

**SECTION1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product code : ARGENTO NITRATO

Trades code : 100153

Chemical Name: silver nitrate CAS: 7761-88-8 - EC No: 231-853-9 - Index No: 047-001-00-2

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

Photographic Process

Sectors of use:

Professional use[SU22]

Product category:

Plant Protection Products

Process categories:

Mixing or blending in batch processes for formulation of preparations\* and articles (multistage and/or significant contact)[PROC5]

Uses advised against

Do not use for purposes other than those listed

**1.3. Details of the supplier of the safety data sheet**

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**1.4. Emergency telephone number**

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**SECTION2. Hazards identification****2.1. Classification of the substance or mixture**

CAS 7761-88-8 CEE 047-001-00-2 EINECS 231-853-9

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:

GHS03, GHS05, GHS09

Hazard Class and Category Code(s):

Ox. Sol. 2, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1

Hazard statement Code(s):

H272 - May intensify fire; oxidiser.

H314 - Causes severe skin burns and eye damage.

H318 - Causes serious eye damage.

H400 - Very toxic to aquatic life. (Acute toxicity M-factor = 100)

H410 - Very toxic to aquatic life with long lasting effects. (Acute toxicity M-factor = 100)

The product has oxidizing properties can intensify fire

Corrosive product: causes severe skin burns and eye damage.

If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

The product is dangerous for the environment as it is very toxic to aquatic organisms

The product is dangerous to the environment as it is very toxic to aquatic life with long lasting effects

## 2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):

GHS03, GHS05, GHS09 - Danger

Hazard statement Code(s):

H272 - May intensify fire; oxidiser.

H314 - Causes severe skin burns and eye damage.

H410 - Very toxic to aquatic life with long lasting effects. (Acute toxicity M-factor = 100)

Supplemental Hazard statement Code(s):

not applicable

Precautionary statements:

Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 - Keep away from clothing and other combustible materials.

P260 - Do not breathe dust, fume, gas, mist, vapours, spray.

P264 - Thoroughly wash clothing after use.

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 [or shower].

P304+P340 - IF INHALED: Remove person to fresh air and keep 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 doctor if symptoms persist

P321 - Specific treatment to see instructions on the safety data sheet

P363 - Wash contaminated clothing before reuse.

P370+P378 - In case of fire: Use appropriate means to extinguish.

P391 - Collect spillage.

Storage

P405 - Store locked up.

Disposal

P501 - Dispose of contents and container in accordance with the laws in force

Contains:

silver nitrate

## 2.3. Other hazards

The substance / mixture NOT contains substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII  
The use of this chemical agent involves the obligation of "risk assessment" by the employer in accordance with Dlgs. April 9, 2008 # 81. Workers exposed to this chemical agent should not be subjected to health surveillance if the results of the risk assessment show that, in relation to the type and quantity of hazardous chemical agent and that agent exposure frequency and mode, you just a "moderate risk" for the health and safety of workers and that the measures laid down in the decree are sufficient to reduce the risk.

## SECTION3. Composition/information on ingredients

### 3.1 Substances

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration[ w/w]	Classification	Index	CAS	EINECS	REACH
silver nitrate	100%	Ox. Sol. 2, H272; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute toxicity M-factor = 100	047-001-00-2	7761-88-8	231-853-9	

Substance	Concentration[ w/w]	Classification	Index	CAS	EINECS	REACH
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**3.2 Mixtures**

Irrelevant

**SECTION4. First aid measures****4.1. Description of first aid measures****Inhalation:**

Air the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area.  
If you feel unwell seek medical advice.

**Direct contact with skin (of the pure product):**

Take contaminated clothing Immediately off.

In case of contact with skin, wash immediately with water.

Consult a physician immediately

**Direct contact with eyes (of the pure product):**

Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately

Do not use eye drops or ointments of any kind before the examination or advice from an oculist.

**Ingestion:**

Drink water with egg white; do not give bicarbonate.

Absolutely do not induce vomiting or emesis. Seek medical advice immediately.

**4.2. Most important symptoms and effects, both acute and delayed**

No data available.

**4.3. Indication of any immediate medical attention and special treatment needed**

Immediately call a doctor if symptoms persist

**SECTION5. Firefighting measures****5.1. Extinguishing media****Advised extinguishing agents:**

In the case of fire use: water

Water spray, CO2, foam, dry chemical, depending on the materials involved in the fire.

**Extinguishing means to avoid:**

Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

**5.2. Special hazards arising from the substance or mixture**

No data available.

**5.3. Advice for firefighters**

Use protection for the breathing apparatus

Safety helmet and full protective suit.

The spray water can be used to protect the people involved in the extinction

You may also use selfrespirator, especially when working in confined and poorly ventilated area and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)

Keep containers cool with water spray

**SECTION6. Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures****6.1.1 For non-emergency personnel:**

Leave the area surrounding the spill or release. Do not smoke

Wear mask, gloves and protective clothing.

**6.1.2 For emergency responders:**

Eliminate all unguarded flames and possible sources of ignition. No smoking.

