

# Silver nitrate

## Safety Data Sheet

**247332**

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Date of issue: 18/07/2011      Revision date 05/03/2020  
Supersedes 27/02/2019

Version: 3.0

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
Substance name : Silver nitrate  
Chemical name : silver nitrate  
EC Index-No. : 047-001-00-2  
EC-No. : 231-853-9  
CAS-No. : 7761-88-8  
REACH registration No : 01-2119513705-43-xxx  
Product code : 247332  
Formula : AgNO<sub>3</sub>  
Synonyms : Argenti nitras  
Product group : Raw material

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

##### 1.2.1. Relevant identified uses

Main use category : Pharmaceutical industry  
Use of the substance/mixture : Active ingredient for the preparation of pharmaceuticals  
Function or use category : Raw material

##### 1.2.2. Uses advised against

No additional information available

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

##### Supplier

Duchefa Farma BV  
A. Hofmanweg 71  
2031BH Haarlem - Nederland  
T +31(0)23-5319093  
[farma@duchefa.nl](mailto:farma@duchefa.nl) - [www.duchefa-farma.com](http://www.duchefa-farma.com)

#### 1.4. Emergency telephone number

Emergency number : Supplier contact information:  
+31(0)23-5319093 (M-F 09:00-17:00)  
+31(0)6-30109355 (outside office hours)

Organisation/Company	Address	Comment
Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP] show CLP information only

Oxidising Solids, Category 2	H272
Corrosive to metals, Category 1	H290
Skin corrosion/irritation, Category 1B	H314
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410

Full text of H statements : see section 16

#### Adverse physicochemical, human health and environmental effects

No additional information available

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display classification (also display

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: H272 - May intensify fire; oxidiser.  
H290 - May be corrosive to metals.  
H314 - Causes severe skin burns and eye damage.  
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P260 - Do not breathe dust.  
P273 - Avoid release to the environment.  
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351 - IF IN EYES: Rinse cautiously with water for several minutes.  
P370+P378 - In case of fire: Use ABC-powder to extinguish.

### 2.3. Other hazards

Other hazards not contributing to the classification : May be corrosive to metals.

PBT: not relevant – no registration required

vPvB: not relevant – no registration required

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Silver nitrate	(CAS-No.) 7761-88-8 (EC-No.) 231-853-9 (EC Index-No.) 047-001-00-2 (REACH-no) 01-2119513705-43-xxx	75 - 100	Ox. Sol. 2, H272 Met. Corr. 1, H290 Skin Corr. 1B, H314 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: If medical advice is needed, have product container or label at hand.
First-aid measures after inhalation	: Remove victim to fresh air Allow the victim to rest Seek medical advice.
First-aid measures after skin contact	: Remove contaminated clothing and shoes Wash skin with mild soap and water If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water Seek medical attention immediately.
First-aid measures after ingestion	: Rinse mouth. Never give anything by mouth to an unconscious person Seek medical advice.

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

No additional information available

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: ABC powder.
Unsuitable extinguishing media	: Water.

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

Explosion hazard	: Product is not explosive.
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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO<sub>2</sub>).

### 5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire. May intensify fire; oxidiser. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Use the personal protective equipment as indicated in chapter 8.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent product from entering drains. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment : Sweeping or shovelling without dust for disposal.

Methods for cleaning up : Hose down area with water.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Handle in accordance with good industrial hygiene and safety procedures. Ensure adequate ventilation.

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

Storage conditions : Store in a dry place. Store in a closed container.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Protect from light.

Storage temperature : 15 - 25 °C

Packaging materials : Do not use metal containers.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

Silver nitrate (7761-88-8)		
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	0.001 mg/m <sup>3</sup>
Silver nitrate (7761-88-8)		
DNEL/DMEL (General population)		

# Silver nitrate

## Safety Data Sheet

247332

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Silver nitrate (7761-88-8)	
Long-term - systemic effects, oral	< 0.031 mg/kg bw/day
Long-term - systemic effects, inhalation	< 0.0063 mg/m <sup>3</sup>
PNEC (Water)	
PNEC aqua (freshwater)	< 0.00004 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	< 438.13 mg/kg dwt
PNEC sediment (marine water)	< 438.13 mg/kg dwt
PNEC (Soil)	
PNEC soil	< 0.794 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	< 0.025 mg/l

### 8.2. Exposure controls

#### Appropriate engineering controls:

Technical measures and appropriate working operations should have priority over the use of personal protective equipment.

#### Personal protective equipment:

Protective clothing. Dust/aerosol mask with filter type P2. Gloves. Protective goggles.

