Safety Data Sheet

For Compliance with OSHA 29 CFR 1910.1200 and ANSI Z400.1-1998

Section 1: Identification

Product Name	Silver nitrate USP
Commercial Name	N/A
Product Use	Laboratory chemicals, manufacture of substances
Restrictions On Use	N/A
Product Code	50-1293

Company

PCCA
9901 South Wilcrest
Houston, TX 77099
Phone: 1-800-331-2498
Fax: 1-800-874-5760

In case of emergency contact:
CHEMTREC (24hr) 1-800-424-9300

Section 2: Hazard(s) Identification

OSHA Haz Com: CFR 1910.1200
Oxidizing solids Category 2 Corrosive to metals Category 1 Skin Corrosion/Irritation Category 1 B Serious Eye Damage/Eye Irritation Category 1 Specific target organ toxicity (single exposure) Category 3 Target Organs - Respiratory system. Specific target organ toxicity - (repeated exposure) Category 2 Target Organs - Liver, Kidney.

Signal Word
DANGER

Hazard Statement(s)
May intensify fire; oxidiser. May be corrosive to metals. Harmful if swallowed. Causes severe skin burns and eye damage. Very toxic to aquatic life with long lasting

Pictogram(s) or Symbol(s)

Precautionary Statement(s):

Prevention
Keep only in original container Do not get in eyes, on skin, or on clothing Do not breathe dust/fume/gas/mist/vapors/spray Wash face, hands and any exposed skin thoroughly after handling Use only outdoors or in a well-ventilated area Keep/Store away from clothing/ other combustible materials Take any precaution to avoid mixing with combustibles Wear protective gloves/protective clothing/eye protection/face protection

Response
Immediately call a POISON CENTER or doctor/physician IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing IF SWALLOWED: Rinse mouth. DO NOT induce vomiting In case of fire: Use CO_2, dry chemical, or foam for extinction

Storage
Store locked up Store in a well-ventilated place. Keep container tightly closed

Disposal
Dispose of contents/container to an approved waste disposal plant Very toxic to aquatic life with long lasting effects

Section 3: Composition/Information on Ingredients

Substance/Mixture	Substance
Components	Silver nitrate
% By Weight	100
CAS#	7761-88-8
Molecular Weight	169.87 g/mole
Chemical Formula	$AgNO_3$
Synonym(s)	*Sliver (1+) nitrate* Nitric acid, silver (1+) salt*

Mixtures

Name	CAS#	% by Weight	TLV/PEL	LC50/LD50
Silver nitrate	7761-88-8	100	TWA:0.01(mg/m3)	ORAL (LD50): Acute: 1173mg/kg [Rat]. 50mg/kg [Mouse]. 473 mg/kg [Guinea pig].

Section 4: First-Aid Measures

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a physician or poison control center immediately.

Skin Contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required

Ingestion Do NOT induce vomiting. Call a physician or poison control center immediately

Symptoms/Effects

Acute Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Delayed Causes burns by all exposure routes. . Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Immediate Medical Attention

Treat symptomatically.

Section 5: Fire-Fighting Measures

Suitable Extinguishing Media

Substance is nonflammable; use agent most appropriate to extinguish surrounding fire

Unsuitable Extinguishing Media

Carbon dioxide (CO_2)

Products of Combustion

Nitrogen oxides (NOx) Corrosive material. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition

Firefighters Special Equipment and Precautions

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

Section 6: Accidental Release Measures

Personal Precautions: Use personal protective equipment as required. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Environmental Precautions: Should not be released into the environment. See Section 12 for additional Ecological Information Methods for Containment and Clean Up: Keep combustibles (wood, paper, oil, etc) away from spilled material. Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Avoid dust formation.

Section 7: Handling and Storage

Handling: Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe (dust, vapor, mist, gas). Do not breathe dust. Keep away from clothing and other combustible materials. Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Incompatible Materials. Strong oxidizing agents. Strong reducing agents. Combustible material. Metals. Amines.

