



SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product Identification:

Silver Nitrate Solution, 0.5%, 32 fl oz (960 ml) Bottle	NDC 64950-378-96
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Product Name: Silver Nitrate Solution

Recommended use: Silver Nitrate 0.5% is a solution used in treating wounds and burns on the skin as an anti-infective agent. It's used on the skin to cauterize infected tissues around a wound and can also help create a scab to help stop bleeding from a minor wound.

Restrictions: It must be applied as a 0.5% solution as higher concentrations are cytotoxic.

Manufacturer Name: Halo Pharmaceuticals Inc.
Manufacturer Address: 30 N Jefferson Road
Whippany, NJ 07981

Telephone number: 973-428-4000
Fax number: 973-428-4017
E-mail: Web.info@halopharma.com

Distributor Name: Genus Lifesciences Inc.
Distributor Address: 514 N. 12th Street
Allentown, PA 18102

Telephone number: (610) 782-9780
Fax number: (610) 782-9781

SECTION 2 – HAZARD (S) IDENTIFICATION

Classification (GHS):

The product Silver Nitrate Solution is a non-hazardous pharmaceutical mixture and does not meet OSHA's Hazard Communication Standard (HCS) 2012, 29CFR 1910.1200 and OSHA's Globally Harmonized System (GHS) hazard criteria. As per OSHA section 1910.1200(b)(6)(vii), "Any drug, as that term is defined in the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 301 et seq.), when it is in solid, final form for direct administration to the patient; drugs which are packaged by the chemical manufacturer for sale to consumers in a retail establishment" are exempt. The GHS hazards listed below are for the active product ingredient (API), Silver Nitrate, and not for the Solution product itself.



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Physical hazards: Not classified

Health hazards: Eye Damage Category 1

Environmental hazards: Aquatic environment Acute Category 1
Aquatic environment Chronic Category 1

Signal Word: Warning

Hazard Statement: When ingested, Silver Nitrate is highly toxic to the gastrointestinal tract and also to the central nervous system. Swallowing can cause severe gastroenteritis that may end fatally. Concentrated solutions will produce irritation, ulceration, and discoloration of the skin; also causes severe irritation of the eyes. Ingestion will produce violent abdominal pain and other gastroenteric symptoms.

Pictogram:



Precautionary Statement: Silver nitrate solution must be handled carefully, since it tends to stain the skin, utensils, clothing and linens. Not combustible but increases combustion and flammability of combustibles.

Hazards Not Otherwise Classified: None known.

SECTION 3 – COMPOSITION / INFORMATION OF INGREDIENTS*

Chemical Identity	Other Names	CAS Number
Silver Nitrate	N/A	7761-88-8
Water	N/A	7732-18-5

* Chemical exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 – FIRST AID MEASURES

Eye Contact: If contact suspected, flush with water while holding eyelids open for at least 15 minutes. Remove contact lenses if worn. Seek medical attention immediately.

Skin Contact: This product is intended for the skin. If irritation is caused, wash with soap and large amount of water. Contact medical personnel if irritation persists.



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- Ingestion:** If an accidental ingestion of large amounts occurs, call a physician immediately.
- Inhalation:** As a finished product is not an expected route of exposure. If breathing is difficult, move to fresh air and seek medical attention.
- Symptoms or effects:** Common side effects of Silver Nitrate Solution may include mild burning or cold sensation where the medicine is applied, change in color of skin, and irritation where this medicine is used.
- Recommendations:** Immediate medical attention is required if an ingestion is suspected. Call a Poison Control Center (1-800-222-1222) or 911 if you feel unwell. No action shall be taken involving any personal risk or without suitable training. If needed and if possible, give artificial respiration and/or CPR. Administer activated charcoal as slurry.
- Note to Physician:** Always wear latex or nitrile gloves when handling or applying this medicine. Also wear gloves while cleaning the skin wound and preparing it for treatment. Patient may need to have sterile water and 0.9% saline solution on hand, to use in caring for the skin wound. Silver Nitrate can also damage fabric. Avoid getting this medicine on clothing or bed linens. Medicine used on the skin is not likely to be affected by other drugs, but many drugs can interact with each other.

SECTION 5 – FIREFIGHTING MEASURES

- Extinguishing media** Use Water spray. Do not use Dry Chemical or foams. CO₂ or Halon may provide limited control. In case of fire in the surroundings, use the appropriate extinguishing media.
- Specific hazards arising from the mixture:** Fire may produce irritating, corrosive and/or toxic gases. When involved in a fire this product will accelerate burning of other substances, may decompose explosively, will react explosively with hydrocarbons, may ignite combustibles, and containers may explode (Refer to section 10).
- Advice to the firefighters:** Wear appropriate protective clothing and equipment. If large quantities are involved in a fire an explosion may result.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** No action shall be taken involving any personal risk or without suitable training. Clean the spill if it is safe to do so. Minimize exposure. Keep unnecessary personnel away. Do not touch or walk through spilled material.



