

# SAFETY DATA SHEET

## SILVER NITRATE APPLICATORS

### 1.0 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product:** SILVER NITRATE APPLICATORS

**General Use:** Cauterization  
**Must not be used on genital warts.**

**Manufacturers Name:** AMG Medical Inc.

**Emergency Telephone Number:**  
Local poison control center

**Address:** 8505 Dalton  
Montreal, Quebec H4T 1V5

**Telephone Number for Information:**  
800-361-2210 (Normal bus. hours)

**Date Issued:** February 10, 2009

**Date Revised:** June 20, 2018

**Recommended Use:** Cauterization of wounds, warts and ulcers.

**Restriction on use:** Must not be used on genital warts.

**CHEMTREC CHEMICAL TRANSPORTATION**  
**EMERGENCY TELEPHONE NO. 800-424-9300**  
**D.C.: 202-483-7616**

**POISON CONTROL CENTER**  
**TELEPHONE NO. 800-268-9017**  
**T.O.: 416-598-5900**

### 2.0 HAZARD IDENTIFICATION

**Pictograms:**



**HAZARD CLASSIFICATION:** Oxidizer, irritant, harmful if swallowed, causes skin burn and eye damage and toxic to aquatic life.

**EMERGENCY OVERVIEW:** Silver nitrate/potassium nitrate solid impregnated on tip of wooden applicator is a strong irritant to skin and tissue. Toxic if ingested.

Note: The chemicals above are impregnated onto the tip of a plastic applicator. The weight percentages indicated above represent the relative proportions of the active ingredients and do not take into account the weight of the applicator.<sup>1</sup>

<sup>1</sup>TWA – Values<sup>2</sup> given are 8-hour time-weighted averages, unless otherwise specified.

<sup>2</sup>Denoted ingredient is a SARA Title III, Section 313 listed toxic chemical (silver compounds).

<sup>3</sup>Not established – Substance not assigned a specific PEL or TLV. Substance regulated by OSHA as particulates not otherwise regulated (PNOR, PELs – 15 mg/m<sup>3</sup> total dust. 5 mg/m<sup>3</sup> respirable fraction) and by ACGIH as particulates not otherwise classified (PNOC, TLV – 10 mg/m<sup>3</sup>, total dust containing no asbestos and less than 1% crystalline silica) and is considered nuisance dust.

### 3.0 COMPOSITION/ INFORMATION ON INGREDIENTS

Component	Weight %	CAS Number	EINECS# / ELINCS#	Formula
Silver Nitrate	75	7761-88-8	231-853-9	AgNO <sub>3</sub>
Potassium Nitrate	25	7757-79-1	231-818-8	KNO <sub>3</sub>

### 4.0 FIRST AID MEASURES

**Inhalation:** This is not a probable route of exposure due to the product form. If acute overexposure to product occurs, immediately remove victim from the adverse environment to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Seek medical attention immediately.

**Eye Contact:** Wash out eye with lukewarm water for at least fifteen (15) minutes. Seek prompt medical attention.

**Skin Contact:** Immediately flush with copious amounts of water, then with a salt solution. Call a physician or local Poison Control Center.

**Ingestion:** Give Copious amounts of salt water and follow with an emetic. Then administer a dose of Epsom salts and follow with milk. Call a physician or the local Poison Control Center.

**Immediate medical attention and special treatment:** NA

**Most important symptoms and effects: Silver nitrate:** Silver nitrate: Argyria due to chronic overexposure to silver. Chronic exposure to potassium nitrate can cause anemia, nephritis and methemoglobinemia.

## 5.0 FIRE FIGHTING MEASURES

**Flash Point (Method Used):** For product, NA.

**Flammable limits:** Not applicable for product **LEL:** Not applicable **UEL:** Not applicable

**Autoignition Temperature:** Not applicable for product

**General Hazard:** The impregnated solid is an oxidizer. May release toxic or irritating vapors under fire conditions.

**Suitable and unsuitable extinguishing media:** As appropriate for surrounding fire. It is not believed that the product would be a significant hinderance to extinguishing methods used for the surrounding fire, due to the small amount of impregnated chemical solid and product form.

**Special protective equipment and precautions for fire-fighters:** Fire fighters and others who may be exposed to combustion products during fire should wear full protective clothing, including positive pressure self-contained breathing apparatus (SCBA). Wear SCBA with a full face-piece, operated in the positive pressure mode when fighting fires.

