

Safety Data Sheet

SILVER NITRATE CRYSTALS

Section 1 - Chemical Product and Company Identification

SDS Name: Silver Nitrate Crystals

Catalog Numbers: SO-625

Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.
10 ELECTRONICS AVENUE
DANVERS, MA 01923

For information, call: 978-739-4883

Emergency Number: 800-424-9300

For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications

H272-Oxidizing solids: 2

H290-Corrosive to metals: 1

H303-Acute toxicity, oral: 5

H313-Acute toxicity, dermal: 5

H314-Skin corrosion/irritation: 1B

H318-Serious eye damage/eye irritation: 1B

H335-Specific target organ toxicity, single exposure; Respiratory tract irritation: 3

H373-Specific target organ toxicity, repeated exposure: 2

Pictograms or Hazard Symbols and Hazard Statement(s):



Signal word: Danger

Hazard Statements:

H272-May intensify fire; oxidizer
H290-May be corrosive to metals
H303-May be harmful if swallowed
H313-May be harmful in contact with skin
H314-Causes severe skin burns and eye damage
H318-Causes serious eye damage
H335-May cause respiratory irritation
H373-May cause damage to organs through prolonged or repeated exposure (target organs: kidney and liver)

Precautionary Statements:

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/fume/gas/mist/vapours/spray.
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.
P264-Wash thoroughly after handling.
P271-Use only outdoors or in a well-ventilated area.
P280-Wear protective gloves/protective clothing/eye protection/face protection.
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.
P312-Call a Poison Center or doctor/physician if you feel unwell.
P314-Get medical advice/attention if you feel unwell.
P363-Wash contaminated clothing before reuse.
P370+P378-In case of fire: Use dry chemical, dry sand, water spray, or alcohol-resistant foam to extinguish.
P390-Absorb spillage to prevent material damage.
P403+P233-Store in a well-ventilated place. Keep container tightly closed.
P405-Store locked up.
P406-Store in corrosive resistant/container with a resistant inner liner.
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7761-88-8	Silver Nitrate	>95

Section 4 - First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Seek immediate medical attention.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek immediate medical attention.

Oral Exposure: If swallowed, seek immediate medical advice. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal burns and perforation of the digestive tract. Do NOT induce vomiting. Rinse mouth with water and, after rinsing, drink water.

Inhalation Exposure: If inhaled, remove to fresh air. See immediate medical attention.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use dry chemical, dry sand, water spray, or alcohol-resistant foam.

Hazardous Combustion Products: Nitrogen oxides, silver/silver oxides, irritating toxic fumes and gases.

Flash Point: Not available

Auto ignition Temperature: Not available

Explosion Limits, Lower: Not available

Upper: Not available

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 2

Note: This is corrosive material. It is an oxidizer: contact with combustible/organic material may cause fire. It may ignite combustibles (wood, paper, oil, clothing, etc).

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Avoid dust formation.

Methods for Cleaning up: Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Avoid dust formation. Keep material away from combustibles (wood, paper, oil, clothing, etc). Do not release to the environment. Do not release to drains.

Section 7 - Handling and Storage

Use care when handling. Use only under a chemical fume hood. Wear personal protective equipment. Avoid contact with skin, eyes, and clothing. Do not breathe (dust, vapors, gas, mist). Store tightly closed in a non-metal container. Keep in a cool, dry, and well-ventilated area. **Light sensitive.** Keep away from combustibles (wood, paper, oil, clothing, etc). Keep away from incompatible materials. Protect from heat.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits:

Chemical Name	ACGIH	NIOSH	OSHA
Silver Nitrate CAS#7761-88-8	0.01 mg/m3 TWA	0.01 mg/m3 TWA 10 mg/m3 IDLH	0.01 mg/m3 TWA (vacated)

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: White, crystalline
Odor: Odorless
Vapor Pressure: Not available
Odor threshold: Not available
Vapor Density: Not applicable
pH: 5.4-6.4 (10% Aqueous Solution)
Relative density: Not available
Melting point/freezing point: 212°C
Solubility: Soluble in water
Boiling Point: 444°C at 760 mmHg
Flash point: Not available
Evaporation Rate: Not applicable
Flammability (solid, gas): Not available
Partition coefficient: n-octanol/water: log Pow: 5
Auto-ignition temperature: Not available
Decomposition temperature: >444°C
Viscosity: Not applicable
Specific Gravity/Density: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. **Light sensitive. Oxidizer.** Contact with combustibles/organic materials (wood, paper, clothing, oil, etc) may cause fire.
Conditions to Avoid: Incompatible materials, ignition sources, excess heat, and combustible material. Exposure to light. Avoid dust formation.
Incompatible Materials: Strong oxidizing agents, strong reducing agents, combustible material, metals, amines, aluminum, and mild steel metals.
Hazardous Decomposition Products: Nitrogen oxides, silver/silver oxides, irritating toxic fumes and gases.

Section 11 - Toxicological Information

CAS#7761-88-8 Silver Nitrate: RTECS#: VW4725000

LD50 Oral: >2000 mg/kg (rat)
LD50 Dermal: >2000 mg/kg (rat)
LC50 Inhalation: >750 µg/m³ 4h (rat)

Carcinogenicity: Silver Nitrate CAS#7761-88-8 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop 65.

Epidemiology: Not available
Teratogenicity: Not available
Reproductive Effects: Not available
Developmental Effects: Not available
Neurotoxicity: Not available
Mutagenicity: Not available
Specific Target Organ Toxicity, Single Exposure: Respiratory system.
Specific Target Organ Toxicity, Repeated Exposure: Kidney and liver.

Note: Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Delayed and immediate effects as well as chronic effects from short and long-term exposure. Causes burns by all exposure routes. Corrosive material. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains. Very toxic to aquatic life. May cause long-term adverse effects in the aquatic environment.

CAS#7761-88-8 Silver Nitrate:

LC50, freshwater fish: 0.029 mg/L 96h (leuciscus idus)
EC50, water flea: 0.0006 mg/L 48h
EC50, microtox: 0.038 mg/L (photobacterium phosphoreum) 24h
EC50, micotox: 0.395 mg/L (photobacterium phosphoreum) 15min

Persistence and degradability: Not available
Bio-accumulative potential: Not available
Mobility: Will likely be mobile in the environment due to its water solubility.

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 – Transport Information

DOT

Proper shipping name: Silver nitrate

UN1493

PG II

Hazard class 5.1

Section 15 - Regulatory Information

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information

SDS Creation Date: 8-11-21

Revision #1. 5-9-22

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