

Safety Data Sheet
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Silver Nitrate, ACS	
NCL Catalog Number	S-17	
Product Description	Laboratory chemical	
Manufacturer	EMD Chemicals Inc.	PO Box 70, 480 Democrat Road Gibbstown, NJ 08027
Supplier	NCL of Wisconsin, Inc. Telephone: 1-800-648-7836 Email: nclabs@nclabs.com	PO Box 8, Birnamwood, WI 54414 Fax: 715-449-2454 Emergency Contact: 1-800-424-9300 (Chemtrec)

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification

Oxidizing Solids	Category 2
Acute Toxicity	Oral Category 4
Skin Corrosion	Category 1B
Serious Eye Damage	Category 1
Aquatic Acute	Category 1
Aquatic Chronic	Category 1



Signal Word
Hazard Statements

	Danger
H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220	Keep away from clothing and other combustible materials.
P260	Do not breathe dust.
P264	Wash exposed skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P312	Call a POISON CENTER or doctor if you feel unwell.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER or doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P370+P378	In case of fire: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide to extinguish.
P391	Collect spillage.

P405
P501

Store locked up.
Dispose of contents/container to comply with local, state and federal regulations.

Other Information

None under normal conditions.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Identity

AgNO₃

Synonyms

Nitrate of silver, nitric acid silver salt, nitric acid silver.

Substance

Name	CAS #	Approximate %
Silver Nitrate	7761-88-8	100

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General First Aid Measures

Never give anything by mouth to an unconscious person. Seek medical advice if you feel unwell.

If Inhaled

Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor if you feel unwell.

In Case of Skin Contact

Remove contaminated clothing and shower/wash exposed skin with mild soap and water. Rinse with warm water. Immediately call a POISON CENTER or doctor.

In Case of Eye Contact

Immediately flush eyes with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately Call a POISON CENTER or doctor.

If Swallowed

Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.

Most Important Symptoms/Effects Acute and Delayed

After Skin Contact

Tingling/irritation of the skin. Caustic burns/corrosion of the skin.

After Eye Contact

Irritation of the eye tissue. Inflammation/damage of the eye tissue. Corrosion of the eye tissue on continuous exposure.

Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical advice.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Foam. Dry powder. Sand. Carbon dioxide. Water spray.

Unsuitable Extinguishing Media

Do not use high pressure water stream.

Special Hazards Arising from the Chemical

Thermal decomposition generates corrosive vapors.

Special Protective Actions for Fire-Fighters

Wear self-contained breathing apparatus and protective clothing. Keep exposed containers cool with water spray.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions

Use personal protective equipment (see section 8). Safety glasses, gloves, gas/dust mask. Evacuate area of non-essential personnel. Eliminate ignition sources.

Environmental Precautions

Prevent entry to surface and ground waters.

Methods and Materials for Containment and Cleaning Up

Sweep up into closing containers. Collect spillage. Store away from other materials. Ensure compliance with local, state and federal regulations.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

**Conditions for Safe Storage
Including any Incompatibilities**

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Store separate from strong reducing agents.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Silver Nitrate (7761-88-8)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.01 mg/m ³
USA OSHA	OSHA PEL TWA (mg/m ³)	0.01 mg/m ³

Appropriate Engineering Controls

Material should be handled or transferred in a fume hood or with equivalent ventilation. Maintain eye-wash fountain and quick-drench facilities in work area.

Individual Protection Measures

Avoid all unnecessary exposure.

Eye/Face Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye-wash fountain and quick-drench facilities in work area.

Skin Protection

Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

Respiratory Protection

Wear appropriate mask.

