SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Silver Nitrate
CAS number	7761-88-8
Synonyms	Not available

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Oxidizing solids : Category 2

Corrosive to Metals : Category 1
Skin corrosion : Category 1A
Serious eye damage : Category 1
Reproductive toxicity : Category 1B
Short-term (acute) aquatic hazard: Category 1
Long-term (chronic) aquatic hazard: Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word DANGER

Hazard statements
H272 May intensify fire; oxidizer.
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H360 May damage fertility or the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements	**Prevention:** P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P210 Keep away from heat. P220 Keep/Store away from clothing/ combustible materials. P221 Take any precaution to avoid mixing with combustibles. P234 Keep only in original container. P260 Do not breathe dust. P264 Wash skin thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. **Response:** P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immedi-ately call a POISON CENTER/ doctor. P305 + P351 + P338 + P310 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/ doctor. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P363 Wash contaminated clothing before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. P390 Absorb spillage to prevent material damage. P391 Collect spillage. **Storage:** P405 Store locked up. P406 Store in corrosive resistant container with a resistant inner liner. **Disposal:** P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None known.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Silver Nitrate	-	7761-88-8	95 - 100%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice	First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.
If inhaled	After inhalation: fresh air. Call in physician.
In case of skin conta	In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.
In case of eye conta	After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.
If swallowed	After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed
Protection of first-aiders : For personal protection see section 8.
Notes to physician : No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	For this substance/mixture no limitations of extinguishing agents are given.

5.2 Specific hazards arising from the substance or mixture
Container explosion may occur under fire conditions.Not combustible.
Has a fire-promoting effect due to release of oxygen.
Ambient fire may liberate hazardous vapours.

5.3 Special protective equipment and precautions for firefighters
Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Specific hazards during fire fighting	Container explosion may occur under fire conditions.

5.4 Further information Suppress (knock down) gases/vapors/mists with a water spray jet.
Prevent fire extinguishing water from contaminating surface water or the ground water system.

5.5 Hzardous Combustion products	Nitrogen oxides (NOx), Silver/silver oxides

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections
See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
For precautions see section 2.2.
Advice on protection against fire and explosion
Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling
Work under hood. Do not inhale substance/mixture.
Conditions for safe storage
No metal containers.
Further information on storage conditions
Tightly closed. Keep locked up or in an area accessible only to qualified or authorized persons. Do not store near combustible materials.
Storage class
5.1B, Oxidizing hazardous materials
Recommended storage temperature
Recommended storage temperature see product label.

Further information on storage stability
Light sensitive.
Packaging material
Suitable material: Amber Glass Bottle/Jar, LDPE Bottle/Jar

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

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

Component	Type	Value
Silver Nitrate	TWA	0.01 mg/m3 (Silver)

US. ACGIH Threshold Limit Values

Component	Type	Value
Silver Nitrate	TWA	0.01 mg/m3 (Silver)

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Silver Nitrate	TWA	0.01 mg/m3 (Silver)

Biological occupational exposure limits
Not available

8.2 Exposure controls

Appropriate engineering controls
No data available

Personal protective equipment

Eye/face protection
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection
protective clothing

Body Protection
protective clothing

Respiratory protection
required when dusts are generated.

Hygiene measures
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid	
Appearance	Crystalline	
Odor	Odorleess	
Odor Threshold	Not applicable	
pH	No data available	
Melting Point/Range	414 °F / 212 °C	Method: dec.
Boiling Point/Range	824 °F / 440 °C	Decomposes on heating.
Evaporation Rate	No data available	
Flammability (solid)	No data available	
Flammability or explosive limit		
Upper	No data available	
Lower	No data available	
Vapor Pressure	No data available	

Vapor Density	No data available
Density	4.350 g/cm3
Solubility	2,150 g/l (68 °F / 20 °C)
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No data available
Decomposition Temp	No data available
Viscosity	No data available
Molecular Formula	AgNO3
Molecular Weight	169.87 g/mol
VOC Content(%)	No data available
Oxidizing properties	The substance or mixture is classified as oxidizing with the category 2.

9.2 Other safety information
Not available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions
Decomposes on exposure to light.

