Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Common Name/Trade Name</th>
<th>Sulfuric Acid, 0.1142 N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248</td>
</tr>
<tr>
<td>Commercial Name(s)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Synonym</td>
<td>Sulfuric Acid, 0.1142 N Solution</td>
</tr>
<tr>
<td>Chemical Name</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Chemical Family</td>
<td>Inorganic acid. (Acid.)</td>
</tr>
<tr>
<td>Chemical Formula</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Catalog Number(s)</td>
<td>S-313</td>
</tr>
<tr>
<td>CAS#</td>
<td>Mixture.</td>
</tr>
<tr>
<td>RTECS</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>TSCA</td>
<td>TSCA 8(b) inventory: Water; Sulfuric acid</td>
</tr>
<tr>
<td>CI#</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

IN CASE OF EMERGENCY
CHEMTREC (24hr) 800-424-9300
CALL (310) 516-8000

Section 2. Composition and Information on Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS #</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
<th>CEIL (mg/m³)</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Water</td>
<td>7732-18-5</td>
<td></td>
<td></td>
<td></td>
<td>99.4</td>
</tr>
<tr>
<td>2) Sulfuric acid</td>
<td>7664-93-9</td>
<td>1</td>
<td>3</td>
<td></td>
<td>0.59</td>
</tr>
</tbody>
</table>

Section 3. Hazards Identification

Potential Acute Health Effects

Very hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion. Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung sensitizer). Non-corrosive for lungs. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Continued on Next Page
### Potential Chronic Health Effects

**CARCINOGENIC EFFECTS:** Classified 1 (Proven for human.) by IARC, + (Proven.) by OSHA [Sulfuric acid].

Classified A2 (Suspected for human.) by ACGIH [Sulfuric acid].

**MUTAGENIC EFFECTS:** Not available.

**TERATOGENIC EFFECTS:** Not available.

**DEVELOPMENTAL TOXICITY:** Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED] [Sulfuric acid].

The substance may be toxic to lungs, teeth.

Repeated or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or more human organs.

### Section 4. First Aid Measures

<table>
<thead>
<tr>
<th>Eye Contact</th>
<th>Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Contact</td>
<td>In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.</td>
</tr>
<tr>
<td>Serious Skin Contact</td>
<td>Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.</td>
</tr>
<tr>
<td>Serious Inhalation</td>
<td>Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.</td>
</tr>
<tr>
<td>Serious Ingestion</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

### Section 5. Fire and Explosion Data

<table>
<thead>
<tr>
<th>Flammability of the Product</th>
<th>Non-flammable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flash Points</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Products of Combustion</td>
<td>Not available.</td>
</tr>
<tr>
<td>Fire Hazards in Presence of Various Substances</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Explosion Hazards in Presence of Various Substances</td>
<td>Non-explosive in presence of open flames and sparks, of shocks.</td>
</tr>
<tr>
<td>Fire Fighting Media and Instructions</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special Remarks on Fire Hazards</td>
<td>Not available.</td>
</tr>
<tr>
<td>Special Remarks on Explosion Hazards</td>
<td>Mixtures of sulfuric acid and any of the following can explode: p-nitrotoluene, pentasilver trihydroxymidophosphate, perchlorates, alcohols with strong hydrogen peroxide, ammonium tetraperoxycromate, mercuric nitrite, potassium chloride, potassium permanganate with potassium chloride. Nitramide decomposes explosively on contact with concentrated sulfuric acid. 1,3,5-Trinitrosohexahydro-1,3,5-triazine + sulfuric acid causes explosive decompositon. (Sulfuric acid)</td>
</tr>
</tbody>
</table>
Section 6. Accidental Release Measures

<table>
<thead>
<tr>
<th>Small Spill</th>
<th>Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute solution of sodium carbonate.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Spill</td>
<td>Corrosive liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.</td>
</tr>
</tbody>
</table>

Unfortunately, the page continues on the next page.
**Sulfuric Acid, 0.1142 N**

**Water/Oil Dist. Coeff.** Not available.

**Ionicity (in Water)** Not available.

**Dispersion Properties** See solubility in water.

**Solubility** Easily soluble in cold water, hot water.

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**Section 10. Stability and Reactivity Data**

<table>
<thead>
<tr>
<th>Stability</th>
<th>The product is stable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instability Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Conditions of Instability</td>
<td>Excess heat, incompatible materials.</td>
</tr>
</tbody>
</table>

**Incompatibility with various substances**
- Reactive with oxidizing agents, combustible materials, organic materials, metals, acids, alkalis.

**Corrosivity**
- Corrosive in presence of aluminum, of zinc, of copper, of stainless steel (316).
- Slightly corrosive in presence of stainless steel (304).
- Non-corrosive in presence of glass.

**Special Remarks on Reactivity**
- Incompatible with the following:
  - Organic acids, inorganic acids, alcohols, glycols, aldehydes, amides, amines; azo, diazo, and hydrazines;
  - carbamates, caustics, cyanides, dithiocarbamates, esters, ethers, fluorides, aromatic hydrocarbons, halogenated
  - organics, isocyanates, ketones, mercaptans and other organic sulfides, alkali and alkaline metals, metals as
  - powders, metals and metal compounds, nitriles, nitrites, nitro compounds, unsaturated aliphatic hydrocarbons,
  - aliphatic saturated hydrocarbons, organic peroxides and hydroperoxides.

**Special Remarks on Corrosivity**
- Non-corrosive to lead and mild steel, but dilute acid attacks most metals.
- Attacks many metals releasing hydrogen. (Sulfuric acid)

**Polymerization**
- Will not occur.

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**Section 11. Toxicological Information**

**Routes of Entry** Absorbed through skin. Dermal contact. Eye contact. Inhalation.

**Toxicity to Animals**
- LD50: Not available.
- LC50: Not available.

**Chronic Effects on Humans**
- **CARCINOGENIC EFFECTS:** Classified 1 (Proven for human.) by IARC, + (Proven.) by OSHA [Sulfuric acid].
- Classified A2 (Suspected for human.) by ACGIH [Sulfuric acid].
- **DEVELOPMENTAL TOXICITY:** Classified Reproductive system/toxin/female, Reproductive system/toxin/male
  [SUSPECTED] [Sulfuric acid].
- May cause damage to the following organs: lungs, teeth.

**Other Toxic Effects on Humans**
- Very hazardous in case of skin contact (irritant, permeator), of ingestion, .
- Hazardous in case of skin contact (corrosive), of eye contact (corrosive), of inhalation (lung corrosive).

**Special Remarks on Toxicity to Animals**
- Not available.

**Special Remarks on Chronic Effects on Humans**
- Mutagenicity: Cytogenetic Analysis: Hamster, ovary = 4mmol/L
- Reproductive effects: May cause adverse reproductive effects based on animal data. Developmental abnormalities
  (musculoskeletal) in rabbits at a dose of 20 mg/m3 for 7 hrs.(RTECS)
- Teratogenicity: neither embryotoxic, fetotoxic, nor teratogenetic in mice or rabbits at inhaled doses producing some
  maternal toxicity (Sulfuric acid)

**Special Remarks on other Toxic Effects on Humans**
- Acute Potential Health Effects:
  - Skin: Causes skin irritation and burns. Harmful if absorbed through skin.
  - Eyes: Causes eye irritation and burns. May cause irreversible eye injury
  - Inhalation: Causes irritation of the respiratory tract and possible burns. Irritation may lead to chemical pneumonitis,
    and pulmonary edema. Exposure may lead to bronchitis, pharyngitis, and dental erosion.
  - Ingestion: Harmful if swallowed. Causes digestive tract irritation and burns. May cause severe and permanent
    damage to the digestive tract. May cause corrosion and permanent tissue destruction of the esophagus and digestive
    tract.
- Chronic Potential Health Effects: Repeated exposure may cause erosion of teeth. Chronic exposure may cause
  lung damage.

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*Continued on Next Page*
Section 12. Ecological Information

Ecotoxicity
Not available.

BOD5 and COD
Not available.

Products of Biodegradation
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation
The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation
Not available.

Section 13. Disposal Considerations

Waste Disposal
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14. Transport Information

DOT Classification
Class 8: Corrosive material

Identification
: Sulfuric Acid, Solution UNNA: 2796 PG: II

Special Provisions for Transport
Not available.

DOT (Pictograms)

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations
Illinois toxic substances disclosure to employee act: Sulfuric acid
New York release reporting list: Sulfuric acid
Rhode Island RTK hazardous substances: Sulfuric acid
Pennsylvania RTK: Sulfuric acid
Minnesota: Sulfuric acid
Massachusetts RTK: Sulfuric acid
New Jersey: Sulfuric acid
TSCA 8(b) inventory: Water; Sulfuric acid
SARA 302/304/311/312 extremely hazardous substances: Sulfuric acid
CERCLA: Hazardous substances.: Sulfuric acid: 1000 lbs. (453.6 kg);

California Proposition 65
Warnings

Other Regulations

Other Classifications
WHMIS (Canada) CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
CLASS E: Corrosive liquid.

DSCL (EEC)
R34- Causes burns.

S23- Do not breathe gas/fumes/vapour/spray [***]
S24/25- Avoid contact with skin and eyes.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S28- After contact with skin, wash immediately with plenty of [***]
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

<table>
<thead>
<tr>
<th>HMIS (U.S.A.)</th>
<th>National Fire Protection Association (U.S.A.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazard</td>
<td>3</td>
</tr>
<tr>
<td>Fire Hazard</td>
<td>0</td>
</tr>
<tr>
<td>Reactivity</td>
<td>0</td>
</tr>
<tr>
<td>Personal Protection</td>
<td></td>
</tr>
</tbody>
</table>

**WHMIS (Canada) (Pictograms)**

**DSCL (Europe) (Pictograms)**

**TDG (Canada) (Pictograms)**

**ADR (Europe) (Pictograms)**

**Protective Equipment**

- Gloves.
- Full suit.
- Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
- Face shield.

*Continued on Next Page*
### Section 16. Other Information

<table>
<thead>
<tr>
<th><strong>MSDS Code</strong></th>
<th>S313S</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>References</strong></td>
<td>Not available.</td>
</tr>
<tr>
<td><strong>Other Special Considerations</strong></td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Verified by Sonia Owen.  

**CALL (310) 516-8000**

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) 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 MSDS. 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 MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.