



SAFETY DATA SHEET

VWR ANALYTICAL

Issuing Date 20-Jul-2012

Revision Date 11-Feb-2015

Revision Number 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name SILVER NITRATE

Other means of identification

Product Code(s) BDH9276-125G : BDH9276-500G

UN-No 1493

Synonyms No information available.

Recommended use of the chemical and restrictions on use

Recommended Use For Laboratory Use Only. Not for Drug, Food, or Household use.

Uses advised against Not for Human or Animal Drug Use

Details of the supplier of the safety data sheet

Company Address

VWR International, LLC
Radnor Corporate Center
100 Matsonford Road
Radnor, PA 19087-8660

Company Phone Number 610-386-1700

E-mail Address www.vwr.com

Emergency Telephone Number

Emergency Telephone Number CHEMTREC 800.424.9300
CANUTEC 613.996.6666

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

Emergency Overview

Danger

Hazard Statements

H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage



Appearance Fine White

Physical State Crystalline Powder

Odor No information available

Precautionary Statements

P260 - Do not breathe dust/fume/gas/mist/vapors/spray

P264 - Wash face, hands and any exposed skin thoroughly after handling

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

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/physician

P321 - Specific treatment (see supplemental first aid instructions on this label)

P330 - Rinse mouth

P363 - Wash contaminated clothing before reuse

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

- Very toxic to aquatic life with long lasting effects
- Very toxic to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	EC No.	Weight %	Trade Secret
Silver nitrate	7761-88-8	231-853-9	95-100	Not applicable

4. FIRST AID MEASURES

First Aid Measures

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin Contact	Wash off immediately with plenty of water.
Inhalation	Move to fresh air in case of accidental inhalation of vapors or decomposition products. Apply artificial respiration if victim is not breathing.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Water spray.

Unsuitable Extinguishing Media No information available.

Specific Hazards Arising from the Chemical

No information available.

Hazardous Combustion Products Nitrogen oxides (NOx). Silver/Silver oxide.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Environmental Precautions

Environmental Precautions See Section 12 for additional Ecological information.

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 Avoid dust formation. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling Light Sensitive. Moisture sensitive. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Keep container tightly closed in a dry and well-ventilated place. Protect from light. Protect from moisture.

Incompatible Products

Chlorides. Carbonates. Isocyanates. Ferrous Salts. Chlorosulfonic Acid. Arsenic Powder. Fluorine. Sodium chlorate. Reaction with Acetaldehyde, Acetylene or other terminal alkynes may produce explosive compounds. A dry mixture of powdered magnesium and silver nitrate has been reported to ignite explosively on contact with a drop of water. A mixture with charcoal ignites when struck ,while mixtures with phosphorous or sulfur explode when struck. passage of phoshine gas into a solution of silver nitrate resulted in an explosion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Silver nitrate 7761-88-8	TWA: 0.01 mg/m ³	TWA: 0.01 mg/m ³	IDLH: 10 mg/m ³ TWA: 0.01 mg/m ³

Appropriate engineering controls

Engineering Measures

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection

Safety glasses with side-shields. Face-shield.

Skin and Body Protection

Wear protective gloves/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.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State

Crystalline Powder

Appearance

Fine White

Color

No information available

Odor

No information available

Odor Threshold

No information available

Property

Values

Remarks • Method

pH

No information available.

Melting point/freezing point

212 °C

Boiling Point/Range

No information available. °C

Flash Point (High in °C)

No information available.

Evaporation Rate

No information available

Flammability (solid, gas)

No information available

Flammability Limit in Air

Upper flammability limit:

No information available.

Lower flammability limit:

No information available.

Vapor pressure

No information available.

Vapor Density

No information available.

Specific Gravity

No information available

Water Solubility

No information available

Solubility in other solvents

No information available.

Partition coefficient

No information available

Autoignition Temperature

No information available

Decomposition Temperature

No information available

Kinematic viscosity No information available
Dynamic viscosity No information available.
Explosive Properties No information available
Oxidizing Properties No information available

Other Information

Softening Point No information available.
Molecular Weight No information available
VOC Content No information available.
Density 4.35
Bulk Density No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

Protect from light and moisture. Protect from moisture.

Incompatible Materials

Chlorides. Carbonates. Isocyanates. Ferrous Salts. Chlorosulfonic Acid. Arsenic Powder. Fluorine. Sodium chlorate. Reaction with Acetaldehyde, Acetylene or other terminal alkynes may produce explosive compounds. A dry mixture of powdered magnesium and silver nitrate has been reported to ignite explosively on contact with a drop of water. A mixture with charcoal ignites when struck ,while mixtures with phosphorous or sulfur explode when struck. passage of phosphine gas into a solution of silver nitrate resulted in an explosion.

Hazardous Decomposition Products

Nitrogen oxides (NOx). Silver/Silver oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Corrosive, causes burns Harmful if swallowed

Inhalation There is no data available for this product.

Eye Contact There is no data available for this product.

Skin Contact There is no data available for this product.

Ingestion There is no data available for this product.

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

Information on toxicological effects

Symptoms No information available.

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

Sensitization No information available.
Mutagenic Effects No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Silver nitrate 7761-88-8	-	Group 2A	-	-

Reproductive Toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Chronic Toxicity Prolonged or repeated exposure increases the risk.
Target Organ Effects Throat, Nasal Septum, Fingernails, Eyes, Skin.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

12. ECOLOGICAL INFORMATION

Ecotoxicity

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to Algae	Toxicity to Fish	Daphnia Magna (Water Flea)
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 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	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 magna mg/L EC50 Static

Persistence and Degradability

No information available.

Bioaccumulation/Accumulation

No information available.

Chemical Name	Log Pow
Silver nitrate 7761-88-8	-

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method Dispose of contents/container in accordance with local regulation.

Contaminated Packaging Do not re-use empty containers.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Silver nitrate 7761-88-8	-	-	-	-

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

14. TRANSPORT INFORMATION

DOT

UN-No 1493
Proper Shipping Name SILVER NITRATE
Hazard Class 5.1
Packing Group II

IATA

UN-No 1493
Proper Shipping Name SILVER NITRATE
Hazard Class 5.1
Packing Group II

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL/NDL Complies
EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECL Complies
PICCS Complies
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

U.S. 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:

Component	SARA 313 - Threshold Values %
Silver nitrate 7761-88-8 (95-100)	-

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

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	Extremely Hazardous Substances RQs	RQ
Silver nitrate 7761-88-8	1 lb	-	RQ 1 lb final RQ RQ 0.454 kg final RQ

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

Chemical Name	California Prop. 65
Silver nitrate - 7761-88-8	-

U.S. State Right-to-Know Regulations

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

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

Canada

WHMIS Hazard Class

C Oxidizing materials D2A Very toxic materials E Corrosive material



16. OTHER INFORMATION

Issuing Date 20-Jul-2012

Revision Date 11-Feb-2015

Revision Note

No information available

Disclaimer

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and its Affiliates shall not be held liable for any damage resulting from handling.

End of Safety Data Sheet