

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

### 1.1 Product identifier

Product name: Silver sulfate  
CAS-No.: 10294-26-5  
EC-No.: 233-653-7

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

Identified use: Laboratory chemical

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

Company: NETZSCH-Gerätebau GmbH  
Wittelsbacherstraße 42  
95100 Selb / Germany

Customer service Phone: +49 9287 881-555

**1.4 Emergency Phone: +49 9287 881-174 (during office hours)**

Fax: +49 9287 881-505

E-mail Address: service@ngb.netzsch.com

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Eye Dam. 1 H318 Causes serious eye damage.  
Acute aquatic toxicity, H400 very toxic for water organisms  
Chronic aquatic toxicity, H410 very toxic for water organisms with long-term effect.

### 2.2 Label elements

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

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

Hazard pictograms:



Signalword: Danger

Hazard statements: H318 Causes serious eye damage.  
H410 very toxic for water organisms with long-term effect.

Precautionary statements: P280 Wear protective gloves/protective clothing/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.

Additional information: -

## 2.3 Other hazards

All chemicals are potentially dangerous.  
They are therefor only be handled by specially trained personnel with the necessary care.

### Results of PBT- und vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

## 3. Composition / information on ingredients

### 3.1 Chemical characterization:

#### Substances

CAS-No. Description: 10294-26-5 disilver(1+) sulphate

#### Identification number(s):

EC number: 233-653-7

Formula:  $\text{Ag}_2\text{SO}_4$

Molar mass [g/mol]: 311.80

## 4. First aid measures

### 4.1 Description of first aid measures

General information: In case of ailments consult a physician. Show this safety data sheet to the doctor in attendance. Remove any clothing soiled by the product.

After inhalation: Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

After skin contact: Wash off with soap and plenty of water.  
If skin irritation continues, consult a doctor.

After eye contact: Rinse immediately for 15 minutes with plenty of water with the eyelid held wide open. Seek medical advice.

After swallowing: Do not induce vomiting. Rinse out mouth and then drink water. Consult a physician. Never give anything by mouth to an unconscious person.

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

The most important known symptoms and effects are described on the marking label (see section 2. 2) and/or in chapter 11.

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

No further relevant information available.

## 5. Fire-Fighting measures

### 5.1 Extinguishing agents

Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions. CO2 powder, foam or water spray.

For safety reasons unsuitable extinguishing agents: Do not use water jet.

## 5.2 Special hazards arising from the substance or mixture

In the event of fire development of hazardous combustion gases or vapours possible.

### In case of fire, the following can be released:

Sulphure oxides, silver, silver oxide

## 5.3 Advice for firefighters

Protective equipment:                      Wear self-contained respiratory protective device.  
Wear fully protective suit.

Additional information:                      -

## 6. Accidental release measures

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

Avoid formation of dust. Provide for adequate airing.

### 6.2 Environmental precautions

Do not allow to enter sewers/ground water or penetrate the soil.

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

Pick up mechanically.

Dispose of the material collected according to regulations.

### 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.

## 7. Handling and storage

### 7.1 Precautions for safe handling

Handling corresponding to laboratory safety guidelines. Avoid dust and aerosol formation. Provide appropriate ventilation in dust formation.

### Information about fire and explosion protection:

No special measures required.

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

Requirements for safe storage,  
including any incompatibilities:            No special requirements.

Information about storage in one  
common storage facility:                    Store away from foodstuffs.

Further information about  
storage conditions:                          Protect from exposure to the light.  
Storage class (TRGS 510): non-flammable solids  
Preserve it in a cool and well ventilated place.  
Keep the container tightly closed.

### 7.3 Specific end use(s)

No further relevant information available.

## 8. Exposure controls / personal protection

Additional information about design of technical facilities:

No further data; see item 7.

### 8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

10294-26-5 disilver(1+) sulphate

WEL (Great Britain)	Long-term value: 0.01 mg/m <sup>3</sup> as Ag
---------------------	--

Additional information:

The lists valid during the making were used as basis.

### 8.2 Exposure controls

#### Personal protective equipment:

General protective and hygienic measures:

Do not eat, drink or smoke while working.  
Do not breathe dust.  
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.

Individual protection measures:

-

Respiratory protection:

Required when dusts are generated: filter P2 / P3.  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use selfcontained respiratory protective device.

Protection of hands:

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.  
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.  
Material: Nitrile

Eye protection:

Tightly sealed goggles.

Body protection:

Protective work clothing.

