

## SAFETY DATA SHEET

Preparation Date: 3/15/2018

Revision Date: 11/6/2018

Revision Number: G2

### 1. IDENTIFICATION

#### Product identifier

**Product code:** S1095  
**Product Name:** SILVER SULFATE, POWDER, REAGENT, ACS

#### Other means of identification

**Synonyms:** Sulfuric acid, silver salt  
 Disilver sulfate  
 Sulfuric acid, disilver salt  
**CAS #:** 10294-26-5  
**RTECS #** Not available  
**CI#:** Not available

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

**Recommended use:** For manufacturing or laboratory use only.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Serious eye damage/eye irritation	Category 1
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#### Label elements

**Danger**

**Hazard statements**  
 Causes serious eye damage



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

**Precautionary Statements - Prevention**

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 or doctor/physician.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %
Silver Sulfate	10294-26-5	100

**4. FIRST AID MEASURES**

**First aid measures**

**General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

**Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

**Eye Contact:**

Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

**Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

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

**Symptoms**

May cause skin irritation  
May cause irritation of respiratory tract  
Severe eye irritation  
Risk of serious damage to eyes  
May cause eye damage  
May cause digestive (gastrointestinal) tract irritation  
Abdominal pain

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

**Notes to Physician:**

Treat symptomatically.

### **Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

## **5. FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

#### **Suitable Extinguishing Media:**

The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

#### **Unsuitable Extinguishing Media:**

No information available.

### **Specific hazards arising from the chemical**

#### **Hazardous Combustion Products:**

If it is involved in a fire the following can be released: silver oxides. Sulfur Oxides.

#### **Specific hazards:**

No information available.

### **Special Protective Actions for Firefighters**

#### **Specific Methods:**

No information available.

#### **Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## **6. ACCIDENTAL RELEASE MEASURES**

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

#### **Personal Precautions:**

Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

#### **Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

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

#### **Methods for containment**

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

#### **Methods for cleaning up**

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

#### **Safe Handling Advice**

Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Wear personal protective equipment. Handle in accordance with good industrial hygiene and safety practice.

## Conditions for safe storage, including any incompatibilities

### **Technical Measures/Storage Conditions:**

Sensitive to light. Store in light-resistant containers. Keep container tightly closed in a dry and well-ventilated place. Store away from incompatible materials. Store at room temperature in the original container.

### **Incompatible Materials:**

Strong oxidizing agents  
Aluminum  
Steel

## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### Control parameters

#### **National occupational exposure limits**

##### **United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Silver Sulfate	10294-26-5	0.01 mg/m <sup>3</sup> TWA (as Ag)	0.01 mg/m <sup>3</sup> TWA (as Ag)	0.01 mg/m <sup>3</sup> TWA (as Ag)	None

##### **Canada**

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Silver Sulfate	10294-26-5	0.01 mg/m <sup>3</sup> TWA (as Ag)	0.03 mg/m <sup>3</sup> STEL (as Ag) 0.01 mg/m <sup>3</sup> TWA (as Ag)	0.01 mg/m <sup>3</sup> TWA (as Ag)	0.01 mg/m <sup>3</sup> TWAEV (as Ag)

##### **Australia and Mexico**

Components	CAS-No.	Australia	Mexico
Silver Sulfate	10294-26-5	0.01 mg/m <sup>3</sup> TWA (as Ag)	0.01 mg/m <sup>3</sup> TWA (as Ag)

### Appropriate engineering controls

#### **Engineering measures to reduce exposure:**

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Individual protection measures, such as personal protective equipment

#### **Personal Protective Equipment**

**Eye protection:** Goggles or Safety glasses with side-shields.

**Skin and body protection:** Chemical resistant apron  
Gloves  
Long sleeved clothing

**Respiratory protection:** Effective dust mask. or. Wear respirator with dust filter. Use a dust respirator

under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:**

Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state:</b> Solid	<b>Appearance:</b> Crystalline powder. Crystalline solid.	<b>Color:</b> White. Gray.
<b>Odor:</b> Odorless.	<b>Taste</b> No information available.	<b>Formula:</b> Ag <sub>2</sub> SO <sub>4</sub>
<b>Molecular/Formula weight (g/mole):</b> 311.80 g/mol	<b>Flammability:</b> No information available	<b>Flashpoint (°C/°F):</b> No information available.
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> 657°C/1215°F	<b>Decomposition temperature(°C/°F):</b> 1085°C/1985°F
<b>Boiling point/range(°C/°F):</b> 1085°C/1985°F	<b>Bulk density:</b> No information available	<b>Density (g/cm<sup>3</sup>):</b> 5.45
<b>Specific gravity:</b> No information available	<b>pH:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> Soluble in Nitric acid Soluble in ammonia Soluble in hot concentrated Sulfuric acid Slowly soluble in 125 parts water, 71 parts boiling water	

**10. STABILITY AND REACTIVITY**

**Reactivity**

No information available

**Chemical stability**

**Stability:**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:**

Excess Heat. Exposure to light. Incompatible materials.

