



## SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
OSHA HCS2012

Revision date 29-Apr-2024

Revision Number 1

### 1. Identification

#### Product identifier

**Product Name** Sulfur Standard: 10000 µg/mL S in H<sub>2</sub>O [100ml bottle]

#### Other means of identification

**Product Code(s)** 5190-8209

**Synonyms** None

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

**Recommended use** Reagents and Standards for Analytical Chemical Laboratory Use

**Restrictions on use** Not to be used for human or animal consumption

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

##### Supplier Address

Agilent Technologies, Inc.  
5301 Stevens Creek Blvd  
Santa Clara, CA 95051, USA

800-227-9770

**E-mail** pdl-msds\_author@agilent.com

#### Emergency telephone number

**Emergency Telephone**  
CHEMTRIC®: 1-800-424-9300

### 2. Hazard(s) identification

#### Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

#### Hazards not otherwise classified (HNOC)

Not applicable

#### Label elements



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### **Hazard statements**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

The product contains no substances which at their given concentration, are considered to be hazardous to health.

### **Precautionary Statements - Response**

### **Other information**

No information available.

## **3. Composition/information on ingredients**

### Substance

Not applicable.

### Mixture

**Chemical nature** aqueous solution.

| Chemical name    | CAS No.   | Weight-% | Trade secret |
|------------------|-----------|----------|--------------|
| Ammonium sulfate | 7783-20-2 | 1 - <3   | *            |

## **4. First-aid measures**

### Description of first aid measures

**Inhalation** Remove to fresh air.

**Eye contact** Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

**Skin contact** Wash skin with soap and water.

**Ingestion** Rinse mouth.

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



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**Symptoms** No information available.

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

**Note to physicians** Treat symptomatically.

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

**Specific hazards arising from the chemical** No information available.

#### **Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Ensure adequate ventilation.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers.

## 7. Handling and storage

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### Precautions for safe handling

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA.

## 8. Exposure controls/personal protection

### Control parameters

**Exposure Limits** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### **Biological occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

### Appropriate engineering controls

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

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

**Eye/face protection** Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

**Hand protection** Wear protective nitrile rubber gloves. The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

**Skin and body protection** Wear suitable protective clothing.

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**Environmental exposure controls** Do not allow into any sewer, on the ground or into any body of water.

**General hygiene considerations** Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

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### 9. Physical and chemical properties

#### Information on basic physical and chemical properties

|                       |                          |
|-----------------------|--------------------------|
| <b>Physical state</b> | Liquid                   |
| <b>Appearance</b>     | Liquid                   |
| <b>Color</b>          | colorless                |
| <b>Odor</b>           | Odorless                 |
| <b>Odor threshold</b> | No information available |

| <u>Property</u>                         | <u>Values</u>     | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH                                      | No data available | None known              |
| Melting point / freezing point          | 0 °C / 32 °F      | None known              |
| Initial boiling point and boiling range | 100 °C / 212 °F   | None known              |
| Flash point                             | No data available | None known              |
| Evaporation rate                        | No data available | None known              |
| Flammability                            | No data available | None known              |
| Flammability Limit in Air               |                   | None known              |
| Upper flammability or explosive limits  | No data available |                         |
| Lower flammability or explosive limits  | No data available |                         |
| Vapor pressure                          | 23 hPa            | @ 20°C                  |
| Relative vapor density                  | No data available | None known              |
| Relative density                        | 0.99821           | @ 20 °C                 |
| Water solubility                        | Miscible in water | None known              |
| Solubility(ies)                         | No data available | None known              |
| Partition coefficient                   | No data available | None known              |
| Autoignition temperature                | No data available | None known              |
| Decomposition temperature               |                   | None known              |
| Kinematic viscosity                     | No data available | None known              |
| Dynamic viscosity                       | No data available | None known              |

#### Other information

|                             |                          |
|-----------------------------|--------------------------|
| <b>Explosive properties</b> | No information available |
| <b>Oxidizing properties</b> | No information available |
| <b>Softening point</b>      | No information available |
| <b>Molecular weight</b>     | No information available |
| <b>VOC content</b>          | No information available |
| <b>Liquid Density</b>       | No information available |
| <b>Bulk density</b>         | No information available |

### 10. Stability and reactivity

|                   |                           |
|-------------------|---------------------------|
| <b>Reactivity</b> | No information available. |
|-------------------|---------------------------|



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**Chemical stability** Stable under normal conditions.

**Possibility of hazardous reactions** None under normal processing.

**Conditions to avoid** None known based on information supplied.

**Incompatible materials** None known based on information supplied.

**Hazardous decomposition products** None known based on information supplied.

### 11. Toxicological information

#### Information on likely routes of exposure

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available.

**Ingestion** Specific test data for the substance or mixture is not available.

#### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** No information available.

