



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Std., Atomic Absorption, Ag (140-001-47x)

Revision: 25.07.2025

Product code: AC18.06288

Page 2 of 13

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Met. Corr. 1; H290  
Skin Irrit. 2; H315  
Eye Dam. 1; H318  
Aquatic Acute 1; H400  
Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008****Hazard components for labelling**

nitric acid

**Signal word:** Danger**Pictograms:****Hazard statements**

H290 May be corrosive to metals.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P501 Dispose of contents/container to hazardous or special waste collection point.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing and eye protection/face protection.  
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 POISON CENTER/doctor.  
P391 Collect spillage.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Mixtures in aqueous solution

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Std., Atomic Absorption, Ag (140-001-47x)

Revision: 25.07.2025

Product code: AC18.06288

Page 3 of 13

## Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7697-37-2	nitric acid			1 - < 5 %
	231-714-2	007-030-00-3	01-2119487297-23	
	Ox. Liq. 3, Met. Corr. 1, Acute Tox. 3, Skin Corr. 1A, Eye Dam. 1; H272 H290 H331 H314 H318 EUH071			
7761-88-8	silver nitrate			< 1 %
	231-853-9	047-001-00-2	01-2119513705-43	
	Ox. Sol. 2, Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H272 H290 H314 H318 H400 H410			

Full text of H and EUH statements: see section 16.

## Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7697-37-2	231-714-2	nitric acid	1 - < 5 %
	inhalation: ATE 2,65 mg/l (vapours) Ox. Liq. 3; H272: >= 65 - 100 Skin Corr. 1A; H314: >= 20 - 100 Skin Corr. 1B; H314: >= 5 - < 20		
7761-88-8	231-853-9	silver nitrate	< 1 %
	dermal: LD50 = > 348 mg/kg; oral: LD50 = > 2000 mg/kg Aquatic Acute 1; H400: M=1000 Aquatic Chronic 1; H410: M=100		

## Further Information

No data available

## SECTION 4: First aid measures

## 4.1. Description of first aid measures

## General information

No data available

## After inhalation

Provide fresh air.

Call a doctor if you feel unwell.

## After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

In case of skin irritation, consult a physician.

## After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Remove contact lenses, if present and easy to do. Continue rinsing.

## After ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting. Do not allow a neutralisation agent to be drunk.

Call a physician immediately.

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

Irritant

Methaemoglobinaemia

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Std., Atomic Absorption, Ag (140-001-47x)**

Revision: 25.07.2025

Product code: AC18.06288

Page 4 of 13

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

No data available

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

No data available

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

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

In case of fire and/or explosion do not breathe fumes.

Avoid contact with skin, eyes and clothes.

**Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Corrosive to metals.

Do not breathe vapour/aerosol.

**For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

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

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Collect in closed and suitable containers for disposal.

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Std., Atomic Absorption, Ag (140-001-47x)

Revision: 25.07.2025

Product code: AC18.06288

Page 5 of 13

**Other information**

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**6.4. Reference to other sections**

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

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

- Read label before use. Handle and open container with care.
- When using do not eat, drink, smoke, sniff. Use personal protection equipment.
- Provide adequate ventilation. Avoid contact with skin, eyes and clothes.
- Do not breathe vapour/aerosol. Use extractor hood (laboratory).

**Advice on protection against fire and explosion**

- Usual measures for fire prevention.

**Advice on general occupational hygiene**

- Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately.
- Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

**Further information on handling**

- Draw up and observe skin protection programme.
- Wash hands and face before breaks and after work and take a shower if necessary.
- Take off immediately all contaminated clothing and wash it before reuse.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

- Corrosive to metals.
- Unsuitable container/equipment material: Metal
- The product develops hydrogen in an aqueous solution in contact with metals.

**Hints on joint storage**

- National regulatory information

**Further information on storage conditions**

- Keep container tightly closed.

