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1 Identification of the substance/mixture and of the company/undertaking

- **Informations to product No. 2081**
- **Product name:**

Silbernitrat, API
Argentum nitricum cryst.
Silver nitrate

- **Supplier of the Product / responsible Company:**

Caesar & Loretz GmbH
Herderstr. 31
40721 Hilden
Tel.: 02103/4994-0
Fax: 02103/32360
e-mail: info@caelo.de

- **Emergency telephone:**

Giftinformationszentrum Mainz
Langenbeckstr. 1, 55131 Mainz
Tel.: 06131/19240

- **Relevant identified uses of the substance or mixture and uses advised against:**

No further relevant information available.

- **Application of the substance / mixture:**

Ingredient for pharmaceutical drugs or active pharmaceutical ingredient.

2 Hazards identification

- **GHS-Labeling Elements:**




- **Signal word:** Danger

- **H-Phrases:**

H272 May intensify fire; oxidizer.
H314 Causes severe skin burns and eye damage.
H410 Very toxic to aquatic life with long lasting effects.

- **P-Phrases:**

P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 IF SWALLOWED:
P330 rinse mouth.
P331 Do NOT induce vomiting.
P305 IF IN EYES:
P351 Rinse cautiously with water for several minutes.
P311 Call a POISON CENTER or doctor/physician.

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Ox. Sol. 2
Skin Corr. 1B
Aquatic Acute 1
Aquatic Chronic 1

3 Composition / information on ingredients

CAS-No. Substance name

7761-88-8 Silver nitrate

- **EINECS-No.:** 231-853-9
- **Index-No.:** 047-001-00-2
- **REACH Reg. No.:** 01-2119513705-43-0000
- **INCI-Name:** Silver Nitrate

4 First aid measures


- **after inhalation:** Fresh air. Seek medical advice.
- **after skin contact:** Take off contaminated clothes and shoes, wash immediately with plenty of water and soap. Local treatment with polyethylene glycole 400.
- **after eye contact:** Rinse out with plenty of water with the eyelid wide open , seek medical advice, even if no immediate symptoms are observed.
- **after swallowing:** Drink plenty of water. Avoid vomiting (Danger of perforation!). Seek medical advice immediately.

5 Fire-fighting measures

- **Suitable extinguishing media:** All regular extinguishing media can be used. Select fire fighting measures suitable to surrounding environment.
- **Specific hazards during fire fighting:** Not combustible but oxidant. In case of fire dangerous vapours/gases can be generated: Nitrogen oxides.
- **Special protective equipment for fire-fighters:** Suitable protective clothes and respiratory protection.
- **Additional information:** Prevent fire extinguishing water from contaminating surface water, the ground water system or soil. Residues must be deposited according to local regulations.

6 Accidental release measures

- **Personal protective measures:** Avoid contact with skin and clothes. Corrosive.
- **Environmental protective measures:** Prevent from leaking into sewage water, ground water system or surface waters. Clean up floor with surfactant containing water thoroughly.
- **Methods for cleaning:** Take up dry. Disposal according to Chapter 13 of this MSDS. Clean up with water.

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7 Handling and storage

- **Handling:**

- **Advice on safe handling:** Avoid dust formation.

- **Storage:**

- **Requirements for storage areas and containers:**

Keep container tightly closed. Store at a good ventilated place. Keep away from heat and ignition sources. At room temperature (+15 to +25°C). Protect from light. Do not store in metal containers.

8 Exposure controls / personal protective equipment

Components with limit values that require monitoring at the workplace:

7761-88-8 Silver nitrate (100,0%)

MAK: 0,01 mg/m³ (dust)

- **Personal protective equipment:**

- **General protective and hygiene measures:**

Keep away from food, beverages and animal food.

Take off contaminated clothes immediately.

Wash hands before breaks and after work.

Avoid contact with eyes and skin.

- **Respiratory protection:** Dust protection mask.

- **Hand protection:** Protection gloves of latex or rubber.

- **Eye protection:** Safety glasses.