10.4 Conditions to avoid
Light.

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Silver Nitrate	No data available	No data available	No data available

Skin corrosion/irritation
Skin - reconstructed human epidermis (RhE) Result: Causes severe burns. - 3 - 60 min (OECD Test Guideline 431)

Serious eye damage/eye irritation
Eyes - Rabbit Result: Causes serious eye damage. Remarks: (ECHA)
Remarks: Risk of permanent damage due to staining of the cornea.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
Test Type: Micronucleus test Test system: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 487 Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: Positive results were obtained in some in vitro tests. Test Type: Micronucleus test Species: Rat Application Route: Gavage Method: OECD Test Guideline 474 Result: Positive results were obtained in some in vivo tests.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Silver Nitrate	7761-88-8	0.10%	0.10%	-	0.10%	-

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, NTP, OSHA.
Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure
No data available

Reproductive toxicity
May damage the unborn child.

Chronic effects
No data available

11.2 Additional Information
Repeated dose toxicity - Rat - male and female - Oral - 52 Days - NOAEL (No observed adverse effect level) - >= 250 mg/kg RTECS: VW4725000 May cause argyria (a slate-gray or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver)., Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish
LC50 (Pimephales promelas (fathead minnow)): 0.0012 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Method: US-EPA

Toxicity to daphnia and other aquatic invertebrates
EC50 (Daphnia magna (Water flea)): 0.00022 mg/l
End point: mortality
Exposure time: 48 h
Test Type: semi-static test Analytical monitoring: yes
Remarks: (ECHA)

Toxicity to algae/aquatic plants
ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0.00252 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
EC10 (Raphidocelis subcapitata (freshwater greenalga)): 0.00046 mg/l
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity)
1,000

Toxicity to fish (Chronic toxicity)
NOEC (Pimephales promelas (fathead minnow)):
0.000351 mg/l
Exposure time: 34 d
Test Type: flow-through test
Analytical monitoring: yes
GLP: yes
Remarks: (ECHA)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
EC10 (Daphnia magna (Water flea)): 0.0027 mg/l Exposure time: 21 d Test Type: semi-static test Analytical monitoring: yes
Remarks: (ECHA)

M-Factor (Chronic aquatic toxicity)
100

12.2 Persistence and degradability
Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bio accumulative potential
Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 70 Exposure time: 41 d Temperature: 68 °F / 20 °C

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
No data available

12.6 Endocrine disrupting properties
No data available

12.7 Other adverse effects
Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)
UN/ID/NA number : UN 1493
Proper shipping name : Silver nitrate
Class : 5.1
Packing group : II
Labels : Division 5.1 - Oxidizing substances
ERG Code : 140
Marine pollutant : no
Poison Inhalation Hazard : No

IMDG
UN/ID/NA number : UN 1493
Proper shipping name : Silver nitrate
Class : 5.1
Packing group : II
Labels : 5.1
EmS Code : F-A, S-Q
Marine pollutant : yes
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

IATA
UN/ID/NA number : UN 1493
Proper shipping name : Silver nitrate
Class : 5.1
Packing group : II
Labels : Division 5.1 - Oxidizing substances
Packing instruction (cargo aircraft) 562
Packing instruction (passenger aircr 558
Poison Inhalation Hazard : No

Special precautions for user
The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

US federal regulatio This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
No substances are subject to a Significant New Use Rule. No substances are subject to TSCA 12(b) export notification requirements.

CERCLA Hazardous Substance List (40 CFR 302.4)
Component RQ (lbs) 1

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
This material does not contain any components with a section 304 EHS RQ

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazardous
Reactivity Hazard. Acute Health Hazard

SARA 313 (TRI reporting)
The following components are subject to reporting levels established by SARA Title III, Section 313: Silver nitrate 7761-88-8 >= 90 - <= 100 %

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act
Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Not listed.

Clean Air Act
This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act
The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A: Silver nitrate 7761-88-8 >= 90 - <= 100 %. The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table 117.3: Silver nitrate 7761-88-8 >= 90 - <= 100 % .This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307 Silver nitrate 7761-88-8 >= 90 - <= 100 %. This product does not contain any priority pollutants related to the U.S. Clean Water Act.

US state regulations

US. Massachusetts RTK - Substance List
Silver nitrate 7761-88-8

US. New Jersey Worker and Community Right-to-Know Act
Silver nitrate 7761-88-8

Vermont Chemicals of High Concern
Product does not contain any listed chemicals

Maine Chemicals of High Concern
Product does not contain any listed chemicals

Washington Chemicals of High Concern
Product does not contain any listed chemicals

The ingredients of this product are reported in the following inventories: TSCA :
All substances listed as active on the TSCA inventory

California Proposition 65
Not listed.

SECTION 16: Other information

Issue date: 4/16/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.