

## Safety Data Sheet **SILVER SULFATE**

SDS no. 04QXJ8NZ • Version 1.0 • Date of issue: 2024-07-08

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### SECTION 1: Identification

#### GHS Product identifier

Product name SILVER SULFATE

#### Other means of identification

Name	Product Code
SILVER SULFATE	SA243
Sulfuric acid, silver salt	

#### Recommended use of the chemical and restrictions on use

Catalyst (determining COD (Chemical Oxygen Demand)), analytical and laboratory reagent.

#### Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

#### Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

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### SECTION 2: Hazard identification

#### Classification of the substance or mixture

#### GHS classification in accordance with: UN GHS revision 7

- Serious eye damage/eye irritation, Cat. 1
- Hazardous to the aquatic environment, short-term (acute), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic), Cat. 1

#### GHS label elements, including precautionary statements

#### Pictograms



**Signal word**

**Danger**

**Hazard statement(s)**

H318  
H410

Causes serious eye damage  
Very toxic to aquatic life with long lasting effects

**Precautionary statement(s)**

P273  
P280  
P305+P351+P338  
  
P310  
P391  
P501

Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor/physician  
Collect spillage.  
Dispose of contents/container to an approved waste disposal facility

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**SECTION 3: Composition/information on ingredients**

**Mixtures**

Molecular weight: 311.79

Information on Composition: Assay: Contains about 69% silver.

**Components**

Component	CAS no.	Concentration
Silver sulfate (EC no.: 233-653-7)	10294-26-5	<= 100 % (weight)
CLASSIFICATIONS: Hazardous to the aquatic environment, short-term (acute), Cat. 1; Hazardous to the aquatic environment, long-term (chronic), Cat. 1; Serious eye damage/eye irritation, Cat. 1. HAZARDS: H318 - Causes serious eye damage; H400 - Very toxic to aquatic life; H410 - Very toxic to aquatic life with long lasting effects.		

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**SECTION 4: First-aid measures**

**Description of necessary first-aid measures**

General advice

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).

First Aid Facilities: Maintain eyewash fountain in work area.

If inhaled

If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

In case of skin contact

Wash affected areas with copious quantities of water immediately. If irritation occurs seek medical advice.

In case of eye contact

If contact with the eye(s) occurs, wash with copious amounts of water for approximately 15 minutes holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek medical attention.

If swallowed Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

**Most important symptoms/effects, acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**Indication of immediate medical attention and special treatment needed, if necessary**

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

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**SECTION 5: Fire-fighting measures**

**Suitable extinguishing media**

Small fire: Use dry chemical, CO<sub>2</sub>, water spray or foam.

Large fire: Use water spray, fog or foam.

**Specific hazards arising from the chemical**

Hazards from Combustion Products: May liberate toxic fumes in fire (sulfur oxides).

Material does not burn. Fire or heat may produce irritating, poisonous and/or corrosive gases. Runoff may pollute waterways.

**Special protective actions for fire-fighters**

Wear SCBA and structural firefighter's uniform.

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**SECTION 6: Accidental release measures**

**Personal precautions, protective equipment and emergency procedures**

Evacuate the area of all non-essential personnel. Avoid inhalation, contact with skin, eyes and clothing.

Wear protective clothing specified for normal operations (see Section 8)

**Environmental precautions**

Prevent contamination of soil and water.

**Methods and materials for containment and cleaning up**

Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal.

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**SECTION 7: Handling and storage**

**Precautions for safe handling**

Avoid generation or accumulation of dusts. Avoid prolonged or repeated contact with skin, eyes and clothing. Use in well ventilated areas away from all ignition sources. In case of insufficient ventilation, wear suitable respiratory equipment. Wash hands and face thoroughly after working with material. Contaminated clothing should be removed and washed before reuse.