Provision of sufficient ventilation.

Evacuate the danger area and, in case, consult an expert.

**6.2. Environmental precautions**

Contain spill

Inform the competent authorities.

Discharge the remains in compliance with the regulations

**6.3. Methods and material for containment and cleaning up****6.3.1 For containment:**

Rapidly recover the product, wear a mask and protective clothing

Recover the product for reuse, if possible, or the removal.

**6.3.2 For cleaning up:**

To clean the floor and all objects contaminated by this material use water

After wiping up, wash with water the area and materials involved

**6.3.3 Other information:**

None in particular.

**6.4. Reference to other sections**

Refer to paragraphs 8 and 13 for more information

**SECTION 7. Handling and storage****7.1. Precautions for safe handling**

Wear protective gloves protective clothing eye protection face protection.

In residential areas do not use on large surfaces.

At work do not eat or drink.

See also paragraph 8 below.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep in original container closed tightly. Do not store in open or unlabeled containers.

Keep containers upright and safe by avoiding the possibility of falls or collisions.

Keep away from combustible materials.

Keep away from open flames, sparks and heat sources. Avoid direct sunlight exposure.

**7.3. Specific end use(s)**

Professional use:

Photographic and cinematographic treatment

**SECTION 8. Exposure controls/personal protection****8.1. Control parameters**

Related to contained substances:

silver nitrate:

TLV (as Ag): 0.01 mg/m<sup>3</sup> (ACGIH 1997).

**8.2. Exposure controls**

Appropriate engineering controls:

Professional use:

Not established

Individual protection measures:



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(a) Eye / face protection  
Wear mask

(b) Skin protection  
(i) Hand protection  
When handling the pure product use chemical resistant protective gloves (EN 374-1/EN374-2/EN374-3)  
(ii) Other  
When handling the pure product wear full protective skin clothing.

(c) Respiratory protection  
Use adequate protective respiratory equipment (EN 14387:2008)

(d) Thermal hazards  
No hazard to report

Environmental exposure controls:  
Related to contained substances:  
silver nitrate:  
Do not let this chemical agent contaminate the environment.

**SECTION9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical and chemical properties	Value	Determination method
Appearance	Powder	
Odour	Not determined	
Odour threshold	undefined	
pH	Not determined	pH METRO
Melting point/freezing point	Irrilevant	
Initial boiling point and boiling range	Not determined	
Flash point	non flammable	ASTM D92
Evaporation rate	Not determined	
Flammability (solid, gas)	Irrilevant	
Upper/lower flammability or explosive limits	undefined	
Vapour pressure	Not determined	
Vapour density	Not determined	
Relative density	4.35 gr / cm <sup>3</sup>	
Solubility	in water	
Water solubility	Complete	
Partition coefficient: n-octanol/water	Not determined	
Auto-ignition temperature	Not determined	
Decomposition temperature	Not determined	
Viscosity	not determined	
Explosive properties	not explosive	
Oxidising properties	non-oxidizing	

**9.2. Other information**

No data available.

**SECTION10. Stability and reactivity****10.1. Reactivity**

Related to contained substances:

silver nitrate:  
No data available

**10.2. Chemical stability**

Decomposes when exposed to light.  
Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

Related to contained substances:  
silver nitrate:  
Light

**10.5. Incompatible materials**

Agents strong reducing agents, strong bases, Alcohols, ammonia and magnesium

**10.6. Hazardous decomposition products**

No data available

**SECTION 11. Toxicological information****11.1. Information on toxicological effects**

ATE oral = ∞  
ATE dermal = ∞  
ATE inhal = ∞

- (a) acute toxicity: based on available data, the classification criteria are not met.
- (b) skin corrosion/irritation: Corrosive product: causes severe skin burns and eye damage.
- (c) serious eye damage/irritation: Corrosive product: causes severe skin burns and eye damage. - If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.
- (d) respiratory or skin sensitization: based on available data, the classification criteria are not met.
- (e) germ cell mutagenicity: based on available data, the classification criteria are not met.
- (f) carcinogenicity: based on available data, the classification criteria are not met.
- (g) reproductive toxicity: based on available data, the classification criteria are not met.
- (h) specific target organ toxicity (STOT) single exposure: based on available data, the classification criteria are not met.
- (i) specific target organ toxicity (STOT) repeated exposure: based on available data, the classification criteria are not met.
- (j) aspiration hazard: based on available data, the classification criteria are not met.

Related to contained substances:

silver nitrate:

EXPOSURE: The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation risk: Evaporation at 20 ° C is negligible; a harmful concentration of airborne particles can, however, be reached quickly on spraying or when dispersed, especially if powdered.

EFFECTS OF SHORT-TERM EXPOSURE: The substance is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. The substance may cause effects on the blood, resulting in formation of methaemoglobin. The effects may be delayed. And 'effects may be delayed.

EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: The substance may have effects on the blood, resulting in formation of methaemoglobin. Inhalation or ingestion can lead to generalized argyria, gray discolouration of the eyes and the skin and brown fingernails.