#### Hand protection:

Gloves made of nitrile rubber: Glove thickness: 0.11 mm, Break through time: 480 min

Type	Material	Permeation	Thickness (mm)	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11	EN ISO 374

#### Eye protection:

Safety glasses (to European standard EN 166 or equivalent)

#### Skin and body protection:

Protective clothing (with elasticated cuffs and closed neck)

#### Respiratory protection:

Dustmask with filter type P2



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline powder.
Molecular mass	: 169.87 g/mol
Colour	: White.
Odour	: odourless.
Odour threshold	: No data available
pH	: 5.6 - 6.4 (43 g/l 20°C)

Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 212 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 2.35 g/cm <sup>3</sup> 20°C
Solubility	: Water: 2160 g/l (20°C)
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Product is not explosive.
Oxidising properties	: May intensify fire; oxidiser.
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Stable under normal conditions.

### 10.2. Chemical stability

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

Strong acids  
Strong bases  
Combustibles.

### 10.6. Hazardous decomposition products

In case of fire hazardous gases / vapors may form: flue gas.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	: Not classified
Additional information	: Irritating to the skin and mucous membranes

# Silver nitrate

## Safety Data Sheet

247332

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Silver nitrate (7761-88-8)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat	> 5 mg/l

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: 5.6 - 6.4 (43 g/l 20°C)
Serious eye damage/irritation	: Serious eye damage, category 1, implicit pH: 5.6 - 6.4 (43 g/l 20°C)
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Silver nitrate (7761-88-8)	
LC50 fish 1	0.0012 mg/l
EC50 Daphnia 1	0.0002 mg/l 48 h

### 12.2. Persistence and degradability

Silver nitrate (7761-88-8)	
Persistence and degradability	Biodegradability in water: no data available.

### 12.3. Bioaccumulative potential

Silver nitrate (7761-88-8)	
Bioconcentration factor (BCF REACH)	70
Bioaccumulative potential	Moderate.

### 12.4. Mobility in soil

Silver nitrate (7761-88-8)	
Ecology - soil	There are no available data for a classification.

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Other adverse effects : In aqueous solution it's a corrosive acid.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

- Waste treatment methods : Avoid release to the environment.
- Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container at hazardous or special waste collection point.
- HP Code : HP2 - "Oxidising:" waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials.  
HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment  
HP8 - "Corrosive:" waste which on application can cause skin corrosion.

## SECTION 14: Transport information

In accordance with ADR / IATA / RID / IMDG / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1493	1493	1493	Not regulated	1493
<b>14.2. UN proper shipping name</b>				
SILVER NITRATE	Not applicable	Silver nitrate	Not regulated	Not applicable
<b>14.3. Transport hazard class(es)</b>				
5.1	5.1	5.1	Not regulated	5.1
	Not applicable		Not regulated	
<b>14.4. Packing group</b>				
II	II	II	Not regulated	Not applicable
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Not regulated	Dangerous for the environment : No
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

- Classification code (ADR) : O2
- Limited quantities (ADR) : 1kg
- Excepted quantities (ADR) : E2
- Packing instructions (ADR) : P002, IBC08
- Special packing provisions (ADR) : B4
- Mixed packing provisions (ADR) : MP10
- Portable tank and bulk container instructions (ADR) : T3
- Portable tank and bulk container special provisions (ADR) : TP33

# Silver nitrate

## Safety Data Sheet

247332

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Tank code (ADR)	: SGAV
Tank special provisions (ADR)	: TU3
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: VII
Special provisions for carriage - Bulk (ADR)	: VC1, VC2, AP6, AP7
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV24
Hazard identification number (Kemler No.)	: 50
Orange plates	:  
Tunnel restriction code (ADR)	: E
EAC code	: 1Y

### - Transport by sea

No data available

### - Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y544
PCA limited quantity max net quantity (IATA)	: 2.5kg
PCA packing instructions (IATA)	: 558
PCA max net quantity (IATA)	: 5kg
CAO packing instructions (IATA)	: 562
CAO max net quantity (IATA)	: 25kg
ERG code (IATA)	: 5L

### - Inland waterway transport

Not regulated

### - Rail transport

No data available

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Silver nitrate is not on the REACH Candidate List

Silver nitrate is not on the REACH Annex XIV List

### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:

1		Modified	Change of logo
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Abbreviations and acronyms:

SDS	Safety Data Sheet
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008

Data sources : Supplier.

Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Met. Corr. 1	Corrosive to metals, Category 1
Ox. Sol. 2	Oxidising Solids, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

SDS EU (REACH Annex II) ducheфа nieuwe logo

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*