**Specific hazards arising from the hazardous product:** Acrid/irritating smoke, oxides of nitrogen, potassium oxide, and oxides of carbon.

**NFPA Rating:** Health: 1 Flammability:1 Reactivity:0 Special: OX (oxidizer)

## 6.0 ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures:** Not applicable for product in final form (solid silver nitrate/potassium nitrate impregnated on tip of wooden applicator).

**Methods and materials for containment and cleaning up:** Dispose of spent applicators in accordance with applicable federal, provincial, and local regulations.

## 7.0 HANDLING AND STORAGE

**Precautions for safe handling:** Wear latex, vinyl or rubber examination gloves in order to prevent unnecessary or accidental skin contact. Avoid eye contact.

**Conditions for safe storage:** Store product in a dark, dry location, away from organic or other readily oxidizable materials. Keep container closed when not in use. Do not use in eyes. Keep away from children.

## 8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Local and/or general ventilation, as needed, to reduce employee exposures to below applicable OSHA PELs and ACGIH TLVs (see SECTION 2.0 COMPOSITION INFORMATION ON INGREDIENTS, FOR PELs and TLVs), or other industry standards or guidelines on exposure. If respiratory protection is required, all appropriate requirements as set forth in 29 CFR 1910.134 must be met. A competent health professional should be consulted for respirator selection. Due to final product form and use, it is not believed that PELs or TLVs will be exceeded.

**Protective Gloves:** Latex, vinyl or rubber examination gloves in order to prevent unnecessary or accidental skin contact.

**Eye Protection:** Safety glasses to prevent accidental contact.

**Other Protective Clothing or Equipment:** No special clothing necessary.

Ingredient	CAS Number	% Weight	OSHA Airborne Particulate Permissible Exposure Limit (PEL, TWA <sup>1</sup> )	ACGIH Airborne Particulate Threshold Limit Value (TLV <sub>1</sub> TWA <sup>1</sup> )
Silver nitrate <sup>2</sup>	7761-88-8	75	0.01 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup> , as Ag metal
Potassium nitrate	7757-79-1	25	not established <sup>3</sup>	not established <sup>3</sup>



## 10.0 STABILITY AND REACTIVITY

**Reactivity:** None

**Chemical stability:** Product is stable at ambient temperature and pressure. Exposure of product to light may cause oxidation and discoloration of the impregnated applicator.

**Possibility of hazardous reactions:** None

**Incompatible Materials:** Easily oxidizable materials.

Silver nitrate is incompatible with alkalies, antimony salts, arsenites, bromides, carbonates, chlorides, iodides, vegetable decoctions and extracts; acetylene, acetylene + ammonium hydroxide, acetylides, ammonium hydroxide, arsenic, chloride phosphine, phosphonium iodide, phosphorous isocyanate, and plastics.

Potassium nitrate is incompatible with antimony, antimony trisulfide, arsenic, arsenic disulfide, barium sulfide, boron, boron phosphide, calcium sulfide, chargoal, copper phosphide, fluorine, germanium, germanium sulfide, sodium acetate, sodium hypophospite, sodium peroxide + dextrose, sulfur + arsenic trisulfide, titanium, titanium disulfide, trichloroethylene, zinc, zirconium.

**Hazardous decomposition product:** Will not occur.

**Sun light and other heat sources:** Keep away from sunlight and heat sources. Discoloration may occur and affect the stability of the product.

**Conditions to avoid:** Store at room temperature in the closed package, in a dry place protected from light. Exposure to light will cause the silver nitrate tip to turn black, but will not affect the product's potency.

## 11.0 TOXICOLOGICAL INFORMATION

For silver nitrate:

LD50 oral mouse – 50 mg/kg  
LDLo unknown route, man – 29 mg/kg  
Eye rabbit – 1 mg, severe irritation

For potassium nitrate:

LD50 oral rabbit – 1901 mg/kg

**Primary Route(s) of Entry (for product): Inhalation:No Skin:Yes Ingestion:No Other:No**

**POTENTIAL HEALTH EFFECTS:**

Note: Since the product has not been tested as a whole, the health effects below are based on the health effects of individual ingredients which are in significant concentrations in product. When appropriate, health effects of the individual ingredients are given in order to provide adequate warning to persons using the silver nitrate applicators. Silver nitrate applicators, in their final form for use, are not believed to pose high risk to the user, due to the small amount of active ingredients on the tip of the applicator, and the highly remote likelihood of inadvertent or accidental exposures to toxic concentrations.