**Incompatible Materials:** Strong oxidizing agents  
Aluminum  
Steel

**Hazardous decomposition products:** No information available.

**Other Information**  
**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Eyes. Inhalation. Ingestion. Skin.

### Acute Toxicity

#### Component Information

Silver Sulfate
CAS-No.   10294-26-5

**LD50/oral/rat** = 5000 mg/kg oral LD50 rat  
**LD50/oral/mouse** = No information available  
**LD50/dermal/rabbit** = No information available  
**LD50/dermal/rat** = No information available  
**LC50/inhalation/rat** = No information available  
**LC50/inhalation/mouse** = No information available  
**Other LD50 or LC50 information** = No information available

#### Product Information

**LD50/oral/rat** =  
**VALUE- Acute Tox Oral** = No information available

**LD50/oral/mouse** =  
**Value - Acute Tox Oral** = No information available

**LD50/dermal/rabbit**  
**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**  
**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**  
**VALUE-Vapor** = No information available  
**VALUE-Gas** = No information available  
**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**  
**VALUE-Vapor** = No information available  
**VALUE - Gas** = No information available

VALUE - Dust/Mist = No information available

### Symptoms

**Skin Contact:** May cause skin irritation.

**Eye Contact:** Severe eye irritation. Risk of serious damage to eyes. May cause eye injury.

**Inhalation** May cause irritation of respiratory tract.

**Ingestion** May cause digestive (gastrointestinal) tract irritation. May cause abdominal pain.

**Aspiration hazard** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity** Chronic inhalation or ingestion of silver salts may cause argyria which is characterized by a permanent blue-gray discoloration of the eyes, skin, mucous membranes, and internal organs. It results from the accumulation of silver in the body.

**Sensitization:** No information available.

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Silver Sulfate	10294-26-5	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

### Specific Target Organ Toxicity

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target Organs:** No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity effects:** Aquatic environment.

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**Freshwater Fish Species Data:** 0.00019 mg/L EC10 217d static  
**Water Flea Data:** 0.004mg/L EC50 Daphnia 48h  
**Persistence and degradability:** No information available  
**Bioaccumulative potential:** No information available.  
**Mobility:** No information available.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal. Do not re-use empty containers  
 Dispose of as unused product. Dispose of in accordance with federal, state and local regulations

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Silver Sulfate	10294-26-5	None	None	None	None

### 14. TRANSPORT INFORMATION

**DOT**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Class:** No information available  
**Packing group:** No information available  
**Emergency Response Guide Number:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available  
**Special Provisions:** No Information available  
**Symbol(s):** No information available  
**Description:** No information available

**TDG (Canada)**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant:** No Information available  
**Description:** No information available

**ADR**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available

**IMO / IMDG**

**Product code:** S1095

**Product name:** SILVER SULFATE,  
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**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant** No information available

**RID**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**ICAO**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**IATA**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**ERG Code:** No information available  
**Special Provisions** No information available

**15. REGULATORY INFORMATION**

**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Silver Sulfate	10294-26-5	Present	Present KE-12273	Present	Present (1)-10	Present	Present	Present 233-653-7

**U.S. Regulations**

*Silver Sulfate*

- New Jersey RTK Hazardous Substance List:** Present sn 3008 (silver compounds)
- New Jersey (EHS) List:** SN 3008 500 lb TPQ (silver compounds)
- New Jersey - Discharge Prevention - List of Hazardous Substances:** Present (silver compounds)
- Pennsylvania RTK:** Environmental Hazard (silver compounds)
- Pennsylvania RTK - Environmental Hazard List** Present (silver compounds)
- Minnesota - Hazardous Substance List:** Present (as Ag)
- California Directors List of Hazardous Substances:** Present (compounds existing in stable emulsions or suspensions are exempt)(silver compounds)

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive	Female Reproductive

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				<b>Toxicity</b>	<b>Toxicity:</b>
Silver Sulfate	10294-26-5	Not Listed	Not Listed	Not Listed	Not Listed

#### CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Silver Sulfate	10294-26-5	None	None	None	Silver compounds	1.0%

#### U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Silver Sulfate	10294-26-5	Not Applicable	Not Applicable

#### Canada

##### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

Component  
Silver Sulfate  
10294-26-5 ( 100 )

WHMIS 2015 Hazard Classification  
Serious Eye Damage/Eye Irritation - Category 1: H318 Causes serious eye damage.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

Components	WHMIS Ingredient Disclosure List -
Silver Sulfate	1%

#### Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Silver Sulfate	10294-26-5	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Silver Sulfate	10294-26-5	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Silver Sulfate	10294-26-5	Not listed

#### EU Classification

##### EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Silver Sulfate	10294-26-5	No information

##### EU - CLP (1272/2008)

#### R-phrases(s)

R41 - Risk of serious damage to eyes.

#### S -phrase(s)

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S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Silver Sulfate	10294-26-5		No information	

**The product is classified in accordance with Annex VI to Directive 67/548/EEC**

**Indication of danger:**

Xi - Irritant.

Xi



## 16. OTHER INFORMATION

**Preparation Date:** 3/15/2018  
**Revision Date:** 11/6/2018  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**