# 100 54-5 Sulfur (100µg/mL in H2O)

**High-Purity Standards**

**Catalogue number:** 100 54-5  
**Version No:** 2.4  
**Safety Data Sheet according to OSHA HazCom Standard (2012) requirements**

## SECTION 1 IDENTIFICATION

### Product Identifier

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>100 54-5 Sulfur (100µg/mL in H2O)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Synonyms</strong></td>
<td>100µg/mL Sulfur in H2O</td>
</tr>
<tr>
<td><strong>Other means of identification</strong></td>
<td>100 54-5</td>
</tr>
</tbody>
</table>

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

**Relevant identified uses**

Use according to manufacturer's directions.

### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

**Registered company name**

High-Purity Standards

**Address**

PO Box 41727 SC 29423 United States

**Telephone**

843-767-7900

**Fax**

843-767-7906

**Website**

highpuritystandards.com

**Email**

Not Available

### Emergency phone number

<table>
<thead>
<tr>
<th><strong>Association / Organisation</strong></th>
<th>INFOTRAC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Emergency telephone numbers</strong></td>
<td>1-800-535-5053</td>
</tr>
<tr>
<td><strong>Other emergency telephone numbers</strong></td>
<td>1-352-323-3500</td>
</tr>
</tbody>
</table>

## SECTION 2 HAZARD(S) IDENTIFICATION

### Classification of the substance or mixture

<table>
<thead>
<tr>
<th><strong>Classification</strong></th>
<th>Not Applicable</th>
</tr>
</thead>
</table>

### Label elements

<table>
<thead>
<tr>
<th><strong>Hazard pictogram(s)</strong></th>
<th>Not Applicable</th>
</tr>
</thead>
</table>

**SIGNAL WORD**

**NOT APPLICABLE**

### Hazard statement(s)

Not Applicable

### Hazard(s) not otherwise specified

Not Applicable

### Precautionary statement(s)

#### Prevention

Not Applicable

#### Response

Not Applicable

#### Storage

Not Applicable

Continued...
Precautionary statement(s) Disposal
Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances
See section below for composition of Mixtures

Mixtures

<table>
<thead>
<tr>
<th>CAS No</th>
<th>% [weight]</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7664-93-9</td>
<td>0.01 (as S)</td>
<td>sulfuric acid</td>
</tr>
<tr>
<td>7732-18-5</td>
<td>balance</td>
<td>water</td>
</tr>
</tbody>
</table>

SECTION 4 FIRST-AID MEASURES

Description of first aid measures

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Contact</td>
<td>If this product comes in contact with eyes:</td>
</tr>
<tr>
<td></td>
<td>☐ Wash out immediately with water.</td>
</tr>
<tr>
<td></td>
<td>☐ If irritation continues, seek medical attention.</td>
</tr>
<tr>
<td></td>
<td>☐ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>If skin or hair contact occurs:</td>
</tr>
<tr>
<td></td>
<td>☐ Flush skin and hair with running water (and soap if available).</td>
</tr>
<tr>
<td></td>
<td>☐ Seek medical attention in event of irritation.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>If fumes, aerosols or combustion products are inhaled remove from contaminated area.</td>
</tr>
<tr>
<td></td>
<td>☐ Other measures are usually unnecessary.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>☐ Immediately give a glass of water.</td>
</tr>
<tr>
<td></td>
<td>☐ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</td>
</tr>
</tbody>
</table>

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIRE-FIGHTING MEASURES

Extinguishing media

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

| Fire Incompatibility | None known. |

Special protective equipment and precautions for fire-fighters

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Fighting</td>
<td>Use water delivered as a fine spray to control fire and cool adjacent area.</td>
</tr>
<tr>
<td></td>
<td>Do not approach containers suspected to be hot.</td>
</tr>
<tr>
<td></td>
<td>Cool fire exposed containers with water spray from a protected location.</td>
</tr>
<tr>
<td></td>
<td>If safe to do so, remove containers from path of fire.</td>
</tr>
<tr>
<td></td>
<td>Equipment should be thoroughly decontaminated after use.</td>
</tr>
<tr>
<td>Fire/Explosion Hazard</td>
<td>Non combustible.</td>
</tr>
<tr>
<td></td>
<td>Not considered a significant fire risk, however containers may burn.</td>
</tr>
</tbody>
</table>