**Acute Effects of Overexposure:**

**Eye contact:** Contact with silver nitrate/potassium nitrate solid impregnated on tip of plastic applicator may cause irritation, the degree of which depends on the concentration and period of contact. Symptoms may include burning, tearing, and redness.

**Skin contact:** Contact with silver nitrate/potassium nitrate solid impregnated on tip of plastic applicator may cause irritation, the degree of which depends on the concentration and period of contact. Symptoms may include redness and burning.

**Inhalation:** Inhalation of airborne silver nitrate particles may cause irritation of the respiratory tract.

**Accidental Ingestion:** Poisonous. If swallowed, can cause severe gastroenteritis and can be fatal. Due to its causticity, large doses of ingested silver nitrate may cause a burning sensation in the throat, violent abdominal pain, vomiting, collapse, and death.

**Respiratory tract sensitization:** None

**Blood cells:** None

**Chronic Effects of Overexposure:**

It is reported in the literature that chronic introduction of significant amounts of silver compounds into the blood stream and subsequent deposition of the reduced silver in various tissues of the body may result in the production of a generalized permanent grayish pigmentation of the skin and mucous membranes – a condition known as argyria, with no constitutional symptoms and no physical disability. The introduction of fine particles of silver through breaks in the skin produces a local pigmentation at the site of the injury. Localized argyria of the skin is rare. It has been concluded that on the average, 3.8 grams of orally administered silver nitrate causes argyria. The inhalation of silver powder over long periods has been concluded to cause pulmonary changes.

Chronic exposure to potassium nitrate can cause anemia, nephritis and methemoglobinemia.

**Carcinogenicity:** NTP:No IARC Monographs:No OSHA:No

**Medical Conditions Generally Aggravated by Exposure (to silver nitrate):** Preexisting diseases of the lungs, skin, eyes, and other mucous membrane.

## 12.0 ECOLOGICAL INFORMATION

**Bioaccumulative potential:** Unlikely to possess significant bio accumulative potential.  
**Ecotoxicity:** Very toxic to aquatic life  
**Persistence and degradability:** Persistent in the environment  
**Mobility in soil:** Highly mobile in soil  
**Other adverse effects:** No data available

## 13.0 DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Dispose of in accordance with applicable federal, state, and local regulations. Consult an expert on the disposal of spent or recovered material. A solid waste determination should be performed by a qualified professional.

## 14.0 TRANSPORT INFORMATION

**DOT hazard classification:** OXIDIZER

POTASSIUM Nitrate: UN1486      Silver Nitrate: UN1493  
Regulatory Reference: 49CFR 172.101; 173.182

## 15.0 REGULATORY INFORMATION

**EPA SARA Title III Hazard Categorization:** Based on the components of the tip of the silver nitrate applicators, the product is categorized as an immediate (acute) health hazard and delayed (chronic) health hazard.

**FEPA SARA Title III Section 302 Extremely Hazardous Substances (EHSs):** No ingredients in this product are listed as an EHS under Section 302 of SARA Title III.



## 16.0 OTHER INFORMATION

All information, recommendations, and suggestions appearing herein concerning the product are based upon data believed to be reliable. It is the user's responsibility to determine the safety, toxicity, and suitability for their own use of the product described herein, and to comply with all applicable regulations. Since the actual use by others is beyond the MSDS developer's control, no guarantee, expressed or implied is made by AMG Medical Inc. as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does AMG Medical Inc. assume any liability arising out of use by others of the product referred to herein. This MSDS is not intended as a license to operate under, or recommendation to infringe on, any patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.

Note: CHEMTREC emergency telephone numbers is to be used only in the event of CHEMICAL EMERGENCIES involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to AMG Medical Inc. Regulatory Affairs Department for assistance.

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**PREPARED BY: AMG Medical Inc.**  
**Revision No.: F    Date: June 20, 2018**  
**MSDS CONTACT: Regulatory Affairs**  
**SUPERSEDES MSDS: Revision E**