupational exposure limits

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
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** Solid  
**Appearance** White  
**Odor** Odorless  
**Odor threshold** No information available

**pH** No information available  
**Melting point / freezing point** 212 C  
**Boiling point / boiling range** 444 C  
**Flash point** No information available  
**Evaporation rate** No information available  
**Flammability (solid, gas)** No information available

**Flammability Limit in Air**

<b>Upper flammability limit:</b>	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>	4.350
<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 acids. Bases. Alcohols. Ammonia.
<b>Hazardous Decomposition Products</b>	None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

<b>Inhalation</b>	Harmful by inhalation.
<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 )	-	-

**Information on toxicological effects****Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<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	0.0006: 48 h Daphnia magna mg/L EC50 0.0008 - 0.001: 48 h Daphnia

		0.009 - 0.02: 96 h Lepomis macrochirus mg/L LC50 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 Flow through 0.0008 - 0.0011: 48 h Daphnia 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**

<b>UN/ID no.</b>	UN1493
<b>Proper shipping name</b>	Silver nitrate
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	II
<b>Reportable Quantity (RQ)</b>	1 lb

**IATA**

<b>UN/ID no.</b>	UN1493
<b>Proper shipping name</b>	Silver nitrate

Hazard Class 5.1  
Packing Group II

## 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	No
Chronic Health Hazard	No
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

## 16. OTHER INFORMATION

Prepared By  
Revision Date  
Disclaimer

EKI Regulatory Affairs (Email: reg@eki-chem.com)  
14-Jul-2015

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**End of Safety Data Sheet**