9 Physical and chemical properties

- **Form:** crystalline

- **Colour:** colourless - white

- **Odour:** odourless

- **Melting point / melting range:** 212 °C

- **Boiling point / boiling range:** 444 °C (Decomposition)

- **Flash point:** not relevant

- **Decomposition temperature:** > 444 °C

- **Explosion hazard:** The product is not explosive.

- **Density:** (20 °C) 4,35 g/cm³

- **Solubility in / Miscibility with**

- **Water:** (20 °C) 2192 g/l

- **pH-range:** (100 g/l, 20 °C) 5,4 - 6,4


10 Stability and reactivity

- **Thermal decomposition / conditions to avoid:**

Thermal decomposition: > 444 °C.

- **Materials to avoid:** reductants, organic materials, alkali hydroxides, acetylene, aldehydes, nitriles, ammonia, ammonium compounds, combustible materials, hydrazine and derivatives, carbides, magnesium, alcohols

- **Hazardous decomposition products:** Nitrogen oxides

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11 Toxicological information

- **Acute toxicity:**

LD/LD50-data relevant for hazard classification:

7761-88-8 Silver nitrate

Oral: LD50: 1173 mg/kg (rat)

- **Primary irritant effect:**

- **on skin:** strong irritant / burning effect.

- **on eyes:** Strong burning effect

- **on respiratory organs:** Burnings

- **after swallowing:** Burnings, gastrointestinal disorder.

- **Sub-acute / chronic toxicity:** If silver compounds are inhaled or swallowed over a long period, a persistent colouring (grey or blue) of skin and mucous membranes can occur (Argyria).

- **Additional toxicological informations:** Soluble silver compounds are not easily resorbed over the gastrointestinal tract.

12 Ecological information

- **Aquatic toxicity:**

Silver ions are toxic for water organisms.

Fishes: *Leuciscus idus* LC50: 0,029 mg/l/96h (OECD 203)

Oncorhynchus mykiss LC50: 0,006 mg/l/96h

Daphnia: *Daphnia magna* EC50: 0,002 mg/l/48h

Algae: *Desmodesmus subspicatus* IC50 0,002 mg/l/8d

Bacteria: *pseudomonas putida* EC10 0,006 mg/l/16h

- **General advices:**

Prevent from leaking into ground water, environment waters or drainage, even in small quantities.

Danger for drinking water even if small quantities leak into the ground.

- **Water hazard class:** 3 (VwVwS): very hazardous for water.

13 Disposal considerations

- **Product:**

- **Recommendation:** Disposal according to local regulations as pharmaceutical waste.

- **Empty contaminated packaging:**

- **Recommendation:** Disposal according to the local regulations.

14 Transport informations

- **Land transport according to ADR:**

- **Proper shipping name:** Silver nitrate

- **Class:** 5.1

- **UN-number:** 1493


- **Packing group:** II

- **Classification code:** O2

- **Limited quantities (Table 3.4.6. ADR):** 1 kg

- **Hazard classification number:** 50

- **Special provisions (Chapter 3.3 ADR):** -

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- **Additional informations for sea transport IMDG:**
- **EMS-No.:** F-A, S-Q
- **Properties:** m.p.

15 Regulatory information

- **Labelling according to actual legislation (GHS, Globally Harmonized System of Classification and Labelling of Chemicals):**

The product is classified and labelled according to GHS-regulations.

- **Hazard symbols:** GHS03, GHS05, GHS09

- **Signal word:** Danger

- **H-Phrases:**

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- **P-Phrases:**

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P331 Do NOT induce vomiting.

P305 IF IN EYES:

P351 Rinse cautiously with water for several minutes.

P311 Call a POISON CENTER or doctor/physician.

- **National regulations (Germany):**

- **Water hazard class:** see chapter 12

- **Storage class TRGS 510:** 5.1A

16 Other Information

The information provided in this MSDS is correct to the best of our knowledge at the date of edition.

- **Reason for last revision:** Adjustment to regulation (EC) 1907/2006 (REACH) and GHS-labelling system.