

MATERIAL SAFETY DATA SHEET

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FOR CHEMICAL EMERGENCIES, CALL INFOTRAC 24 HOURS A DAY AT:
1-800-535-5053

CERIC SULFATE, Standardized, 0.10 N

SECTION ONE - MATERIAL DESCRIPTION

Manufacturers Name: Seacole-CRC
Chemical Description: $\text{H}_4\text{Ce}(\text{SO}_4)_4$ in water and dilute sulfuric acid
Trade Name: CERIC SULFATE, Standardized, 0.10 N
General Product Use: laboratory reagent

SECTION TWO - HAZARDOUS COMPONENTS

This document is prepared pursuant to the OSHA Hazard Communication Standard 29 CFR 1910.1200. Substances contained in the product, which may require disclosure as "hazardous" per this standard are listed below:

Chemical Name	CAS Number	Optional Percent (w/w)	OSHA/PEL	Exposure Limits ACGIH/TLV	OTHER
Sulfuric acid	07994-93-9	< 5%	5 mg/M ³	5 mg/M ³	----
Ceric sulfate	13590-82-4	< 15%	1 mg/M ³	0.2 mg/M ³	----

NFPA HAZARD RATING: Health: 2 Fire: 0 Reactivity: 0 Special: COR
HMIS RATING: Health: 2 Fire: 0 Reactivity: 0

SECTION THREE - PHYSICAL DATA

Appearance and Odor: transparent orange liquid, odorless
Boiling Point: @ 212° F
Melting Point: @ 32° F
Vapor Pressure: not determined
Vapor Density: not determined
Water solubility: complete
Specific gravity: 1.1
Percent volatile: None
pH: < 2

SECTION FOUR - FIRE FIGHTING AND EXPLOSION HAZARD DATA

Flash Point: > 160° F
Lower Explosive Limit: not determined
Upper Explosive Limit: not determined
Auto Ignition Temperature: not determined
Extinguishing Media: Use water spray, carbon dioxide, dry chemical, alcohol-type or universal type foams applied by manufacturer's recommended technique.
Unusual Hazards: None known.

CAUTION: FIRES INVOLVING THIS MATERIAL MAY RELEASE TOXIC GASES INCLUDING OXIDES OF CERIUM, CARBON DIOXIDE AND CARBON MONOXIDE. USE SELF-CONTAINED BREATHING APPARATUS WHEN FIGHTING FIRES.

SECTION FIVE - HEALTH AND FIRST AID DATA

Odor Thresholds: Not determined
Carcinogenicity: This product DOES NOT contain any materials, which are, or are considered as suspected, carcinogens by NTP, IARC, or OSHA.
Primary Routes of Entry: Eye contact, skin contact, inhalation and ingestion.

POTENTIAL EFFECTS OF OVEREXPOSURE:

Eyes: Severe eye irritant. Exposure may cause irritation and reddening of the eye, excessive tearing and/or permanent tissue damage due to acidic nature of the product.
Skin: Moderately irritating to skin. Exposure to skin or mucous membranes and may produce defatting, absorption of skin oils, smarting, redness, or contact dermatitis.
Inhalation: Not considered an inhalation hazard in its liquid form.
Ingestion: Ingestion may cause irritation and discomfort to the esophagus and gastrointestinal tissue. Acidic nature of product may cause irreversible tissue damage.

FIRST AID:

Eye Contact: Immediately flush with large quantities of water for at least 15 minutes while holding eyelids open. IF CONTACT LENSES ARE BEING WORN, REMOVE IMMEDIATELY prior to water rinsing. Contact a physician if any irritation persists.
Skin Contact: Remove contaminated clothing. Flush affected areas with water. Contact a physician if any irritation persists.
Ingestion: Immediately give several glasses of water or milk. Induce vomiting IMMEDIATELY. Contact a physician immediately. NEVER GIVE ANYTHING ORALLY TO AN UNCONSCIOUS PERSON.
Inhalation: Remove to fresh air. If breathing has stopped, provide artificial respiration. Keep the victim warm and seek medical attention.

SECTION SIX - REACTIVITY DATA

Stability: Stable under normal operating conditions.