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

<table>
<thead>
<tr>
<th>Minor Spills</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean up all spills immediately.</td>
<td></td>
</tr>
<tr>
<td>Avoid breathing vapours and contact with skin and eyes.</td>
<td></td>
</tr>
<tr>
<td>Control personal contact with the substance, by using protective equipment.</td>
<td></td>
</tr>
<tr>
<td>Contain and absorb spill with sand, earth, inert material or vermiculite.</td>
<td></td>
</tr>
<tr>
<td>Wipe up.</td>
<td></td>
</tr>
<tr>
<td>Place in a suitable, labelled container for waste disposal.</td>
<td></td>
</tr>
</tbody>
</table>
Major Spills

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact with the substance, by using protective equipment.
- Prevent spillage from entering drains, sewers or water courses.
- Recover product wherever possible.
- Put residues in labelled containers for disposal.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Other information

Conditions for safe storage, including any incompatibilities

- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Storage incompatibility

Avoid contamination of water, foodstuffs, feed or seed.
None known

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

| OCCUPATIONAL EXPOSURE LIMITS (OEL) |
| INGREDIENT DATA |
| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
| US OSHA Permissible Exposure Levels (PELs) - Table Z1 | sulfuric acid | Sulfuric acid | 1 mg/m³ | Not Available | Not Available | TLV® Basis: Pulm func |
| US NIOSH Recommended Exposure Limits (RELs) | sulfuric acid | Battery acid, Hydrogen sulfate, Oil of vitriol, Sulfuric acid (aqueous) | 1 mg/m³ | Not Available | Not Available | Not Available |
| US ACGIH Threshold Limit Values (TLV) | sulfuric acid | Sulfuric acid | 0.2 mg/m³ | Not Available | Not Available | Not Available |

| EMERGENCY LIMITS |
| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
| sulfuric acid | Sulfuric acid | Not Available | Not Available | Not Available |
| water | Not Available | Not Available | Not Available |

Exposure controls

- Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

- The basic types of engineering controls are:
  - Process controls which involve changing the way a job activity or process is done to reduce the risk.
  - Enclosure and/or isolation of emission source which keeps a selected hazard “physically” away from the worker and ventilation that strategically “adds” and “removes” air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.
  - Employers may need to use multiple types of controls to prevent employee overexposure.

- General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying “escape” velocities which, in turn, determine the “capture velocities” of fresh circulating air required to effectively remove the contaminant.

- Type of Contaminant: Air Speed:
  - solvent, vapours, degreasing etc., evaporating from tank (in still air) 0.25-0.5 m/s (50-100 f/min)
Within each range the appropriate value depends on:

<table>
<thead>
<tr>
<th>Lower end of the range</th>
<th>Upper end of the range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Room air currents minimal or favourable to capture</td>
<td>1: Disturbing room air currents</td>
</tr>
<tr>
<td>2: Contaminants of low toxicity or nuisance value only</td>
<td>2: Contaminants of high toxicity</td>
</tr>
<tr>
<td>3: Intermittent, low production.</td>
<td>3: High production, heavy use</td>
</tr>
<tr>
<td>4: Large hood or large air mass in motion</td>
<td>4: Small hood - local control only</td>
</tr>
</tbody>
</table>

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

### Personal protection
- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lenses should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

### Eye and face protection

- Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

### Skin protection
See Hand protection below

### Hands/feet protection

- Wear general protective gloves, eg. light weight rubber gloves.
- The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical 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.
- The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
- Personal hygene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

### Hand protection

- Suitable and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
  - frequency and duration of contact,
  - chemical resistance of glove material,
  - glove thickness and
  - dexterity
- Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).
  - When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 340 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
  - When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
  - Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
  - Contaminated gloves should be replaced.
- For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.
  - It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.
  - Glove thickness may also depend on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.
  - Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:
    - Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
    - Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

- Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.
Information on basic physical and chemical properties

- **Appearance**: Colorless
- **Physical state**: Liquid
- **Relative density (Water = 1)**: Not Available
- **Odour**: Not Available
- **Odour threshold**: Not Available
- **Partition coefficient n-octanol / water**: Not Available
- **Auto-ignition temperature (°C)**: Not Available
- **Decomposition temperature**: Not Available
- **Melting point / freezing point (°C)**: Not Available
- **Viscosity (cSt)**: Not Available
- **Initial boiling point and boiling range (°C)**: Not Available
- **Molecular weight (g/mol)**: Not Available
- **Flash point (°C)**: Not Available
- **Taste**: Not Available
- **Evaporation rate**: Not Available
- **Explosive properties**: Not Available
- **Upper Explosive Limit (%)**: Not Available
- **Surface Tension (dyn/cm or mN/m)**: Not Available
- **Lower Explosive Limit (%)**: Not Available
- **Volatile Component (%vol)**: Not Available
- **Viscosity (cSt)**: Not Available
- **Vapour density (Air = 1)**: Not Available
- **pH as a solution (1%)**: Not Available
- **Vapour pressure (kPa)**: Not Available
- **Gas group**: Not Available
- **Solubility in water (g/L)**: Miscible
- **VOC g/L**: Not Available
- **pH as supplied**: Not Available
- **Decomposition temperature**: Not Available
- **Melting point / freezing point (°C)**: Not Available
- **Viscosity (cSt)**: Not Available
- **Flash point (°C)**: Not Available
- **Initial boiling point and boiling range (°C)**: Not Available
- **Molecular weight (g/mol)**: Not Available
- **Flash point (°C)**: Not Available
- **Vapour density (Air = 1)**: Not Available
- **pH as a solution (1%)**: Not Available

**SECTION 10 STABILITY AND REACTIVITY**

- **Reactivity**: See section 7
- **Chemical stability**: Product is considered stable and hazardous polymerisation will not occur.
- **Possibility of hazardous reactions**: See section 7
- **Conditions to avoid**: See section 7
- **Incompatible materials**: See section 7
- **Hazardous decomposition products**: See section 5

**SECTION 11 TOXICOLOGICAL INFORMATION**

Information on toxicological effects

- **Inhaled**: The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
- **Ingestion**: The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
- **Skin Contact**: The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
- **Eye**: Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
- **Chronic**: Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

<table>
<thead>
<tr>
<th>Substance</th>
<th>TOXICITY</th>
<th>IRRITATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 54-5 Sulfur (100µg/mL in H2O)</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>sulfuric acid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral (rat) LD50: 2140 mg/kgE</td>
<td>Eye (rabbit): 1.38 mg SEVERE</td>
<td></td>
</tr>
<tr>
<td>water</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eye (rabbit): 5 mg/30sec SEVERE</td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**

- 1. Value obtained from Europe ECNA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

**SULFURIC ACID**: Asthma-like symptoms may continue for months or even years after exposure to the material ends. **WARNING**: For inhalation exposure ONLY. This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS.
### Occupational exposures to strong inorganic acid mists of sulfuric acid:

**Water**

- **Acute Toxicity**
  - No significant acute toxicological data identified in literature search.

- **Skin Irritation/Corrosion**

- **Serious Eye Damage/Irritation**

- **Respiratory or Skin Sensitisation**

- **Mutagenicity**

**Air**

**Carcinogenicity**

**Reproductivity**

**STOT - Single Exposure**

**STOT - Repeated Exposure**

**Aspiration Hazard**

Legend:
- Data available but does not fill the criteria for classification
- Data available to make classification
- Data Not Available to make classification

