

Material Safety Data Sheet

Cerium(IV) sulfate tetrahydrate

ACC# 31646

Section 1 - Chemical Product and Company Identification

MSDS Name: Cerium(IV) sulfate tetrahydrate

Catalog Numbers: C265-500

Synonyms: Ceric sulfate tetrahydrate; Cerium(4+) sulfate tetrahydrate; Tetrasulfato-ceric acid, tetrahydrate; Ceric disulfate tetrahydrate.

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
10294-42-5	Cerium sulfate tetrahydrate	100	unlisted

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: slight orange solid.

Danger! Strong oxidizer. Contact with other material may cause a fire. May cause severe eye, skin and respiratory tract irritation with possible burns. May cause digestive tract irritation with nausea, vomiting, and diarrhea.

Target Organs: No data found.

Potential Health Effects

Eye: May cause eye irritation. May cause conjunctivitis. May cause eye injury. May cause permanent corneal opacification.

Skin: May cause severe irritation and possible burns.

Ingestion: May cause nausea, vomiting, and diarrhea, possibly with blood.

Inhalation: May cause respiratory tract irritation. May cause acute pulmonary edema, asphyxia, chemical pneumonitis, and upper airway obstruction caused by edema.

Chronic: No information found.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Wash clothing before reuse. Flush skin with plenty of soap and water.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

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. Strong oxidizer. Contact with other material may cause fire. Use water with caution and in flooding amounts.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire. If water is the only media available, use in flooding amounts. Contact professional fire-fighters immediately.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 1; Special Hazard: OX

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. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Remove all sources of ignition. Do not use combustible materials such as paper towels to clean up spill.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Avoid ingestion and inhalation.

Storage: Keep away from heat, sparks, and flame. Do not store near combustible materials. Keep away from reducing agents. Keep containers tightly closed.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Cerium sulfate tetrahydrate	none listed	none listed	none listed
Cerium disulfate, anhydrous	none listed	none listed	none listed

OSHA Vacated PELs: Cerium sulfate tetrahydrate: No OSHA Vacated PELs are listed for this chemical. Cerium disulfate, anhydrous: 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 gloves to prevent skin exposure.

Clothing: Wear a chemical apron. Wear appropriate clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: slight orange

Odor: none reported

pH: Basic in solution.

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: 350 deg C

Decomposition Temperature: > 350 deg C

Solubility: Decomposes in water.

Specific Gravity/Density: 3.91

Molecular Formula: Ce(SO₄)₂·4H₂O

Molecular Weight: 404.2888

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources, dust generation, combustible materials, reducing agents.

Incompatibilities with Other Materials: Reducing agents.

Hazardous Decomposition Products: Sulfur oxides (SO_x), including sulfur oxide and sulfur dioxide.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 10294-42-5 unlisted.

CAS# 13590-82-4: WS6960000

LD50/LC50:

Not available.

Not available.

Carcinogenicity:

CAS# 10294-42-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 13590-82-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found.

Teratogenicity: No information found.

Reproductive Effects: No information found.
Neurotoxicity: No information found.
Mutagenicity: No information found.
Other Studies: No data available.

Section 12 - Ecological Information

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	Canada TDG
Shipping Name:	OXIDIZING SOLID, N.O.S.	No information available.
Hazard Class:	5.1	
UN Number:	UN1479	
Packing Group:	II	

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 10294-42-5 is not on the TSCA Inventory. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

CAS# 13590-82-4 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.

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.

SARA Codes

CAS # 10294-42-5: acute, flammable.

CAS # 13590-82-4: acute, flammable.

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 depleters.

This material does not contain any Class 2 Ozone depleters.

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# 10294-42-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 13590-82-4 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

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:

O

Risk Phrases:

R 8 Contact with combustible material may cause fire.

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 10294-42-5: No information available.

CAS# 13590-82-4: No information available.

Canada - DSL/NDSL

CAS# 13590-82-4 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of C, D2B.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 12/12/1997

Revision #6 Date: 10/05/2004

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.