

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Initial preparation date: : 01.24.2015**Ceric Sulfate, 0.1N****SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Ceric Sulfate, 0.1N**Manufacturer/Supplier Article number:** CE3115SS**Recommended uses of the product and restrictions on use:** Laboratory Chemicals**Manufacturer Details:**

AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331
1-717-632-1291

Emergency telephone number:**ChemTel: (24-hour)**

+1(800)255-3924

+1(813)248-0585 (International)

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

Oxidizing liquids, category 2

**Corrosive**

Serious eye damage, category 1

**Irritant**

Skin irritation, category 2

Ox. Liq. 2.

Eye Dam. 1.

Skin Irrit. 2.

Signal word: Danger**Hazard statements:**

May intensify fire; oxidizer.

Causes serious eye damage.

Causes skin irritation.

Precautionary statements:

If medical advice is needed have product container or label at hand.

Keep out of reach of children.

Read label before use.

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Take any precaution to avoid mixing with combustibles.

Wear protective gloves/protective clothing/eye protection/face protection.

Keep/Store away from clothing/combustible materials.

Wash skin thoroughly after handling.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

Continue rinsing.

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Immediately call a POISON CENTER or doctor/physician.
 Take off contaminated clothing and wash before reuse.
 If skin irritation occurs: Get medical advice/attention.
 In case of fire, use agents recommended in section 5 for extinction.
 IF ON SKIN: Wash with soap and water.
 Specific treatment (see supplemental first aid instructions on this label).
 Dispose of contents and container as instructed in Section 13.

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

| Ingredients: | | |
|---------------------------|------------------------|---------|
| CAS 7732-18-5 | Water | 83.46 % |
| CAS 7664-93-9 | Sulfuric Acid | 11.04 % |
| CAS 16774-21-3 | Ceric Ammonium Nitrate | 5.5 % |
| 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:

Wash hands and exposed skin with soap and plenty of water. Seek medical attention if irritation persists or if concerned.

After eye contact:

Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses, if present and easy to do, and continue rinsing. Seek immediate medical assistance.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person.

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. Risk of serious damage to eyes.

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

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

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Oxidizer (will promote combustion). Contact with most metals causes formation of flammable and explosive hydrogen gas. Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:**Protective equipment:**

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Prevent contact with eyes, skin, 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. Treat the solid residue as normal refuse. Wash site with soda ash solution. Refer to Section 8. 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. Cover spill with suitable absorbing agent. Mix with water to form slurry. Decant liquid to drain.

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

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. Avoid contact with eyes, skin, and clothing. 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. Contact with water will generate heat.

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

7664-93-9, Sulfuric Acid., 0.2 mg/m³ ACGIH TLV.
7664-93-9, Sulfuric Acid., 1 mg/m³ OSHA Table Z Limits for Air Contaminants.

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.

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| Respiratory protection: | 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. |
| 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): | Orange clear liquid | Explosion limit lower: | Not determined |
| | | Explosion limit upper: | Not determined |
| Odor: | Odorless | Vapor pressure at 20°C: | Not determined |
| Odor threshold: | Not determined | Vapor density: | >1 |
| pH-value: | <3 | Relative density: | Approx. 1.05 |
| Melting/Freezing point: | Approx. 0°C (32°F) | Solubilities: | Infinite in water. |
| Boiling point/Boiling range: | Approx. 100°C | 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. Excess heat.

Incompatible materials:

Organics, chlorates, carbides, fulminates, picrates, alkalines, reducing agents, nitrates, acetic acids, oxidizing agents, metals.

Hazardous decomposition products:

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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:**

Damaging to eyes.

Respiratory or skin sensitization: No additional information.**Carcinogenicity:****There are no known carcinogenic chemicals in this product.:****Germ cell mutagenicity:** No additional information.**Reproductive Toxicity:** No additional information.**STOT-single and repeated exposure:** No additional information.**Additional toxicological information:**

No additional information.

SECTION 12: Ecological information**Ecotoxicity:**Toxicity to fish, Sulfuric Acid LC50 - *Gambusia affinis* (Mosquito fish) - 42 mg/l - 96 h.Toxicity to daphnia and other aquatic invertebrates, Sulfuric Acid EC50 - *Daphnia magna* (Water flea) - 29 mg/l - 24 h.**Persistence and degradability:**

No information available.

Bioaccumulative potential:

No information available.

Mobility in soil:

No information available.

Other adverse effects:

No information available.

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. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11).

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

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ADR, ADN, DOT, IMDG, IATA 1760

Limited Quantity Exception: None**Bulk:****RQ (if applicable):** None**Proper shipping Name:** Corrosive Liquids, N.O.S. (Sulfuric Acid Solution).**Hazard Class:** 8, 5**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Corrosive Liquids, N.O.S. (Sulfuric Acid Solution).**Hazard Class:** 8, 5**Packing Group:** II.**Marine Pollutant (if applicable):** No additional information.**Comments:** None**SECTION 15: Regulatory information****United States (USA)****SARA Section 311/312 (Specific toxic chemical listings):**

Acute, Reactive

SARA Section 313 (Specific toxic chemical listings):

7664-93-9 Sulfuric acid (aerosol forms only).

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, Sulfuric acid (aerosol forms only) 1000 lbs.

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

7664-93-9 Sulfuric Acid.

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.

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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: 2-0-1**HMIS:** 2-0-1**GHS Full Text Phrases:** None**Abbreviations and Acronyms:**

| | |
|-------|--|
| IMDG | International Maritime Code for Dangerous Goods. |
| 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). |