

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Initial preparation date: : 01.24.2015**Ceric Sulfate, 0.0791N****SECTION 1: Identification of the substance/mixture and of the supplier****Product name:** Ceric Sulfate, 0.0791N**Manufacturer/Supplier Article number:** KZCE3075-A**Recommended uses of the product and restrictions on use:** Laboratory chemicals**Manufacturer Details:**

Aqua Analytics
245 Matheson Blvd East, Units 1 & 2 Mississauga, Ontario Canada L4Z 3C9
(888) 712-4000

Emergency telephone number:

Emergency Phone No. (613) 996-6666

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

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

Signal word: Danger**Hazard statements:**

Causes serious eye damage.
Causes severe skin burns and eye damage.

Precautionary statements:

Wear protective gloves/protective clothing/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash skin thoroughly after handling.
Specific treatment (see supplemental first aid instructions on this label).
Wash contaminated clothing before reuse.
If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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. Immediately call a POISON CENTER or doctor/physician.
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.
Store locked up.
Dispose of contents and container as instructed in Section 13.

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

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Ceric Sulfate, 0.0791N		
CAS 7732-18-5	Water	>90 %
CAS 7664-93-9	Sulfuric Acid	6 %
CAS 16774-21-3	Ceric Ammonium Nitrate	<4 %
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.

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

Contact with most metals causes formation of flammable and explosive hydrogen gas. Thermal decomposition can lead to release of irritating gases and vapors. May form corrosive mixtures with water.

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.

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Ceric Sulfate, 0.0791N**Environmental precautions:**

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

Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders). Dispose of contents / container in accordance with local regulations. Wear protective eye wear, gloves and clothing.

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. Avoid breathing mist or vapor.

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. Store in corrosive resistant container with a resistant inner lining.

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

7664-93-9, Sulfuric Acid, ACGIH TLV STEL: 3.0 mg/m³.
7664-93-9, Sulfuric Acid, NIOSH REL TWA 1.0 mg/m³.
7664-93-9, Sulfuric Acid, ACGIH TLV: 0.2 mg/m³, thoracic fraction.
7664-93-9, Sulfuric Acid, OSHA PEL TWA 1.0 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: 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

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Ceric Sulfate, 0.0791N			
Appearance (physical state, color):	Clear, orange colored 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	Solubilities:	Infinite solubility 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:**

Does not react under normal conditions of use and storage.

Chemical stability:

Stable under normal conditions of use and storage.

Possible hazardous reactions:

None under normal conditions of use and storage.

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:

Oxides of sulfur.

SECTION 11: Toxicological information**Acute Toxicity:** None**Chronic Toxicity:** No additional information.**Skin corrosion/irritation:**

Causes severe skin burns. Ceric Ammonium Nitrate.

Causes severe skin burns. Sulfuric Acid.

Serious eye damage/irritation:

Causes serious eye damage. Ceric Ammonium Nitrate.

Respiratory or skin sensitization: No additional information.**Carcinogenicity:****Sulfuric Acid :** Strong inorganic acid mists containing sulfuric acid may cause cancer.

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No additional information.

SECTION 12: Ecological information**Ecotoxicity:** No additional information.**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:**

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:**

ADR, ADN, DOT, IMDG, IATA 1760

Limited Quantity Exception:

None

Bulk:**RQ (if applicable):** None**Proper shipping Name:** Corrosive Liquid, N.O.S. (Sulfuric Acid, Ceric Ammonium Nitrate).**Hazard Class:** 8**Packing Group:** II.**Marine Pollutant (if applicable):** No**Comments:** None**Non Bulk:****RQ (if applicable):** None**Proper shipping Name:** Corrosive Liquid, N.O.S. (Sulfuric Acid, Ceric Ammonium Nitrate).**Hazard Class:** 8**Packing Group:** II.**Marine Pollutant (if applicable):** No**Comments:** None**SECTION 15: Regulatory information****United States (USA)**

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Initial preparation date: : 01.24.2015**Ceric Sulfate, 0.0791N****SARA Section 311/312 (Specific toxic chemical listings):**

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) :

7732-18-5 Water: listed.

16774-21-3 Ceric Ammonium Nitrate: listed.

7664-93-9 Sulfuric Acid: listed.

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

7664-93-9 Sulfuric Acid 1000.

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) :**

7732-18-5 Water: listed.

16774-21-3 Ceric Ammonium Nitrate: listed.

7664-93-9 Sulfuric Acid: 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: 3-0-0**HMIS:** 3-0-0**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).