

Safety data sheet
according to Regulation (EC) No 1907/2006, Article 31

Page 1/12

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Version number 4.04 (replaces version 4.03)

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

· **1.1 Product identifier**

· **Trade name:** Silver Sulfate solution 10 g/l in sulfuric acid

· **Article number:** 3098

· **Registration number** A registration number is not available for this substance as it is a mixture.

· **UFI:** YEW0-E0S8-G00T-SW6H

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

No further relevant information available.

· **Application of the substance / the mixture**

Chemical analytics

Laboratory chemicals

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

· **Manufacturer/Supplier:**

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès (Barcelona)

Tel. (+34) 937 489 400

Fax. (+34) 937 489 401

e-mail: product.safety@itwreagents.com

· **Further information obtainable from:** email: product.safety@panreac.com

· **1.4 Emergency telephone number:**

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

EU

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 1)

· **Hazard pictograms**



GHS05 GHS09

· **Signal word** Danger

· **Hazard-determining components of labelling:**

sulphuric acid 95 - 97%
 Silver Sulfate

· **Hazard statements**

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**

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.
 · **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 7664-93-9 EINECS: 231-639-5 Index number: 016-020-00-8 Reg.nr.: 01-2119458838-20-XXXX	sulphuric acid 95 - 97% Met. Corr.1, H290; Skin Corr. 1A, H314; Eye Dam. 1, H318 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 15% Skin Irrit. 2; H315: 5 % ≤ C < 15 % Eye Dam. 1; H318: C ≥ 15 % Eye Irrit. 2; H319: 5 % ≤ C < 15 % Met. Corr.1; H290: C ≥ 0.3 %	>50-<100%
CAS: 10294-26-5 EINECS: 233-653-7	Silver Sulfate Eye Dam. 1, H318; Aquatic Acute 1, H400 (M=1000); Aquatic Chronic 1, H410 (M=100)	≥3-≤10%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information:** Involve doctor immediately.
 · **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
 · **After skin contact:**
 Call a doctor immediately.

(Contd. on page 3)

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 2)

Dab with polyethylene glycol 400.

Immediately wash with water and soap and rinse thoroughly.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 - make victim drink water (maximum of 2 drinking glasses)
 - Do not attempt to neutralize.
 - Call a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
 - No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
 - No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
 - CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**
 - In case of fire, the following can be released:
 - Sulphur oxides (SO_x)
 - Non-combustible.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information**
 - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
 - Contain escaping vapours with water.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - Wear protective equipment. Keep unprotected persons away.
 - Avoid substance contact.
 - Do not inhale steams/aerosols.
- **6.2 Environmental precautions:**
 - Inform respective authorities in case of seepage into water course or sewage system.
 - Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 - Use neutralising agent.
 - Dispose contaminated material as waste according to section 13.
 - Ensure adequate ventilation.
 - Clean up affected area.
- **6.4 Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.

(Contd. on page 4)

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 3)

- **Information about fire - and explosion protection:** The product is not flammable.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 Provide acid-resistant floor.
 Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from metals.
- **Further information about storage conditions:**
 Keep container tightly sealed.
 Open receptacle only under localised extractor facilities.
 Store under lock and key and with access restricted to technical experts or their assistants only.
- **Recommended storage temperature:** Room Temperature
- **Storage class:** 8 B
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

7664-93-9 sulphuric acid 95 - 97%

IOELV Long-term value: 0.05 mg/m³

· **DNELs**

7664-93-9 sulphuric acid 95 - 97%

Inhalative	Acute - local effects, worker	0.1 mg/m ³
	Long-term - local effects, worker	0.05 mg/m ³

· **PNECs**

7664-93-9 sulphuric acid 95 - 97%

Aquatic compartment - freshwater	0.0025 mg/L
Aquatic compartment - marine water	0.00025 mg/L
Aquatic compartment - sediment in freshwater	0.002 mg/kg
Aquatic compartment - sediment in marine water	0.002 mg/kg
Sewage treatment plant	8.8 mg/L

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· **Appropriate engineering controls** No further data; see section 7.

· **Individual protection measures, such as personal protective equipment**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes and skin.

· **Respiratory protection:**

Combination filter B-P2

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Use suitable respiratory protective device only when aerosol or mist is formed.

(Contd. on page 5)

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 4)

· **Hand protection**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **For the permanent contact gloves made of the following materials are suitable:**

Fluorocarbon rubber (Viton)

Recommended thickness of the material: ≥ 0.7 mm

Value for the permeation: Level ≥ 480 min min

· **As protection from splashes gloves made of the following materials are suitable:**

Butyl rubber, BR

Recommended thickness of the material: ≥ 0.7 mm

Value for the permeation: Level ≥ 120 min min

· **Eye/face protection**



Gauze goggles

· **Body protection:**

Use protective suit.

Acid resistant protective clothing

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Liquid

· **Colour:**

Colourless

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

Undetermined.

· **Boiling point or initial boiling point and boiling range**

Undetermined.

· **Flammability**

Not applicable.

· **Lower and upper explosion limit**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Flash point:**

Not applicable.

· **Decomposition temperature:**

Not determined.

· **pH at 20 °C**

<1

(Contd. on page 6)

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 5)

· Viscosity:	
· Kinematic viscosity	Not determined.
· Dynamic:	Not determined.
· Partition coefficient n-octanol/water (log value)	Not determined.
· Vapour pressure at 20 °C:	>0 hPa
· Density and/or relative density	
· Density:	Not determined.
· Relative density	Not determined.
· Vapour density	Not determined.

