



Health	2
Fire	0
Reactivity	1
Personal Protection	E

## Material Safety Data Sheet Cerium (III) Nitrate MSDS

### Section 1: Chemical Product and Company Identification

**Product Name:** Cerium (III) Nitrate

**Catalog Codes:** SLC5104

**CAS#:** 10294-41-4

**RTECS:** FK6300000

**TSCA:** TSCA 8(b) inventory: No products were found.

**CI#:** Not available.

**Synonym:** Cerium Nitrate, hexahydrate; Cerium trinitrate hexahydrate; Cerous nitrate hexahydrate; Nitric acid, cerium (3+) salt, hexahydrate

**Chemical Name:** Cerium (III) Nitrate, hexahydrate

**Chemical Formula:** Ce(NO<sub>3</sub>)<sub>3</sub>.6H<sub>2</sub>O

**Contact Information:**

**Sciencelab.com, Inc.**

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**  
1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Cerium (III) Nitrate	10294-41-4	100

**Toxicological Data on Ingredients:** Cerium (III) Nitrate: ORAL (LD50): Acute: 4200 mg/kg [Rat].

### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant). Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

### Section 4: First Aid Measures

**Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Skin Contact:**

Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

**Serious Skin Contact:** Not available.

**Inhalation:**

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

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

**Serious Ingestion:** Not available.

### Section 5: Fire and Explosion Data

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable.

**Flammable Limits:** Not applicable.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** of combustible materials of organic materials

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Not applicable.

**Special Remarks on Fire Hazards:** Contact with combustible or organic materials may cause fire.

**Special Remarks on Explosion Hazards:** Not available.

### Section 6: Accidental Release Measures

**Small Spill:** Use appropriate tools to put the spilled solid in a convenient waste disposal container.

**Large Spill:**

Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

### Section 7: Handling and Storage

**Precautions:**

Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable

respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, metals.

**Storage:**

Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

### Section 8: Exposure Controls/Personal Protection

**Engineering Controls:**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:** Face shield. Synthetic apron. Gloves (impervious).

**Personal Protection in Case of a Large Spill:**

Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

### Section 9: Physical and Chemical Properties

**Physical state and appearance:** Solid. (Crystalline powder.)

**Odor:** Acidic

**Taste:** Not available.

**Molecular Weight:** 434.22 g/mole

**Color:** White to yellowish.

**pH (1% soln/water):** Not available.

**Boiling Point:** Not available.

**Melting Point:** Not available.

**Critical Temperature:** Not available.

**Specific Gravity:** 1.1 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** Not available.

**Volatility:** Not available.

**Odor Threshold:** Not available.

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water.

**Solubility:** Soluble in cold water.

### Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Incompatible materials, moisture, combustible materials

**Incompatibility with various substances:** Reactive with reducing agents, combustible materials, organic materials, metals.

**Corrosivity:** Not available.

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** Acute oral toxicity (LD50): 4200 mg/kg [Rat].

**Chronic Effects on Humans:** Not available.

**Other Toxic Effects on Humans:**

Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:**

Excreted in maternal milk in human. May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data

**Special Remarks on other Toxic Effects on Humans:**

Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. Contact with dust may cause stinging, tearing, redness, swelling. Irritation may be severe. Inhalation: Ingestion: The toxicity of nitrates is due to invivo conversion to nitrites. Primary overdose effects of nitrates include orthostatic hypotension, and methemoglobinemia (particularly in children). Headache, gastroenteritis, nausea, vomiting, abdominal pain, and diarrhea may also occur. Small doses of nitrates may cause weakness, general depression, mental impairment. In severe poisonings unconsciousness, dizziness, postural lightheadedness, fatigue, ataxia, shortness of breath (labored breathing), sedation, , warm flushed sweaty skin that later becomes cyanotic, syncope, tachycardia, and hypotension may occur. Other symptoms may include peripheral vasodilation. Vasodilation may produce decreased vascular resistance, cardiovascular collapse, seizures, and coma in severe toxicity. Hypotension, decreased peripheral vascular resistance, cardiovascular collapse, or bradycardia occur less often. Chronic ingestion of more than 5mg/kg/day is considered unacceptable.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The product itself and its products of degradation are not toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## Section 14: Transport Information

**DOT Classification:** CLASS 5.1: Oxidizing material.

**Identification:** : Nitrate, inorganic, n.o.s. (Cerium (III) Nitrate UNNA: 1477 PG: III

**Special Provisions for Transport:** Not available.

## Section 15: Other Regulatory Information

**Federal and State Regulations:** No products were found.

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):**

CLASS C: Oxidizing material. CLASS D-2B: Material causing other toxic effects (TOXIC).

**DSCL (EEC):**

R8- Contact with combustible material may cause fire. R36- Irritating to eyes. S17- Keep away from combustible material. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 0

**Reactivity:** 1

**Personal Protection:** E

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 0

**Reactivity:** 2

**Specific hazard:**

**Protective Equipment:**

Gloves (impervious). Synthetic apron. Wear appropriate respirator when ventilation is inadequate. Face shield.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

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