### SECTION 12 ECOLOGICAL INFORMATION

#### Toxicity

<table>
<thead>
<tr>
<th>100 54-5 Sulfur (100µg/mL in H2O)</th>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>sulfuric acid</th>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50</td>
<td>96</td>
<td>Fish</td>
<td>&lt;8mg/L</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EC50</td>
<td>48</td>
<td>Crustacea</td>
<td>&gt;42.5mg/L</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>EC50</td>
<td>240</td>
<td>Algae or other aquatic plants</td>
<td>2.5000mg/L</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>NOEC</td>
<td>7200</td>
<td>Fish</td>
<td>0.13mg/L</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>water</th>
<th>ENDPOINT</th>
<th>TEST DURATION (HR)</th>
<th>SPECIES</th>
<th>VALUE</th>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

### Persistence and degradability

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Persistence: Water/Soil</th>
<th>Persistence: Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>LOW</td>
<td>LOW</td>
</tr>
</tbody>
</table>

### Bioaccumulative potential

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Bioaccumulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>LOW (LogKOW = -1.38)</td>
</tr>
</tbody>
</table>

### Mobility in soil

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Mobility</th>
</tr>
</thead>
<tbody>
<tr>
<td>water</td>
<td>LOW (KOC = 14.3)</td>
</tr>
</tbody>
</table>

### SECTION 13 DISPOSAL CONSIDERATIONS

#### Waste treatment methods

- **Product / Packaging disposal**
  - Legislation addressing waste disposal requirements may differ by country, state and/or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
  - A Hierarchy of Controls seems to be common - the user should investigate:
    - Reduction
    - Reuse
    - Recycling
    - Disposal (if all else fails)
  - This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type.
  - Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
    - DO NOT allow wash water from cleaning or process equipment to enter drains.
    - It may be necessary to collect all wash water for treatment before disposal.
    - In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
    - Where in doubt contact the responsible authority.

Continued...
Recycle wherever possible.
Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).
Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Labels Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine Pollutant</td>
</tr>
</tbody>
</table>

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

<table>
<thead>
<tr>
<th>Source</th>
<th>Product name</th>
<th>Pollution Category</th>
<th>Ship Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk</td>
<td>Sulphuric acid</td>
<td>Y</td>
<td>3</td>
</tr>
</tbody>
</table>

SECTION 15 REGULATORY INFORMATION

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

**SULFURIC ACID (7664-93-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

- International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
- International Air Transport Association (IATA) Dangerous Goods Regulations - Prohibited List Passenger and Cargo Aircraft
- US - Alaska Limits for Air Contaminants
- US - California OEHH/ARB - Acute Reference Exposure Levels and Target Organs (RELs)
- US - California OEHH/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)
- US - California Permissible Exposure Limits for Chemical Contaminants
- US - Hawaii Air Contaminant Limits
- US - Idaho - Limits for Air Contaminants
- US - Massachusetts - Right To Know Listed Chemicals
- US - Michigan Exposure Limits for Air Contaminants
- US - Minnesota Permissible Exposure Limits (PELs)
- US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Carcinogens
- US - Oregon Permissible Exposure Limits (Z-1)
- US - Rhode Island Hazardous Substance List
- US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants
- US - Water (7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

**WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

- US - Pennsylvania - Hazardous Substance List
- US - Texas - Hazardous Substance List

**Federal Regulations**

Superfund Amendments and Reauthorization Act of 1986 (SARA)

<table>
<thead>
<tr>
<th>SECTION 311 HAZARD CATEGORIES</th>
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<tbody>
<tr>
<td>Immediate (acute) health hazard</td>
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<tr>
<td>Delayed (chronic) health hazard</td>
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<td>Fire hazard</td>
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<tr>
<td>Pressure hazard</td>
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<tr>
<td>Reactivity hazard</td>
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**US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)**

<table>
<thead>
<tr>
<th>Name</th>
<th>Reportable Quantity in Pounds (lb)</th>
<th>Reportable Quantity in kg</th>
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<tr>
<td>Sulfuric acid</td>
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**State Regulations**

**US. CALIFORNIA PROPOSITION 65**

None Reported

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<th>National Inventory</th>
<th>Status</th>
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<td>Canada - DSL</td>
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</table>

Continued...
SECTION 16 OTHER INFORMATION

Other information
Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations
PC-TWA: Permissible Concentration-Time Weighted Average
PC-STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit,
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL: No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
ODV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

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