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Protective Equipment:	Safety Glasses or goggles, gloves, protecting clothes. (Refer to section 8)
Emergency procedures:	Evacuate the area. Keep unnecessary personnel away. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Keep combustibles (wood, paper, oil, etc.) away from spilled material.
Containment Precautions:	Isolate area around spill as specified by site procedures. In general, is recommended to isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids. Do NOT let this chemical enter the environment.
Clean Up Procedures:	Use suitable absorbent material. Collect the material in a compatible container. Dispose according to applicable regulations (Refer to section 13). Decontaminate with water.

SECTION 7 – HANDLING AND STORAGE

Precaution for safe handling:	Observe safe industrial practices. No special handling requirements for normal use of this material. Dispense content with a child resistant closure and in a tight, light-resistant container as defined in the USP/NF.
Conditions for safe storage:	Store in original container at 25°C (77°F). Protect from Moisture and Light. Keep container tightly closed. Keep out of reach of children. Do not use if seal under cap is missing or broken. For more information follow directions in product packaging.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

There are no exposure limits for the Silver Nitrate Solution product. The exposure limits listed below are for the Active Product Ingredient (API) Silver Nitrate and not for the finished Solution product itself.

OSHA Permissible Exposure Limits (PELs):	None
Occupational Exposure Limit (OEL's):	Not Available
ACGIH Threshold Limit Values (TLVs):	
Short Term Exposure Limits (STEL) – 15 min:	Not Available
Time Weight Average (TWA) – 8 Hours:	Not Available



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Engineering Controls:

Use with adequate ventilation. Follow standard operating procedures and requirements for handling this product. Ensure eyewash stations are available and accessible in areas where this product is used. Wear appropriate personal protect equipment consistent with the recommendations of this SDS. Clean work areas routinely to prevent accumulation of product as appropriate.

Personal Protective Measures:

Respiratory protection:	Not required under normal conditions of use for finished product. If it found to be necessary, wear a mask or an appropriate NIOSH approved respirator.
Eye protection:	If it found to be necessary, wear safety glasses or goggles based on the task.
Protective gloves:	If it found to be necessary, wear chemical compatible gloves.
Skin and body protection:	Not required under normal conditions of use for finished product. During manufacture or other similar industrial operations, wear the necessary protection for the process.
Hygiene measures:	Wash hands, wrist, forearms and face thoroughly after handling chemicals and products, before eating, and at the end of working period. Contaminated work clothing should not be allowed out of the workplace. Wash the work clothing before reusing.
Other personal protection:	None required

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties:

Appearance:	Liquid	Odor:	None
Density:	Not Available	Boiling Point:	Not available
Color:	Clear	Solubility:	Water
Viscosity:	Not Available	Specific Gravity:	Not Available
Evaporation Rate:	Not Available	Conductivity:	Not Available

Chemical Properties:

pH:	Not Available	Flash Point:	Not Available
Reactivity:	Refer to section 10	Toxicity:	Refer to section 11



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SECTION 10 – STABILITY AND REACTIVITY

Reactivity: None expected under normal conditions of use.

Chemical stability: Stable under normal conditions of use.

Other:

Conditions to avoid: Moisture, light, and heat.

Incompatible materials: As a precautionary measure, keep away from organic matter, flammable or combustibles materials, and hydrocarbons (fuels).

Hazardous decomposition products: It might produce irritating or toxic fumes (or gases) in a fire.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of exposure: Skin

Delayed, immediate and chronic effects for short and long term exposure:

General effects: Common side effects might include mild burning or cold sensation.

Sensitization: No known significant effects.

Mutagenic effects: No known significant effects or critical hazards.

Reproductive toxicity: No known significant effects.

Fetotoxic / Teratogenic Effects: No known significant effects or critical hazards.

Specific Target Organ Toxicity (STOT):

Single exposure: Nervous System Category 1

Repeated exposure: Nervous System, Liver, and Blood Category 1

Toxicity (LD50):

Toxicity studies have not been conducted with the Silver Nitrate Solution product. The exposure limits listed below are for the active product ingredient (API) Silver Nitrate and not for the finished Tablet product itself.