· 9.2 Other information	
· Appearance:	
· Form:	Fluid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Solvent content:	
· Solids content:	0.7-10 %
· Change in condition	
· Evaporation rate	Not determined.

· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	May be corrosive to metals.
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** Heating.
- **10.3 Possibility of hazardous reactions** Explosive reaction with water.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** In the event of fire: See chapter 5

(Contd. on page 7)

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 6)

- **Additional information:** Hydrogen may form upon contact with metals (danger of explosion!).

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

Quantitative data on the toxicological effect of this product are not available.

Components	Type	Value	Species
7664-93-9 sulphuric acid 95 - 97%			
Oral	LD50	2,140 mg/kg (rat)	
Inhalative	LC50/2 h	510 mg/l (rat)	

- **Primary irritant effect:**

- **Skin corrosion/irritation** Causes severe skin burns and eye damage.

- **Serious eye damage/irritation** Causes serious eye damage.

- **After inhalation:** Strong caustic effect on skin and mucous membranes.

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

- **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.

- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:** No further relevant information available.

Type of test	Effective concentration	Method	Assessment
7664-93-9 sulphuric acid 95 - 97%			
EC50	2,500 mg/l (Bakterien)		
	1.2 mg/l (fish)		
EC50/96 h	10 mg/l (aquatic plants other than algae)		
EC50/24 h	29 mg/l (daphnia magna)		
	(bezogen auf die Reinsubstanz)		

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential** No further relevant information available.

- **12.4 Mobility in soil** No further relevant information available.

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

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

- **12.7 Other adverse effects**

- **Remark:** Very toxic for fish

(Contd. on page 8)

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 7)

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.
 Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
 Must not reach sewage water or drainage ditch undiluted or unneutralised.
 Danger to drinking water if even small quantities leak into the ground.
 Also poisonous for fish and plankton in water bodies.
 Very toxic for aquatic organisms
 Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Chemicals must be disposed of in compliance with the respective national regulations.
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:**

Disposal must be made according to official regulations.
 Packagings that may not be cleansed are to be disposed of in the same manner as the product.

SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR, IMDG, IATA** UN1830

· **14.2 UN proper shipping name**

· **ADR** SULPHURIC ACID solution, ENVIRONMENTALLY HAZARDOUS
 · **IMDG** SULPHURIC ACID solution, MARINE POLLUTANT
 · **IATA** SULPHURIC ACID solution

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 8 (C1) Corrosive substances.
 · **Label** 8

· **IMDG**




· **Class** 8 Corrosive substances.

(Contd. on page 9)

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 8)

· Label	8
· IATA	
	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group	
· ADR, IMDG, IATA	II
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances: Silver Sulfate
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	(SGG1) Acids
· Stowage Category	E
· Stowage Code	SW15 For metal drums, stowage category B.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category	2
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1830 SULPHURIC ACID SOLUTION, 8, II, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I None of the ingredients is listed.
- Seveso category E1 Hazardous to the Aquatic Environment
- Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
- Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

(Contd. on page 10)

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 9)

- **REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)**

None of the ingredients is listed.

- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

- **REGULATION (EU) 2019/1148**

- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

7664-93-9	sulphuric acid 95 - 97%	Limit value: >15-≤40 %	>50-<100%
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- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

- **Regulation (EC) No 273/2004 on drug precursors**

7664-93-9	sulphuric acid 95 - 97%	3
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- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

7664-93-9	sulphuric acid 95 - 97%	3
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- **REGULATION (EU) 2024/590 on substances that deplete the ozone layer**

None of the ingredients is listed.

- **National regulations:**

- **Other regulations, limitations and prohibitive regulations**

- **Substances of very high concern (SVHC) according to REACH, Article 57**

None of the ingredients is listed.

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

- **Date of previous version:** 20.08.2021

- **Version number of previous version:** 4.03

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

(Contd. on page 11)

EU

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 10)

LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 SVHC: Substances of Very High Concern
 vPvB: very Persistent and very Bioaccumulative
 ATE: Acute toxicity estimate values
 Met. Corr. 1: Corrosive to metals – Category 1
 Skin Corr. 1A: Skin corrosion/irritation – Category 1A
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
 * **Data compared to the previous version altered.**

Annex: Exposure scenario

- **Short title of the exposure scenario** Formulation and packing/repacking of substances and mixtures
- **Description of the activities / processes covered in the Exposure Scenario**
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
- **Physical state** Fluid
- **Concentration of the substance in the mixture** The substance is main component.
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure**
No special measures required.
Use only on hard ground.
- **Other operational conditions affecting worker exposure**
Avoid contact with eyes.
Avoid contact with the skin.
- **Other operational conditions affecting consumer exposure** No special measures required.
- **Other operational conditions affecting consumer exposure during the use of the product**
Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** No special measures required.
- **Technical protective measures**
Ensure that suitable extractors are available on processing machines
Use product only in enclosed systems.
- **Personal protective measures**
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes.
Tightly sealed goggles
Protective gloves
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Measures for consumer protection** Ensure adequate labelling.
- **Environmental protection measures**
- **Water**
Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.
Do not allow to reach sewage system.
- **Soil** Prevent contamination of soil.

(Contd. on page 12)

Trade name: Silver Sulfate solution 10 g/l in sulfuric acid

(Contd. of page 11)

· Disposal measures

Disposal must be made according to official regulations.
Ensure that waste is collected and contained.

· Disposal procedures

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· Waste type Partially emptied and uncleaned packaging**· Exposure estimation**

· Consumer Not relevant for this Exposure Scenario.

· Guidance for downstream users No further relevant information available.