

Material Safety Data Sheet

Ammonium cerium(IV) sulfate dihydrate

ACC# 00400

Section 1 - Chemical Product and Company Identification

MSDS Name: Ammonium cerium(IV) sulfate dihydrate**Catalog Numbers:** AC206310000, AC206310050, AC206311000, AC325790000, AC325791000, AC325795000, AC404335000, C249-500**Synonyms:** Ceric ammonium sulfate dihydrate; Cerium(IV) ammonium sulfate dihydrate.**Company Identification:**

Fisher Scientific
 1 Reagent Lane
 Fair Lawn, NJ 07410

For information, call: 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
10378-47-9	Ceric ammonium sulfate dihydrate	>94	unlisted

Hazard Symbols: None listed.**Risk Phrases:** None listed.

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: orange-yellow solid. The toxicological properties of this material have not been fully investigated. **Caution!** May cause eye, skin, and respiratory tract irritation.

Target Organs: No data found.**Potential Health Effects****Eye:** Dust may cause mechanical irritation.**Skin:** May cause skin irritation. The toxicological properties of this material have not been fully investigated.**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. The toxicological properties of this substance have not been fully investigated.**Inhalation:** May cause respiratory tract irritation. The toxicological properties of this substance have not been fully investigated.**Chronic:** No information found.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 1; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Use with adequate ventilation. Wash clothing before reuse. Avoid breathing dust.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Ceric ammonium sulfate dihydrate	none listed	none listed	none listed

Sulfuric acid, ammonium cerium(4+) salt (4:4:1)	none listed	none listed	none listed
Sulfuric acid, ammonium cerium salt	none listed	none listed	none listed

OSHA Vacated PELs: Ceric ammonium sulfate dihydrate: No OSHA Vacated PELs are listed for this chemical. Sulfuric acid, ammonium cerium(4+) salt (4:4:1): No OSHA Vacated PELs are listed for this chemical. Sulfuric acid, ammonium cerium salt: No OSHA Vacated PELs are listed for this chemical.

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 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: orange-yellow

Odor: odorless

pH: 1.2 (100 g/l H₂O)

Vapor Pressure: Negligible.

Vapor Density: Not available.

Evaporation Rate: Negligible.

Viscosity: Not available.

Boiling Point: Not applicable.

Freezing/Melting Point: 130 deg C

Decomposition Temperature: Not available.

Solubility: Slightly soluble.

Specific Gravity/Density: Not available.

Molecular Formula: CeH₁₆N₄O₁₆S₄.2H₂O

Molecular Weight: 632.54

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid: Dust generation, excess heat.

Incompatibilities with Other Materials: Strong bases.

Hazardous Decomposition Products: Nitrogen oxides, oxides of sulfur, ammonia.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:**CAS#** 10378-47-9 unlisted.**CAS#** 7637-03-8 unlisted.**CAS#** 13840-04-5 unlisted.**LD50/LC50:**

Not available.

Not available.

Not available.

Carcinogenicity:

CAS# 10378-47-9: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. **CAS#** 7637-03-8: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. **CAS#** 13840-04-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No information available.**Teratogenicity:** No information available.**Reproductive Effects:** No information available.**Neurotoxicity:** No information available.**Mutagenicity:** No information available.**Other Studies:** The toxicological properties have not been fully investigated.

Section 12 - Ecological Information
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No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.**RCRA U-Series:** None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	Not regulated				No information available.
Hazard Class:					
UN Number:					
Packing Group:					

Section 15 - Regulatory Information
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US FEDERAL

TSCA

CAS# 10378-47-9 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

CAS# 7637-03-8 is listed on the TSCA inventory.

CAS# 13840-04-5 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA**CERCLA Hazardous Substances and corresponding RQs**

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 10378-47-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7637-03-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 13840-04-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

Not available.

Risk Phrases:**Safety Phrases:**

S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)

CAS# 10378-47-9: No information available.

CAS# 7637-03-8: No information available.

CAS# 13840-04-5: No information available.

Canada - DSL/NDSL

CAS# 7637-03-8 is listed on Canada's DSL List.

CAS# 13840-04-5 is listed on Canada's NDSL List.

Canada - WHMIS

This product does not have a WHMIS classification.

Canadian Ingredient Disclosure List

Exposure Limits**Section 16 - Additional Information****MSDS Creation Date:** 5/11/1999**Revision #5 Date:** 8/27/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.