1 Identification

· Product identifier
· Trade name: Sulfur 10,000 μg/mL in H2O
· Article number: 10M54-5

· Details of the supplier of the safety data sheet
· Manufacturer/Supplier:
  High-Purity Standards
  7221 Investment Drive, North Charleston, SC 29418 United States
  Telephone: +1-843-767-7900
  Fax: +1-843-767-7906
  highpuritystandards.com
  Email: info@highpuritystandards.com

· Information department: Product safety department
· Emergency telephone number:
  INFOTRAC
  Emergency telephone numbers1-800-535-5053
  Other emergency telephone numbers 1-352-323-3500

2 Hazard(s) identification

· Classification of the substance or mixture
  GHS08 Health hazard
  Carc. 1A H350 May cause cancer.

· Label elements
· GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
· Hazard pictograms
  GHS08

· Signal word Danger
· Hazard-determining components of labeling:
  sulphuric acid
· Hazard statements
  H350 May cause cancer.
· Precautionary statements
  Obtain special instructions before use.
  Do not handle until all safety precautions have been read and understood.
  Wear protective gloves/protective clothing/eye protection/face protection.
  IF exposed or concerned: Get medical advice/attention.
  Store locked up.

(Contd. on page 2)
Trade name: Sulfur 10,000 μg/mL in H2O

Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 0
    - Fire = 0
    - Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    - Health = *0
    - Fire = 0
    - Reactivity = 0

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

### 3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

#### Dangerous components:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Identification number</th>
<th>Purity</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulphuric acid</td>
<td>7664-93-9</td>
<td>1.0%</td>
</tr>
<tr>
<td>water, distilled, conductivity or of similar purity</td>
<td>7732-18-5</td>
<td>99.0%</td>
</tr>
</tbody>
</table>

### 4 First-aid measures

- Description of first aid measures
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: Generally the product does not irritate the skin.
  - After eye contact: Rinse opened eye for several minutes under running water.
  - After swallowing: If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed: No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed: No further relevant information available.

### 5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
Trade name: Sulfur 10,000 μg/mL in H2O

- **Special hazards arising from the substance or mixture**: No further relevant information available.
- **Advice for firefighters**
- **Protective equipment**: No special measures required.

### 6. Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**: Not required.
- **Environmental precautions**: Dilute with plenty of water.
- **Methods and material for containment and cleaning up**:
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- **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.
- **Protective Action Criteria for Chemicals**

<table>
<thead>
<tr>
<th>PAC</th>
<th>Substance</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAC-1</td>
<td>sulphuric acid</td>
<td>0.20 mg/m³</td>
</tr>
<tr>
<td>PAC-2</td>
<td>sulphuric acid</td>
<td>8.7 mg/m³</td>
</tr>
<tr>
<td>PAC-3</td>
<td>sulphuric acid</td>
<td>160 mg/m³</td>
</tr>
</tbody>
</table>

### 7. Handling and storage

- **Handling**
- **Precautions for safe handling**
  - Ensure good ventilation/exhaustion at the workplace.
  - Open and handle receptacle with care.
- **Information about protection against explosions and fires**: Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
  - **Requirements to be met by storerooms and receptacles**: No special requirements.
  - **Information about storage in one common storage facility**: Not required.
  - **Further information about storage conditions**: Keep receptacle tightly sealed.
- **Specific end use(s)**: No further relevant information available.

### 8. Exposure controls/personal protection

- **Additional information about design of technical systems**: No further data; see item 7.
Safety Data Sheet
acc. to OSHA HCS

Trade name: Sulfur 10,000 μg/mL in H2O

· Control parameters

· Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>7664-93-9 sulphuric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL Long-term value: 1 mg/m³</td>
</tr>
<tr>
<td>REL Long-term value: 1 mg/m³</td>
</tr>
<tr>
<td>TLV Long-term value: 0.2* mg/m³</td>
</tr>
</tbody>
</table>

*as thoracic fraction

· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

· Personal protective equipment:

· General protective and hygienic measures:
   Keep away from foodstuffs, beverages and feed.
   Wash hands before breaks and at the end of work.
   Store protective clothing separately.

· Breathing equipment:
   In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· Protection of hands:

   Protective gloves

   The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
   Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
   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.

· Eye protection:

   Tightly sealed goggles

(Contd. of page 3)
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:** Liquid
    - **Color:** colorless
  - **Odor:** Characteristic
  - **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** 100 °C (212 °F)

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.

- **Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

- **Density at 20 °C (68 °F):** 1.0084 g/cm³ (8.4151 lbs/gal)

- **Bulk density:** 1,000 kg/m³

- **Relative density:** Not determined.

- **Vapor density:** Not determined.

- **Evaporation rate:** Not determined.

- **Solubility in / Miscibility with**
  - **Water:** Fully miscible.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**
  - **Dynamic:** Not determined.
  - **Kinematic:** Not determined.