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

- Laboratory chemicals
- Only for laboratory and analysis purposes.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
7697-37-2	Nitric acid	1	2.6		STEL (15 min)	

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Std., Atomic Absorption, Ag (140-001-47x)

Revision: 25.07.2025

Product code: AC18.06288

Page 6 of 13

## DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
7761-88-8	silver nitrate			
Worker DNEL, long-term		inhalation	systemic	0,016 mg/m <sup>3</sup>
Consumer DNEL, long-term		inhalation	systemic	0,006 mg/m <sup>3</sup>
Consumer DNEL, long-term		oral	systemic	0,02 mg/kg bw/day

## PNEC values

CAS No	Substance	Value
7761-88-8	silver nitrate	
Freshwater		0,00004 mg/l
Marine water		0,00086 mg/l
Freshwater sediment		438,13 mg/kg
Marine sediment		438,13 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,025 mg/l
Soil		1,41 mg/kg

## 8.2. Exposure controls

## Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Do not breathe vapour/aerosol.

## Individual protection measures, such as personal protective equipment

## Eye/face protection

goggles

Wear eye/face protection.

## Hand protection

Tested protective gloves must be worn

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

## Skin protection

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

## Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

## Thermal hazards

No data available

## Environmental exposure controls

Do not allow to enter into surface water or drains.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Std., Atomic Absorption, Ag (140-001-47x)

Revision: 25.07.2025

Product code: AC18.06288

Page 7 of 13

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	Liquid	
Colour:	colourless	
Odour:	odourless	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		No data available
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		No data available
Viscosity / kinematic:		No data available
Water solubility:		No data available
Solubility in other solvents		
No data available		
Dissolution rate:		No data available
Partition coefficient n-octanol/water:		No data available
Dispersion stability:		No data available
Vapour pressure:		No data available
Vapour pressure:		No data available
Density (at 22 °C):		~1.020 g/cm <sup>3</sup>
Relative density:		No data available
Bulk density:		No data available
Relative vapour density:		No data available
Particle characteristics:		No data available

**9.2. Other information****Information with regard to physical hazard classes**

Explosive properties	
No data available	
Sustained combustibility:	No data available
Self-ignition temperature	
Solid:	No data available
Gas:	No data available
Oxidizing properties	
No data available	

**Other safety characteristics**

Evaporation rate:	No data available
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	No data available
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available
No data available:	

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Std., Atomic Absorption, Ag (140-001-47x)

Revision: 25.07.2025

Product code: AC18.06288

Page 8 of 13

Viscosity / dynamic:

No data available

Flow time:

No data available

**Further Information**

Corrosive to metals.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Corrosive to metals.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Alkali (lye)

**10.4. Conditions to avoid**

No data available

**10.5. Incompatible materials**

Cellulose

Metal

The product develops hydrogen in an aqueous solution in contact with metals.

**10.6. Hazardous decomposition products**

In case of fire may be liberated:

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

**Acute toxicity**

Based on available data, the classification criteria are not met.

**ATEmix calculated**

ATE (oral) &gt; 2000 mg/kg; ATE (dermal) &gt; 2000 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7697-37-2	nitric acid				
	inhalation vapour	ATE 2,65 mg/l			
7761-88-8	silver nitrate				
	oral	LD50 > 2000 mg/kg	Rat	Study report (1993)	OECD Guideline 401
	dermal	LD50 > 348 mg/kg	Guinea pig	J. Vet. Med. Sci.73: 1417 - 1423. (2011)	OECD Guideline 434

**Irritation and corrosivity**

Skin corrosion/irritation: Causes skin irritation.

Serious eye damage/eye irritation: Causes serious eye damage.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Std., Atomic Absorption, Ag (140-001-47x)**

Revision: 25.07.2025

Product code: AC18.06288

Page 9 of 13

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Information on likely routes of exposure**

There are no data available on the mixture itself.

**Specific effects in experiment on an animal**

There are no data available on the mixture itself.

**Additional information on tests**

There are no data available on the mixture itself.

**Practical experience**

There are no data available on the mixture itself.

**11.2. Information on other hazards****Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**Other information**

There are no data available on the mixture itself.

**Further information**

There are no data available on the mixture itself.