**ACUTE HAZARDS / SYMPTOMS**

Sore throat. Cough. Burning sensation. Heavy breath. difficulty breathing. Blue lips or fingernails. Blue skin. Dizziness. Headache. Nausea. Confusion. Convulsions. Unconsciousness. Symptoms may be delayed (see Notes).

SKIN Pain. Redness. Skin burns. Blisters. (Further see Inhalation).

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Eyes Redness. Ache. Severe deep burns. Loss of vision.

Ingestion Abdominal pain. Burning sensation. Shock or collapse. (Further see Inhalation).

NOTES: Depending on the degree of exposure, periodic medical examination. In case of poisoning with this substance you need a specific treatment; the appropriate means with instructions must be available.

**SECTION12. Ecological information****12.1. Toxicity**

ARGENTO NITRATO:

C(E)L50 (mg/l) = 0,0012 Acute toxicity M-factor = 100

The product is dangerous for the environment as it is very toxic to aquatic organisms following acute exposure. Use according to good working practices to avoid pollution into the environment.

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

Bioconcentration factor (BCF): 70

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

No PBT/vPvB ingredient is present

**12.6. Other adverse effects**

Very toxic to aquatic organisms.

**SECTION13. Disposal considerations****13.1. Waste treatment methods**

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.

Recover if possible. Send to authorized discharge plants or for incineration under controlled conditions. Operate according to local and National rules in force

**SECTION14. Transport information****14.1. UN number**

ADR/RID/IMDG/ICAO-IATA: 1493

ADR exemption because compliance with the following characteristics:

Combination packagings: per inner packaging 1 kg per package 30 Kg

Inner packagings placed in shrink-wrapped or stretch-wrapped trays: per inner packaging 1 kg per package 20 Kg

**14.2. UN proper shipping name**

ADR/RID/IMDG: NITRATO DI ARGENTO

ADR/RID/IMDG: SILVER NITRATE

ICAO-IATA: SILVER NITRATE

**14.3. Transport hazard class(es)**

ADR/RID/IMDG/ICAO-IATA: Class : 5.1

ADR/RID/IMDG/ICAO-IATA: Label : Limited quantities

ADR: Tunnel restriction code : E





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ADR/RID/IMDG/ICAO-IATA: Limited quantities : 1 kg  
IMDG - EmS : F-A, S-Q

**14.4. Packing group**

ADR/RID/IMDG/ICAO-IATA: II

**14.5. Environmental hazards**

ADR/RID/ICAO-IATA: Product is environmentally hazardous  
IMDG: Marine polluting agent : Yes

**14.6. Special precautions for user**

The transport must be carried out by authorised vehicles carrying dangerous goods in accordance with the requirements of the current edition of the agreement A.D.R. applicable national provisions.

The transport must be carried out in the original packaging and in packages that are made from materials resistant to the content and not likely to generate with this dangerous reactions. Employees to the loading and unloading of dangerous goods have received proper training on the risks presented by prepared and on possible procedures to be taken in the event of emergency situations

**14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

It is not intended to carry bulk

**SECTION15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Legislative Decree. 02/03/1997 n. 52 (Classification, packaging and labeling of dangerous substances). Legislative Decree 14/03/2003 n. 65 (Classification, packaging and labeling of dangerous substances). Legislative Decree. 02/02/2002 n. 25 (Risks related to chemical agents at work). D.M. 26/02/2004 Work (Exposure Limits Professional); D.M. 03/04/2007 (Implementation of Directive n. 2006/8 / EC). Regulation (EC) No. 1907/2006 (REACH), Regulation (EC) No. 1272/2008 (CLP), Regulation (EC) 790 / 2009.D.Lgs. September 21, 2005 n. 238 (Seveso Ter).

Seveso category:

P8 - OXIDISING LIQUIDS AND SOLIDS

E1 - ENVIRONMENTAL HAZARDS

REGULATION (EU) No 1357/2014 - waste:

HP2 - Oxidising

HP8 - Corrosive

HP14 - Ecotoxic

**15.2. Chemical safety assessment**

The supplier has made an assessment of chemical safety

**SECTION16. Other information****16.1. Other information**

Points modified compared to previous release: 2.1. Classification of the substance or mixture, 2.2. Label elements, 2.3. Other hazards, 7.1. Precautions for safe handling, 10.4. Conditions to avoid, 12.5. Results of PBT and vPvB assessment, 14.2. UN proper shipping name

Description of the hazard statements exposed to point 3

H272 = May intensify fire; oxidiser.

H314 = Causes severe skin burns and eye damage.

H400 = Very toxic to aquatic life.

H410 = Very toxic to aquatic life with long lasting effects.

Main normative references:

Directive 1999/45/EC

Directive 2001/60/EC

Regulation 1272/2008/EC

Regulation 2010/453/EC



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Regolamento 529/2012 and subsequent updates

This data sheet cancels and replaces any previous edition.

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