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

Appearance	
Form:	Crystalline powder
Colour:	White
Odour:	Odourless
Odour threshold:	Not determined.
pH-value (5 g/l) at 25°C:	5-6
Change in condition	
Melting point / Melting range:	655°C
Boiling point / Boiling range:	Not determined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Ignition temperature:	Not applicable.
Decomposition temperature:	1085°C
Self-igniting:	Not applicable.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits	
Lower:	Not applicable.
Upper:	Not applicable.
Vapour pressure:	Not applicable.
Density at 20°C:	5.45 g/cm <sup>3</sup>
Bulk density at 20°C:	~1200 kg/m <sup>3</sup>
Relative density:	Not determined.
Vapour density:	Not applicable.
Evaporation rate:	Not applicable.
Solubility in / Miscibility with water at 25°C:	8 g/l
Partition coefficient (n-octanol / water):	Not determined.
Viscosity	
Dynamic:	Not applicable.
Kinematic:	Not applicable.

#### 9.2 Other information

No further relevant information available.

## 10. Stability and reactivity

### 10.1 Reactivity

No information available.

### 10.2 Chemical stability

#### Thermal decomposition / conditions to be avoided:

Strong heating.

Thermal decomposition: 1085°C

Exposure to light

No decomposition if used and stored according to specifications.

### 10.3 Possibility of hazardous reactions

No information available.

### 10.4 Conditions to avoid

No further relevant information available.

### 10.5 Incompatible materials

Strong oxidizing agents.

### 10.6 Hazardous decomposition products

In case of fire: see item 5.

More information: is corrosive

As materials unsuitably: Aluminium, steel

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD / LC50 values relevant  
for classification:

Oral | LD50 | >5000 mg/kg (rat)

#### Potential health effects

Skin:	Slight irritations.
Eyes:	Strong irritant with the danger of severe eye injury.
Inhalation:	No irritating effect.
Ingestion	May cause nausea and vomiting.
Sensitization:	No sensitizing effects known.

#### CMR effects

Germ cell mutagenicity:	No information available.
Carcinogenicity:	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity:	No information available.

#### Aspiration hazard:

No information available.

#### Specific target organ toxicity – single exposure:

No information available.

### **Specific target organ toxicity – repeated exposure:**

No information available.

### **Further information:**

The product should be handled with the usual care as necessary for chemicals.

## **12. Ecological information**

### **12.1 Toxicity**

#### **Aquatic toxicity**

Toxicity compared with fishing      static test EC10 – Salmo trutta – 0,00019 mg/l – 217d

Toxicity compared with daphnia      EC50 - Daphnia (water flea) - 0.004 mg / l - 48 h  
and other invertebrates water  
animals

### **12.2 Persistence and degradability**

Persistence:                                      No information available.

Degradability:                                    The methods for determining biodegradability are not applicable  
to inorganic substances.

### **12.3 Bioaccumulative potential**

No further relevant information available.

### **12.4 Mobility in soil**

No further relevant information available.

### **Ecotoxicological effects**

Remark:    Do not allow to enter waters, waste water, or soil! Also not in  
tiny amounts

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

PBT:    Not applicable.

vPvB:    Not applicable.

### **12.6 Other adverse effects**

No further relevant information available.

## **13. Disposal considerations**




### **Waste treatment methods**

Recommendation:                                Dispose of residual amounts and non-reusable solutions in  
accordance with local legal regulations. Waste code must be  
classified as hazardous.

### **Uncleaned packaging**

Recommendation:                                Disposal same as for unused product.

## 14. Transport information

	ADR	IMDG	IATA
<b>14.1 UN-Number</b>	3077	3077	3077
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS MATERIAL, SOLID, N. A. G. (Disilver (1 +) sulphate	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Disilver(1+) sulphate	Environmentally hazardous substance, solid, n.o.s. (Disilver(1+) sulphate)
<b>14.3 Transport hazard class(es) / -label</b>			
<b>14.4 Packing group:</b>	III	III	III
14.3 Transport hazard class(es):	9	9	9
Label:	8	8	8
Danger symbol:			
<b>14.5 Environmental hazards:</b>	Yes	Yes	Yes

### 14.6 Special precautions for user

Warning: Corrosive substances.

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

The cargo is not intended to be carried in bulk.

## 15. Regulatory information

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

#### National regulations:

Information about limitation of use: In dealing with chemicals the national laws must be observed.

Waterhazard class: Water hazard class 3 (Assessment by list): extremely hazardous for water.

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## 16. Other Information

### Guarantee

This information has been compiled to the best of our knowledge; however, we make no claim as to its completeness and it is meant to serve only as a guideline. NETZSCH-Gerätebau GmbH disclaims any liability for damages which may occur in handling or in contact with these chemicals.

**Disclaimer: For R&D use only. Not for drug, household or other uses.**