**SECTION 12: Ecological information****12.1. Toxicity**

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Std., Atomic Absorption, Ag (140-001-47x)**

Revision: 25.07.2025

Product code: AC18.06288

Page 10 of 13

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7697-37-2	nitric acid					
	Acute fish toxicity	LC50 mg/l	1559	96 h	Topeka shiner	Environmental Toxicology and Chemistry, other: ASTM E729-26
	Fish toxicity	NOEC	268 mg/l	30 d	juvenile Topeka shiner and with juvenile Fathead m	Study report (2009) Growth tests estimated the test chemical
	Algae toxicity	NOEC	> 419 mg/l	10 d	several benthic diatoms; see results	Marine Biology 43:307-315 (1977) Ten cultures of benthic diatoms were iso
	Acute bacteria toxicity	EC50	> 1000 mg/l ( )	3 h	Activated sludge	Study report (2008) OECD Guideline 209
7761-88-8	silver nitrate					
	Acute fish toxicity	LC50	0,0012 mg/l	96 h	Pimephales promelas	Environmental Toxicology and Chemistry. A guideline was not specified. The test
	Acute algae toxicity	ErC50	0,0099 mg/l	96 h	Pseudokirchneriella subcapitata	Environmental Science and Technology. 44 eline: U.S. Environmental Protection Age
	Acute crustacea toxicity	EC50	0,00022 mg/l	48 h	Daphnia magna	Environmental Toxicology and Chemistry. The protective effect of reactive sulphi
	Fish toxicity	NOEC	> 0,00125 mg/l	73 d	Oncorhynchus mykiss	Environmental Toxicology and Chemistry 2 other: ASTM 1241-98
	Algae toxicity	NOEC	0,0012 mg/l	14 d	Champia parvula	in Bishop WE, Cardwell RD Heidolph BB (E) The toxicity tests lasted 11 days for th
	Crustacea toxicity	NOEC	0,00031 mg/l	20 d	Isonychia bicolor	Environmental Toxicology and Chemistry. 20 day sublethal effects on representati

**12.2. Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**BCF**

CAS No	Chemical name	BCF	Species	Source
7761-88-8	silver nitrate	70	Cyprinus carpio	Water, Air and Soil

**12.4. Mobility in soil**

There are no data available on the mixture itself.

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

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Std., Atomic Absorption, Ag (140-001-47x)

Revision: 25.07.2025

Product code: AC18.06288

Page 11 of 13

Discharge into the environment must be avoided.

**Further information**

Do not allow to enter into surface water or drains.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Send to a physico-chemical treatment facility under observation of official regulations.

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Do not empty into drains.

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 3264
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Classification code:	C1
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 3264
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Classification code:	C1
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 3264
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Special Provisions:	223 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B
Segregation group:	1 - acids

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	UN 3264
--------------------------------------	---------

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## Std., Atomic Absorption, Ag (140-001-47x)

Revision: 25.07.2025

Product code: AC18.06288

Page 12 of 13

**14.2. UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(nitric acid)

**14.3. Transport hazard class(es):** 8

**14.4. Packing group:** III

Hazard label: 8

Special Provisions: A3 A803

Limited quantity Passenger: 1 L

Passenger LQ: Y841

Excepted quantity: E1

IATA-packing instructions - Passenger: 852

IATA-max. quantity - Passenger: 5 L

IATA-packing instructions - Cargo: 856

IATA-max. quantity - Cargo: 60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: Yes

Danger releasing substance: silver nitrate

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Information according to Directive 2012/18/EU (SEVESO III): E1 Hazardous to the Aquatic Environment

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

**National regulatory information****SECTION 16: Other information****Abbreviations and acronyms**

Ox. Liq. 3: Oxidising liquids, hazard category 3

Ox. Sol. 2: Oxidising solids, hazard category 2

Met. Corr. 1: Corrosive to metals, hazard category 1

Acute Tox. 3: Acute toxicity, hazard category 3

Skin Corr. 1A: Skin corrosion, sub-category 1A

Skin Corr. 1B: Skin corrosion, sub-category 1B

Skin Irrit. 2: Skin irritation, hazard category 2

Eye Dam. 1: Serious eye damage, hazard category 1

Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1

Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1

Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard category: Chronic 2

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**Std., Atomic Absorption, Ag (140-001-47x)**

Revision: 25.07.2025

Product code: AC18.06288

Page 13 of 13

**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Dam. 1; H318	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 2; H411	Calculation method

**Relevant H and EUH statements (number and full text)**

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Provide appropriate information, instructions and training to users

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*