Oral LD₅₀ Rat:
SDS Material Name: Silver Nitrate Solution

1173 mg/kg
Creation Date: Aug/19/24

Intraperitoneal LD₅₀ Rat:

83 mg/kg
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Oral LD₅₀ Mouse:

50 mg/kg

Intraperitoneal LD₅₀ Mouse:

17 mg/kg

Symptoms / Adverse Reactions:

Repeated applications of Silver Nitrate may cause a condition called argyria, a gray or blue-black discoloration of treated skin. This is caused by the silver component of Silver Nitrate Solution and is generally not harmful. However, Silver Nitrate can cause skin burns.

Carcinogenicity:

Product not listed as a carcinogen by OSHA.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity (Toxicity effects):

Ecotoxicity studies have been conducted with the API Silver Nitrate and proved that is highly toxic to aquatic organisms, especially small invertebrates in their larval and embryonic stages. Chronic exposure to Silver Nitrate can cause aquatic life to have shorter lifespans, reproductive problems, lower fertility, and changes in appearance and behavior.

Persistence and Degradability:

API Silver Nitrate decomposes when heated, starting at around 250°C and fully decomposing at 440°C.

Bioaccumulation:

Not Available

Leaching studies:

Not Available

Other adverse effects:

Not Available. It is highly recommended to avoid environmental releases.

SECTION 13 – DISPOSAL INFORMATION

Disposal Containers:

Dispose used or contaminated containers in accordance with the federal, state or local regulatory requirements.

Waste Disposal Methods:

Dispose all the product waste in accordance with the federal, state or local regulatory requirements.

Special Precautions:

Discard away from children's reach. Releases to the sewer should be avoided.



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SECTION 14 – TRANSPORT INFORMATION

USDOT - Department of Transportation:

Silver Nitrate is classified as Hazard Class 5.1, UN1493 under USDOT.

ICAO / IATA - International Civil Aviation Organization / International Air Transport Association:

Silver Nitrate is classified as Hazard Class 5.1, UN1493 under ICAO / IATA.

IMDG / IMO - International Maritime Dangerous Goods / International Maritime Organization:

Silver Nitrate is classified as Hazard Class 5.1, UN1493 under IMDG/IMO.

Special Precautions: None Known

SECTION 15 – REGULATORY INFORMATION

Drug Enforcement Administration (DEA): Not Listed as Controlled Substances.

Food and Drug Administration (FDA): Approved medication.

Occupational Safety and Health Administration (OSHA):

GHS symbols in consumer packaged form are not required per OSHA 29 CFR 1910.1200(b)(5) and OSHA 29 CFR 1910.1200(b)(5)(iii).

SARA 302/304 Extreme Hazardous Substances (EHS): Not Listed

SARA 313 Toxic Chemical Release Inventory (TRI):

Not Regulated. Although not listed by name and CAS number, this chemical is reportable under one or more of the EPCRA section 313 chemical categories.

Clean Water Act (CWA):

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42). However, Silver and compounds are in the list of toxic pollutants designated pursuant to section 307(a)(1) of the Act.



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Clean Air Act (CAA):

This product does not contain any chemicals listed under Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

Resource Conservation and Recovery Act (RCRA): No Code Applicable

Environmental Response Compensation and Liability Act (CERCLA):

Not applicable for the product. This product, as supplied, do not contains substances regulated as hazardous substances under CERCLA (40 CFR 302). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Toxic Substances Control Act (TSCA):

Not applicable for the product. The following ingredients are included on the TSCA inventory 8(b):

Ingredient	CAS Number
Silver Nitrate	7761-88-8
Water	7732-18-5

SECTION 16 – OTHER INFORMATION

See current package insert for further information.

SDS prepared by Genus Lifesciences Inc.

Creation Date: Aug/19/24, New SDS

Revision Date: N/A

This Safety Data Sheet cancels and replaces all preceding SDS for this product.

Genus Lifesciences Inc. believes that the information contained herein is based on the best available data at the date of preparation. However, no warranty is expressed or implied regarding the data's accuracy and completeness. Since the use of this information and the conditions of use of this material are not within the control of Genus Lifesciences Inc., it is the user's obligation to determine the conditions of safe use of this material.

Signature Manifest

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Effective Date: 06 Sep 2024

All dates and times are in Eastern Time.

SDS Silver Nitrate Solution - 64950

Department Approval

Name/Signature	Title	Date	Meaning/Reason
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Regulatory Affairs Approval

Name/Signature	Title	Date	Meaning/Reason
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Quality Assurance Approval

Name/Signature	Title	Date	Meaning/Reason
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