**Conditions for safe storage, including any incompatibilities**

Keep container tightly closed and in a cool, well-ventilated place Keep away from direct sunlight

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**SECTION 8: Exposure controls/personal protection**

**Appropriate engineering controls**

In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

**Individual protection measures, such as personal protective equipment (PPE)**

**Eye/face protection**

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

**Skin protection**

Clean impervious clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

**Body protection**

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

**Respiratory protection**

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

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**SECTION 9: Physical and chemical properties**

**Basic physical and chemical properties**

Physical state	Solid
Appearance	Small, white to colourless, lustrous crystals or crystalline powder. Turns gray on exposure to light.
Color	No data available.
Odor	Odourless.
Odor threshold	No data available.
Melting point/freezing point	652 °C
Boiling point or initial boiling point and boiling range	1085 °C (decomposes)
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	>1000 °C
Oxidizing properties	No data available.
pH	5-6 (5 g/l, H <sub>2</sub> O, 25 °C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Slightly soluble in water.Solubility in Organic Solvents: Soluble in ammonium hydroxide, nitric acid, sulfuric acid and hot water. Insoluble in alcohol.
Partition coefficient n-octanol/water (log value)	No data available.
Vapor pressure	No data available.

# Safety Data Sheet

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Evaporation rate  
Density and/or relative density  
Relative vapor density  
Particle characteristics

No data available.  
Specific Gravity: 5.45 (20 °C)  
No data available.  
No data available.

### Supplemental information regarding physical hazard classes

No data available.

### Further safety characteristics (supplemental)

No data available.

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## SECTION 10: Stability and reactivity

### Reactivity

Stable under normal conditions of storage and handling.

### Chemical stability

Darkens on exposure to air and light

### Possibility of hazardous reactions

Hazardous Polymerization: Will not occur.

### Conditions to avoid

Exposure to moisture.

Avoid storing in direct sunlight and avoid extremes of temperature.

### Incompatible materials

Strong oxidisers.

### Hazardous decomposition products

Oxides of sulfur.

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## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

Acute Toxicity - Oral: LD50 (rat): ~5000 mg/kg

Ingestion: May be harmful if swallowed. May cause irritation to mouth, throat and stomach, abdominal spasms, faintness, muscular spasms and argyria.

Inhalation: Causes irritation to the respiratory system with symptoms including coughing and dyspnoea.

#### Skin corrosion/irritation

May be harmful if absorbed through the skin. Causes skin irritation. May cause argyria, discolouration of skin and mucous membranes, and skin inflammation (itching, scaling, reddening or occasionally blistering).

#### Serious eye damage/irritation

Causes eye irritation with symptoms including of inflammation, redness, watering and itching. May cause discolouration. Risk of serious and permanent damage to eyes due to staining of cornea. Risk of serious eye damage!

**Respiratory or skin sensitization**

No data available

**Germ cell mutagenicity**

No data available.

**Carcinogenicity**

No data available.

**Reproductive toxicity**

No data available.

**Summary of evaluation of the CMR properties**

No data available.

**Specific target organ toxicity (STOT) - single exposure**

No data available.

**Specific target organ toxicity (STOT) - repeated exposure**

No data available.

**Aspiration hazard**

No data available.

**Additional information**

Chronic Effects: May cause permanent bluish discolouration of the skin, eyes and mucous membranes. Prolonged or repeated inhalation, application or ingestion of silver compounds may cause a permanent bluish-gray discolouration of the skin and mucous membranes and eyes known as argyria (accumulation of silver in the body).

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**SECTION 12: Ecological information**

**Toxicity**

Ecological Information: H410 Very toxic to aquatic life with long lasting effects.

**Persistence and degradability**

Soluble in water, persisynce is unlikely based on information available.

**Mobility in soil**

Wil be mobile in the environment due to its water solubility.

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**SECTION 13: Disposal considerations**

**Disposal methods**

**Product disposal**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

**Other disposal recommendations**

Do not discharge this material into waterways, drains and sewers.

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**SECTION 14: Transport information**

**ADG (Road and Rail)**

UN Number: 3077

Class: 9

Packing Group: III

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains Silver Sulphate)

**Hazchem emergency action code (EAC)**

2X

**IMDG**

UN Number: 3077

Class: 9

Packing Group: III

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains Silver Sulphate)

**IATA**

UN Number: 3077

Class: 9

Packing Group: III

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains Silver Sulphate)

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**SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**Canadian Domestic Substances List (DSL)**

Chemical name: Sulfuric acid, disilver(1++) salt

CAS: 10294-26-5

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**SECTION 16: Other information**

**Further information/disclaimer**

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

**Preparation information**

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

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Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), [hcis.safeworkaustralia.gov.au](https://hcis.safeworkaustralia.gov.au)

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)