- **Solvent content:**
  - **Water:** 99.0 %
  - **VOC content:** 0.00 %
  - 0.0 g/l / 0.00 lb/gal

- **Solids content:** 1.0 %
10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability
  - Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
  - Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
- Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations:
  - Carcinogenic categories
    - IARC (International Agency for Research on Cancer)
      7664-93-9 sulphuric acid I
    - NTP (National Toxicology Program)
      7664-93-9 sulphuric acid K
    - OSHA-Ca (Occupational Safety & Health Administration)
      None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes: Not hazardous for water.
### 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

### 14 Transport information

- **UN-Number**
- DOT, ADR, IMDG, IATA: UN2796

- **UN proper shipping name**
- DOT: Sulfuric acid
- ADR: 2796 SULPHURIC ACID
- IMDG, IATA: SULPHURIC ACID

- **Transport hazard class(es)**
- **DOT**
  - Class: 8 Corrosive substances
  - Label: 8

- **ADR**
  - Class: 8 (C1) Corrosive substances
### 5.0.3 Label

<table>
<thead>
<tr>
<th>IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
</tr>
<tr>
<td>Label</td>
</tr>
</tbody>
</table>

| Packing group           | 8 |
| DOT                     | III |
| ADR, IMDG, IATA         | II |

### Environmental hazards:

Not applicable.

| Special precautions for user                          | Warning: Corrosive substances |
| Danger code (Kemler):                                  | 80 |
| EMS Number:                                            | F-A,S-B |
| Segregation groups                                     | Strong acids |
| Stowage Category                                       | B |
| Segregation Code                                       | SG36 Stow "separated from" SGG18-alkalis. |
|                                                         | SG49 Stow "separated from" SGG6-cyanides |

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

### Transport/Additional information:

<table>
<thead>
<tr>
<th>ADR</th>
<th>Code: E2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 500 ml</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMDG</th>
<th>1L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited quantities (LQ)</td>
<td>Code: E2</td>
</tr>
<tr>
<td>Excepted quantities (EQ)</td>
<td>Maximum net quantity per inner packaging: 30 ml</td>
</tr>
<tr>
<td></td>
<td>Maximum net quantity per outer packaging: 500 ml</td>
</tr>
</tbody>
</table>

| UN "Model Regulation" | UN 2796 SULPHURIC ACID, 8, II |

### 15 Regulatory information

<table>
<thead>
<tr>
<th>Safety, health and environmental regulations/legislation specific for the substance or mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sara</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section 355 (extremely hazardous substances):</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-93-9 sulphuric acid</td>
</tr>
</tbody>
</table>
Trade name: Sulfur 10,000 μg/mL in H2O

| Section 313 (Specific toxic chemical listings): | 7664-93-9 sulphuric acid |
| TSCA (Toxic Substances Control Act): | All components have the value ACTIVE. |
| Hazardous Air Pollutants | None of the ingredients is listed. |
| Proposition 65 | |
| Chemicals known to cause cancer: | None of the ingredients is listed. |
| Chemicals known to cause reproductive toxicity for females: | None of the ingredients is listed. |
| Chemicals known to cause reproductive toxicity for males: | None of the ingredients is listed. |
| Chemicals known to cause developmental toxicity: | None of the ingredients is listed. |
| Carcinogenic categories | |
| EPA (Environmental Protection Agency) | None of the ingredients is listed. |
| TLV (Threshold Limit Value established by ACGIH) | 7664-93-9 sulphuric acid A2 |
| NIOSH-Ca (National Institute for Occupational Safety and Health) | None of the ingredients is listed. |

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS08

Signal word Danger

Hazard-determining components of labeling:
sulphuric acid

Hazard statements
H350 May cause cancer.

Precautionary statements
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
Store locked up. 
Dispose of contents/container in accordance with local/regional/national/international regulations.

- National regulations:

- Information about limitation of use:
  Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

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

#### 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.

- Department issuing SDS: Environment protection department.
- Contact:
  High-Purity Standards  
  Tel: 843-767-7900  
  Fax: 843-767-7906
- Date of preparation / last revision 01/30/2020 / -
- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
  IMDG: International Maritime Code for Dangerous Goods  
  DOT: US Department of Transportation  
  IATA: International Air Transport Association  
  ACGIH: American Conference of Governmental Industrial Hygienists  
  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)  
  NFPA: National Fire Protection Association (USA)  
  HMIS: Hazardous Materials Identification System (USA)  
  VOC: Volatile Organic Compounds (USA, EU)  
  PBT: Persistent, Bioaccumulative and Toxic  
  vPvB: very Persistent and very Bioaccumulative  
  NIOSH: National Institute for Occupational Safety  
  OSHA: Occupational Safety & Health  
  TLV: Threshold Limit Value  
  PEL: Permissible Exposure Limit  
  REL: Recommended Exposure Limit  
  Carc. 1A: Carcinogenicity – Category 1A