#### Acute toxicity

#### Numerical measures of toxicity

**The following values are calculated based on chapter 3.1 of the GHS document**

|                                      |                  |
|--------------------------------------|------------------|
| <b>ATEmix (oral)</b>                 | 284,000.00 mg/kg |
| <b>ATEmix (dermal)</b>               | 99,999.00 mg/kg  |
| <b>ATEmix (inhalation-gas)</b>       | 99,999.00 ppm    |
| <b>ATEmix (inhalation-dust/mist)</b> | 99,999.00 mg/l   |
| <b>ATEmix (inhalation-vapor)</b>     | 99,999.00 mg/l   |

#### Component Information

| Chemical name                 | Oral LD50            | Dermal LD50          | Inhalation LC50 |
|-------------------------------|----------------------|----------------------|-----------------|
| Ammonium sulfate<br>7783-20-2 | = 2840 mg/kg ( Rat ) | > 2000 mg/kg ( Rat ) | -               |

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



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**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

## 12. Ecological information

### Ecotoxicity

| Chemical name                 | Algae/aquatic plants | Fish   | Toxicity to microorganisms | Crustacea                             |
|-------------------------------|----------------------|--|----------------------------|---------------------------------------|
| Ammonium sulfate<br>7783-20-2 | -                    | LC50: =250mg/L (96h, Brachydanio rerio)<br>LC50: =480mg/L (96h, Brachydanio rerio)<br>LC50: =420mg/L (96h, Brachydanio rerio)<br>LC50: =18mg/L (96h, | -                          | LC50: =0.43 mg/L (48h, Daphnia magna) |



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|  |  |  |  |  |
|--|--|--|--|--|
|  |  | Cyprinus carpio)<br>LC50: 32.2 - 41.9mg/L<br>(96h, Oncorhynchus<br>mykiss)<br>LC50: 5.2 - 8.2mg/L (96h,<br>Oncorhynchus mykiss)<br>LC50: >100mg/L (96h,<br>Pimephales promelas)<br>LC50: 123 - 128mg/L<br>(96h, Poecilia reticulata)<br>LC50: =126mg/L (96h,<br>Poecilia reticulata) |  |  |
|--|--|--|--|--|

**Persistence and degradability** No information available.

**Bioaccumulation** There is no data for this product.

### Component Information

| Chemical name                 | Partition coefficient |
|-------------------------------|-----------------------|
| Ammonium sulfate<br>7783-20-2 | -5.1                  |

**Other adverse effects** No information available.

## 13. Disposal considerations

### Disposal methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

## 14. Transport information

**DOT** Not regulated

**TDG** Not regulated

**MEX** Not regulated



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**IATA** Not regulated

**IMDG** Not regulated

### 15. Regulatory information

#### International Inventories

**TSCA** LGC, to the best of its ability, has confirmed that the chemical substances in this product are listed as "Active" in the EPA (Environmental Protection Agency) "TSCA Inventory Notification (Active-Inactive) Requirements Rule" ("the Final Rule") of Feb 2019, as amended Feb 2021..

| Chemical name    | CAS No.   | Inventory Listing Status | Commercial Activity Designation |
|------------------|-----------|--------------------------|---------------------------------|
| Ammonium sulfate | 7783-20-2 | Present                  | Active                          |

**DSL/NDSL**

Contact supplier for inventory compliance status.

**EINECS/ELINCS**

Contact supplier for inventory compliance status.

**ENCS**

Contact supplier for inventory compliance status.

**IECSC**

Contact supplier for inventory compliance status.

**KECL**

Contact supplier for inventory compliance status.

**PICCS**

Contact supplier for inventory compliance status.

**AIIC**

Contact supplier for inventory compliance status.

#### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

#### US Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

| Chemical name                | SARA 313 - Threshold Values % |
|------------------------------|-------------------------------|
| Ammonium sulfate - 7783-20-2 | 1.0                           |



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### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

### **CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

### **US State Regulations**

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

### **U.S. State Right-to-Know Regulations**

| Chemical name                 | New Jersey | Massachusetts | Pennsylvania |
|-------------------------------|------------|---------------|--------------|
| Water<br>7732-18-5            | -          | -             | X            |
| Ammonium sulfate<br>7783-20-2 | -          | X             | X            |

### **U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

## **16. Other information**

|             |                         |                       |                           |                              |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| <b>NFPA</b> | <b>Health hazards</b> 0 | <b>Flammability</b> 0 | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b> | <b>Health hazards</b> 0 | <b>Flammability</b> 0 | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |

### **Key or legend to abbreviations and acronyms used in the safety data sheet**

#### **Legend Section 8: Exposure controls/personal protection**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | Sk*  | Skin designation                 |



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### **Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
EPA (Environmental Protection Agency)  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

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**Revision Note** No information available.

### **Disclaimer**

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

**End of Safety Data Sheet**