Other Information

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

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid, crystalline
Color	Colorless to grey
Molecular Weight	169.88 g/mol
Odor	Odorless
Odor Threshold	Not determined
pH	Not determined
Melting Point/Freezing Point	211.9°C
Initial Boiling Point and Boiling Range	Not determined
Flash Point	Not determined
Evaporation Rate	Not determined
Flammability (Solid, Gas)	Not determined
Upper/Lower Flammability/Explosive Limits	Not determined
Vapor Pressure	Not determined
Vapor Density	Not determined
Relative Density	4.35
Solubility	Easily soluble in water
Partition Coefficient: n-octanol/water	Not determined
Auto-Ignition Temperature	Not determined
Decomposition Temperature	443.9 °C
Viscosity	Not determined

SECTION 10: STABILITY AND REACTIVITY

Reactivity	No data available
Chemical Stability	Stable under ordinary conditions of use and storage.
Possibility of Hazardous Reactions	No data available

Conditions to Avoid	No data available
Incompatible Materials	Strong reducing agents
Hazardous Decomposition Products	When heated to decomposition, can emit toxic gases (oxides of nitrogen).

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity	Harmful if swallowed.
Silver Nitrate (7761-88-8)	
LD50 oral rat	1173 mg/kg
Skin Corrosion/Irritation	Causes severe skin burns.
Serious Eye Damage/Irritation	Causes serious eye damage.
Respiratory or Skin Sensitization	Not classified
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
Specific Target Organ Toxicity (Single Exposure)	Not classified
Specific Target Organ Toxicity (Repeated Exposure)	Not classified
Aspiration Hazard	Not classified
Potential Adverse Human Health Effects and Symptoms	No data available
After Skin Contact	Tingling/irritation of the skin. Caustic burns/corrosion of the skin.
After Eye Contact	Irritation of the eye tissue. Inflammation/damage of the eye tissue. Corrosion of the eye tissue on continuous exposure.
After Ingestion	Harmful if swallowed.
Other Information	Not available

SECTION 12: ECOLOGICAL INFORMATION

Ecology – Water Toxicity Very toxic to aquatic life with long lasting effects.

Silver Nitrate (7761-88-8)	
LC50 fish 1	0.0039 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	0.0006 mg/l (48 h; Daphnia magna)
LC50 fish 2	0.006 mg/l (96 h; Salmo gairdneri)
EC50 Daphnia 2	0.006 mg/l (48 h; Crangon)
Threshold limit other aquatic organisms 1	0.006 mg/l (Pseudomonas putida)
Threshold limit algae 1	0.0007 mg/l (Microcystis aeruginosa)
Threshold limit algae 2	0.0095 mg/l (Scenedesmus quadricauda)

Persistence and Degradability	Not established.
Bioaccumulative Potential	BCF fish 1: 11-19 (Micropterus salmoides) BCF fish 2: 15-150 (Lepomis macrochirus) Log Pow: 0.19 Bioaccumulative Potential (Low potential for bioaccumulation (BCF < 500))
Mobility in Soil	Not established
Other Adverse Effects	Avoid release to the environment. Very toxic to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS

Methods of Disposal

Disposal Recommendations Dispose of contents/containers in accordance with local, state and federal regulations.

Other Information Avoid release to the surrounding environment.

SECTION 14: TRANSPORT INFORMATION

UN Number 1493

UN Shipping Name Silver Nitrate

Transport Hazard Class(es) 5.1 – Oxidizing substances

Packing Group II – Medium Danger

Environmental Hazards Not applicable

Transport in Bulk Not applicable

Other Precautions Not applicable

SECTION 15: REGULATORY INFORMATION

Silver Nitrate (7761-88-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard, Reactivity Hazard, Chronic Health Hazard

SECTION 16: OTHER INFORMATION

Revision Date: 04/09/2015

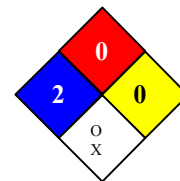
NFPA Hazards

Health Hazard 2: Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury.

Fire Hazard 0: Materials that will not burn under typical fire conditions.

Reactivity/Instability 0: Normally stable, even under fire exposure conditions.

Special Hazard I OX: Oxidizer, allows chemicals to burn without an air supply.



HMIS III Rating

Health 2: Temporary or minor injury may occur.

Flammability 0: Materials that will not burn.

Physical Hazard 0: Materials that are normally stable

Personal Protection F

S-17	
Health	2
Flammability	0
Physical Hazard	0
Personal Protection	F

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END OF SAFETY DATA SHEET