Conditions to Avoid: Moisture and high temperatures rapidly degrades product. Material should be kept in a sealed drum and at temperatures below 100o F at all times.

Incompatibility With Other Materials: None known.

Hazardous Decomposition Products: Thermal decomposition may produce poisonous gasses including carbon monoxide and oxides of cerium.

Hazardous Polymerization: Will not occur.

SECTION SEVEN - SPILL CONTROL AND DISPOSAL PROCEDURES

Spill and/or Leak Procedures: Action should be taken to prevent dissolution of untreated material in water, wash water, sewage streams, or drainage areas, and drinking water supplies. Sweep or vacuum spilled material and place in secure, plastic-lined container.

Waste Disposal: This product MAY BE classified as a hazardous waste per 40 CFR, part 261. The user is responsible for treating spilled or unused material in accordance with all local, state, and federal regulations. (Refer to 40 CFR, part 261, subparts C and D; and 40 CFR, 1900.1200 OSHA regulations.)

SECTION EIGHT - SPECIAL PROTECTION INFORMATION

Protective Equipment: Goggles, chemically impervious gloves, and chemically impervious clothing to prevent skin and eye contact are recommended when working with this material. It is strongly recommended contact lenses not be worn when working with chemicals because they may increase the severity on an eye injury.

Respiratory Protection: No special respiratory protection is anticipated unless mists are generated by spray processing equipment.

Work/Hygienic Practices: Wash thoroughly after handling. Wash contaminated clothes before re-use. Launder work clothes separately from family clothes. Check protective clothing, particularly impervious gloves, for leaks before use.

Handling and Storage Precautions: Store in cool, dry, and well-ventilated areas. Keep containers tightly closed to prevent exposure to moisture.

SECTION NINE - TOXICOLOGY DATA

Toxicity Studies: Toxicity studies have not been performed on this product. Toxicity studies available on the hazardous ingredient(s) include:

Acute Oral Toxicity: LD₅₀ (rat) = not determined

Acute Dermal Toxicity: LD₅₀ (rabbit) = not determined

Acute Respiratory Toxicity: (rat) = not determined

SECTION TEN - REGULATORY AND SHIPPING INFORMATION

Federal Regulations: CRCLA requires notification of the National Response Center of the release of quantities of hazardous substances equal to or greater than the reportable quantities of listed in 40 CFR 302.4 (SARA Section 304). To the best of our knowledge, components present in this product at a level, which could require reporting under the statute, are as follows:

NONE

This product has been reviewed according to the EPA "Hazard Categories promulgated under Sections 311, 312, and 313 of the SARA Title III "Right to Know", and is considered, under applicable definitions, to meet the following hazard categories:

- ☒ IMMEDIATE (ACUTE) HEALTH HAZARD
- ☒ DELAYED (CHRONIC) HEALTH HAZARD
- ☐ SUDDEN RELEASE OF PRESSURE HAZARD
- ☐ FIRE HAZARD
- ☐ REACTIVE HAZARD

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (TITLE III) Section 320 (40 CFR 355): This product does NOT contain components listed in Appendix A of 40 CFR, part 355, as extremely hazardous substance (EHS).

TOXIC SUBSTANCE CONTROL ACT (TSCA): The chemical ingredients in this product are listed per the 8(b) inventory list (40 CFR, part 710).

PROPOSITION 65 (CARCINOGEN AND TERATOGEN): The chemical constituents of this product have been reviewed, and to the best of our knowledge, does not contain chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

DOT Shipping Name:

**CORROSIVE LIQUID, ACIDIC, INORGANIC,
N.O.S., (Sulfuric acid), 8, UN3264, PG II**

Hazard Class:

8-CORROSIVE

Label Requirements:

8-CORROSIVE

Packaging Group:

PG III

UN/NA Number:

UN 3264

Reportable Quantity:

NONE

The information contained herein is based upon data believed to be reliable. Seacole-CRC provides no warranties, either expressed or implied and assumes no responsibility for the accuracy or completeness of the data contained herein. This information is offered for your information, consideration, and investigation. You should satisfy yourself that you have all current data relevant to your particular use. Seacole-CRC knows of no medical condition, other than those noted on this material safety data sheet, which are generally recognized as being aggravated by exposure to this product.