Section 8: Exposure Controls/Personal Protection

Exposure Limits ACGIH TLV: TWA: 0.01 mg/m3 OSHA PEL: (Vacated) TWA: 0.01 mg/m3 NIOSH IDLH: IDLH: 10 mg/m3, TWA: 0.01 mg/m3 Mexico OEL (TWA): TWA: 0.01 mg/m3 TWA: 0.1 mg/m3

Engineering Controls Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Personal Protection	Eye/face Protection: 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 and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure. Respiratory Protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice.

Section 9: Physical and Chemical Properties

Appearance	Appearance Form: solid Colour: white
Odor	Odorless
Odor Threshold	No data available

Melting Point	212 °C / 413.6 °F	**pH**	5.4-6.4 10% aq solution
Freezing Point	Not available	**Vapor Pressure**	No data available
Boiling Point/Range	444 °C / 831.2 °F @ 760	**Vapor Density**	No data available
Decomposition temperature	> 444°C	**Viscosity**	No data available
Partition Coefficient: n-octanol/water	Not available	**Evaporation Rate**	No data available
Flash Point	No data available	**Autoignition temperature**	No data available
Flammability	No data available	**Flammability or Explosive Limits:**	
		Lower	No data available
		Upper	No data available

Solubility(ies)	Soluble in water
Other	Molecular Formula Ag N O3 Molecular Weight 169.87

Section 10: Stability and Reactivity

Reactivity	Yes
Chemical Stability	Oxidizer: Contact with combustible/organic material may cause fire. Light sensitive
Hazardous Polymerization	Hazardous polymerization does not occur
Conditions to Avoid	Avoid dust formation. Incompatible products. Excess heat. Combustible material. Exposure to light.
Incompatible Materials	Strong oxidizing agents, Strong reducing agents, Combustible material, Metals, Amines
Hazardous Decomposition Products	Nitrogen oxides (NOx)

Section 11: Toxicological Information

RTECS VW4725000

Acute Toxicity
Not available

Skin Corrosion/Irritation
No data available

Serious Eye Damage/Irritation
No data available

Respiratory or Skin Sensitization
No data available

Germ Cell Mutagenicity
No data available

Carcinogenicity
Not available.

Reproductive Toxicity
No data available

Routes of Entry
Causes burns by all exposure routes

Symptoms Related to Exposure
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.
Potential Health Effects
Hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive).
Target Organ(s) Respiratory system (single exposure) Liver Kidney (repeated exposure)

Section 12: Ecological Information

Ecotoxicity
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Freshwater Algae: Not listed Freshwater Fish: Leuciscus idus: LC50: 0.029 mg/L/96h Microtox: Photobacterium phosphoreum: EC50: 0.038 mg/L/24h Photobacterium phosphoreum: EC50: 0.395 mg/l/15min Photobacterium phosphoreum: EC50: 0.44 mg/L/30 min as Ag++ Photobacterium phosphoreum: EC50: 0.86 mg/L/15 min as Ag++ Water Flea: EC50: 0.0006 mg/L/48h
Persistance and Degradability
Soluble in water Persistence is unlikely based on information available

Bioaccumulative Potential
Not available

Mobility in Soil
Will likely be mobile in the environment due to its water solubility log Pow: 0.19

Other Adverse Effects

Section 13: Disposal Considerations

Waste Disposal
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.
Disposal of Container
Not available

Other Considerations
Not available

Section 14: Transport Information

DOT Classification
UN-No UN1493 Proper Shipping Name SILVER NITRATE Hazard Class 5.1 Subsidiary Hazard Class 8 Packing Group II

Section 15: Regulatory Information

Regulations
Not available.

Other
N/A

Section 16: Other Information

Full text of H-Statements referred to under sections 2 and 3. Acute Tox. Acute toxicity Aquatic Acute Acute aquatic toxicity Aquatic Chronic Chronic aquatic toxicity Eye Dam. Serious eye damage H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H318 Causes serious eye damage. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. Ox. Sol. Oxidizing solids HMIS Rating Health hazard: 3 Chronic Health Hazard: * Flammability: 0 Physical Hazard 2 NFPA Rating Health hazard: 3 Fire Hazard: 0 Reactivity Hazard: 2 Special hazard.I: OX Further information 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. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling