

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Initial preparation date: : 02.15.2015**Sulfuric Acid, 4.0N****SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Sulfuric Acid, 4.0N**Manufacturer/Supplier Article number:** S25898**Recommended uses of the product and restrictions on use:** Laboratory**Manufacturer Details:**

AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
800 955-1177

Emergency telephone number:

Emergency Telephone No.: 800-255-3924

SECTION 2: Hazards identification**Classification of the substance or mixture:****Health hazard**

Skin corrosion, category 1A
Serious eye damage, category 1

Corrosive to metals, category 1

skin corr./irrit. 1A.

Corrosive to metals. 1.

Eye corr. 1.

Signal word: Danger**Hazard statements:**

May be corrosive to metals.
Causes severe skin burns and eye damage.
Causes serious eye damage.

Precautionary statements:

If medical advice is needed have product container or label at hand.
Keep out of reach of children.
Read label before use.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash thoroughly after handling.
Do not breathe dust/fume/gas/mist/vapors/spray.
Keep only in original container.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.

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IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 Specific treatment (see ... on this label).
 Absorb spillage to prevent material damage.
 Store locked up.
 Dispose of contents/container.

Other Non-GHS Classification: None**SECTION 3: Composition/information on ingredients****Ingredients:**

| Ingredients: | | |
|---------------------------|--------------------|----------|
| CAS 7664-93-9 | Sulfuric Acid, ACS | 20.608 % |
| CAS 7732-18-5 | Water | 79.392 % |
| Percentages are by weight | | |

SECTION 4: First aid measures**Description of first aid measures****After inhalation:**

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance if cough or other symptoms appear.

After skin contact:

Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures**Extinguishing media****Suitable extinguishing agents:**

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None**Special hazards arising from the substance or mixture:**

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

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Wear protective eyewear, gloves, and clothing. Use NIOSH-approved respiratory protection/breathing apparatus. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes and clothing.

SECTION 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures:**

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyewear, gloves, and clothing. Always obey local regulations. Containerize for disposal. Refer to Section 13. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal. Refer to Section 8.

Reference to other sections: None**SECTION 7: Handling and storage****Precautions for safe handling:**

Avoid contact with skin, eyes and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Do not eat, drink, smoke, or use personal products when handling chemical substances. Refer to Section 13.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly closed. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection**Control parameters:**

7664-93-9, Sulfuric Acid, ACS., OSHA PEL: 1 mg/m³.
7664-93-9, Sulfuric Acid, ACS., ACGIH TLV: 1 mg/m³.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection:

Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

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| Eye protection: | Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection. |
| General hygienic measures: | Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes and clothing. Before re-wearing, wash contaminated clothing. |

SECTION 9: Physical and chemical properties

| | | | |
|--|-------------------------|---|--|
| Appearance (physical state, color): | Clear, colorless liquid | Explosion limit lower: | Not determined |
| | | Explosion limit upper: | Not determined |
| Odor: | Odorless | Vapor pressure at 20°C: | < 0.00120 mmHg |
| Odor threshold: | Not determined | Vapor density: | Not determined |
| pH-value: | < 3 | Relative density: | Not determined |
| Melting/Freezing point: | 11C | Solubilities: | Miscible. |
| Boiling point/Boiling range: | 105 - 325C | Partition coefficient (n-octanol/water): | Not determined |
| Flash point (closed cup): | Not determined | Auto/Self-ignition temperature: | Not determined |
| Evaporation rate: | Not determined | Decomposition temperature: | Not determined |
| Flammability (solid, gaseous): | Not determined | Viscosity: | a. Kinematic: Not determined b. Dynamic: Not determined |
| Density at 20°C: | Not determined | | |

SECTION 10: Stability and reactivity**Reactivity:**

Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Incompatible materials.

Incompatible materials:

Organics. Metals. Chlorates. Alkalines. Carbides. Fulminates. Reducing agents. Nitrates. Acetic acid. Oxidizing agents.

Hazardous decomposition products:

Oxides of sulfur.

SECTION 11: Toxicological information**Acute Toxicity:** No additional information.**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:** No additional information.**Serious eye damage/irritation:** No additional information.**Respiratory or skin sensitization:** No additional information.

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No additional information.

SECTION 12: Ecological information**Ecotoxicity:**

Freshwater Fish, 96-Hr LC50 Brachydanio rerio: > 500 mg/L [static].

Fish., LC50 - Gambusia affinis (Mosquito fish) - 42 mg/l - 96 h.

Invertebrates, EC50 - Daphnia magna (Water flea) - 29 mg/l - 24 h.

Persistence and degradability: No additional information.**Bioaccumulative potential:** No additional information.**Mobility in soil:** No additional information.**Other adverse effects:** No additional information.**SECTION 13: Disposal considerations****Waste disposal recommendations:**

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14: Transport information**US DOT****UN Number:**

ADR, ADN, DOT, IMDG, IATA

2796

Limited Quantity Exception:

None

Bulk:**RQ (if applicable):** None**Proper shipping Name:** Sulfuric Acid Solution.**Hazard Class:** 8**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Sulfuric Acid Solution.**Hazard Class:** 8**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None

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Chronic,Acute

SARA Section 313 (Specific toxic chemical listings):

7664-93-9 Sulfuric Acid.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act) :

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7664-93-9 Sulfuric Acid 1000 lbs.

Proposition 65 (California):**Chemicals known to cause cancer:**

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada**Canadian Domestic Substances List (DSL) :**

All ingredients are listed.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 3-0-1**HMIS:** 3-0-1**GHS Full Text Phrases:** None**Abbreviations and Acronyms:**

IMDG International Maritime Code for Dangerous Goods.

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- PNEC. Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA)
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA. Resource Conservation and Recovery Act (USA).
TSCA. Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).