



Material Safety Data Sheet

Ceric Ammonium Sulfate, 0.02N-1.0N in 1.0N Sulfuric Acid

Section 1 - Chemical Product and Company Identification

MSDS Name:

Ceric Ammonium Sulfate, 0.02N-1.0N in 1.0N Sulfuric Acid

Catalog Numbers:

LC12920, LC12930

Synonyms:

None

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	>90
7664-93-9	Sulfuric acid	3
16774-21-3	Ceric ammonium nitrate	1.2 - 6

Section 3 - Hazards Identification

Emergency Overview

Appearance: Orange-yellow solution**Warning!** Corrosive. May cause irritation or burns to eyes and skin. May cause irritation to respiratory and gastrointestinal tract. Exposure to mists may cause cancer.**Target Organs:** Eyes, skin, respiratory and gastrointestinal tracts, teeth

Potential Health Effects

Eye:

May cause severe eye irritation or burns.

Skin:

May cause skin irritation or burns.

Ingestion:

May cause gastrointestinal irritation with nausea, abdominal pain, vomiting, and diarrhea. May cause irritation or burns to the mouth and esophagus.



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Inhalation:

May cause respiratory tract irritation with cough, headache, increased respiration rate, lung capacity impairment. Inhalation of strong inorganic acid mists containing sulfuric acid may cause cancer.

Chronic:

Prolonged or repeated contact may cause dermatitis, conjunctivitis, chronic tracheobronchitis, and erosion and discoloration of teeth. Prolonged inhalation to cerium fumes may cause emphysema.

Section 4 - First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until chemical is gone. Get medical aid at once.

Skin:

Immediately flush eyes with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid at once.

Ingestion:

Do NOT induce vomiting. Give 1 ounce of milk of magnesia. Give conscious victim large quantities of water to dilute acid. Get medical aid at once.

Inhalation:

Move victim to fresh air immediately. If breathing is difficult, give oxygen. Give artificial respiration if necessary. Get medical aid at once.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Avoid breathing corrosive vapors. Heat generates sulfuric acid vapor and oxides of sulfur and nitrogen.

Extinguishing Media:

Use water or carbon dioxide. Water spray or fog may be used to absorb corrosive vapors.

Autoignition Temperature:

No information found.

Flash Point:

No information found.

NFPA Rating:

CAS# 7732-18-5: Health- 0, Flammability- 0, Instability- 0

CAS# 7664-93-9: Health- 3, Flammability- 0, Instability- 1

CAS# 16774-21-3: Health- 2, Flammability- 0, Instability- 0

Explosion Limits:

Lower: n/a Upper: n/a

Section 6 - Accidental Release Measures



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General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb with inert material (sand, diatomaceous earth), and transfer to non-metallic container labeled "Corrosive" for later disposal.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Do not ingest or inhale. Do not get in eyes, on skin, or on clothing.

Storage:

Store capped in plastic or glass at room temperature, protected from heat and incompatible materials.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities using or storing this material should be equipped with an eyewash and safety shower. Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Sulfuric acid	0.2 mg/m ³ (thoracic fraction)	1 mg/m ³ TWA 15 mg/m ³ IDLH	3 mg/m ³ STEL
Ceric ammonium nitrate	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.

OSHA Vacated PELs:

Sulfuric acid: 1 mg/m³ TWA

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133. Do not wear contact lenses when working with chemicals.

Skin:

Wear acid protective clothing and gloves.

Clothing:

Wear acid protective clothing and gloves.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134. Always use a NIOSH-approved respirator when necessary.



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Section 9 - Physical and Chemical Properties

Physical State:	Liquid
Color:	Orange-yellow
Odor:	Odorless
pH:	Acidic
Vapor Pressure:	No information found.
Vapor Density:	No information found.
Evaporation Rate:	No information found.
Viscosity:	No information found.
Boiling Point:	No information found.
Freezing/Melting Point:	No information found.
Decomposition Temperature:	No information found.
Solubility in water:	Soluble
Specific Gravity/Density:	No information found.
Molecular Formula:	No information found.
Molecular Weight:	No information found.

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Metals, reducing agents, chlorates, perchlorates, combustible and flammable materials (e.g. alkyl resins, asphalt, gasoline, grease, methyl acetone, polystyrene, polyurethane), organics, carbides, fulminates, picrates.

Hazardous Decomposition Products:

Oxides of nitrogen, oxides of sulfur, oxides of cerium, sulfuric acid vapor, ammonia.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.

CAS# 7664-93-9: WS5600000.

CAS# 16774-21-3: unlisted.

LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 7664-93-9:

Inhalation, mouse: LC50 = 320 mg/m³/2H

Inhalation, rat: LC50 = 510 mg/m³/2H

Oral, rat: LD50 = 2140 mg/kg.



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CAS# 16774-21-3:

Oral, rat: LD50 = 1600 mg/kg.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7664-93-9:

ACGIH: A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists)

California: carcinogen, initial date 3/14/03 (Strong inorganic acid mists containing sulfuric acid).

NIOSH: Not listed.

NTP: Known carcinogen (Strong inorganic acid mists containing sulfuric acid).

OSHA: Select carcinogen

IARC: Group 1 carcinogen

CAS# 16774-21-3: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

See actual entry in RTECS for more information.

Teratogenicity:

No information found.

Reproductive:

No information found.

Mutagenicity:

See actual entry in RTECS for more information.

Neurotoxicity:

No information found

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Sulfuric acid

Hazard Class: 8

UN Number: UN2796

Packing Group: PG II

Section 15 - Regulatory Information

US Federal

TSCA:

CAS# 7732-18-5 is listed on the TSCA Inventory.



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CAS# 7664-93-9 is listed on the TSCA Inventory.

CAS# 16774-21-3 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):

CAS# 7664-93-9: final RQ = 1000 pounds (454 kg)

CERCLA/SARA Section 313:

This material contains Sulfuric acid (CAS# 7664-93-9, 3%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous:

None of the components are on this list.

US State

State Right to Know:

Sulfuric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations:

WARNING: This product contains Sulfuric acid, a chemical known to the state of California to cause cancer when contained in strong inorganic acid mists.

European/International Regulations

Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7664-93-9 is listed on Canada's DSL List.

CAS# 16774-21-3 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 7664-93-9 is listed on Canada's Ingredient Disclosure List.

CAS# 16774-21-3 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: November 15, 1997

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