

## Material Safety Data Sheet

### Cerium Oxide, 99.95%

#### Section 1: Chemical Product and Company Identification

**Product Name:** Cerium Oxide

**Synonym:** Ceria; Ceric Dioxide; Cerium Dioxide.

**Chemical Formula:** CeO<sub>2</sub>

**Customs Tariff No.:**

**Contact Information:** Changsha Easchem Co., Limited

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#### Section 2: Composition and Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
1306-38-3	Cerium Oxide	99.95	215-150-4

#### Section 3: Hazards Identification

**EMERGENCY OVERVIEW** Appearance: white powder.

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

**Target Organs:** None.

#### Potential Health Effects

**Eye:** May cause eye irritation.

**Skin:** May cause mild skin irritation.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

**Inhalation:** May cause respiratory tract irritation.

**Chronic:** No information found.

#### Section 4: First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation develops, get medical aid.

**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

**Ingestion:** 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 if irritation or symptoms occur.

**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 if cough or other symptoms appear.

**Notes to Physician:** Treat symptomatically.

#### Section 5: Fire and Explosion Data

**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. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

**Extinguishing Media:** Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. For small fires, use dry chemical, carbon dioxide, water spray or regular 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. Reduce airborne dust and prevent scattering by moistening with water. 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. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Avoid ingestion and inhalation.

**Storage:** Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. No special precautions indicated.

#### 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
Cerium(IV) oxide	none listed	none listed	none listed

**OSHA Vacated PELs:** Cerium(IV) oxide: 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:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Section 9: Physical and Chemical Properties

**Physical State:** Powder

**Appearance:** white

**Odor:** odorless

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** 5.9

**Evaporation Rate:** Not available.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** 2600 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Insoluble in water.

**Specific Gravity/Density:** 6.1

**Molecular Formula:** CeO<sub>2</sub>

**Molecular Weight:** 172.1188.

#### Section 10: Stability and Reactivity Data

**Chemical Stability:** Stable under normal temperatures and pressures.

**Conditions to Avoid:** Incompatible materials, dust generation, excess heat, strong oxidants.

**Incompatibilities with Other Materials:** Strong oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide, carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Will not occur.

### Section 11: Toxicological Information

**RTECS#:**

**CAS#** 1306-38-3: FK6310000

**LD50/LC50:**

CAS# 1306-38-3:

Oral, rat: LD50 = >5 gm/kg;

**Carcinogenicity:**

CAS# 1306-38-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No information available.

**Teratogenicity:** No information available.

**Reproductive Effects:** No information available.

**Mutagenicity:** No information available.

**Neurotoxicity:** No information available.

**Other Studies:**

### 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
<b>Shipping Name:</b>	Not regulated as a hazardous material	No information available.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

### Section 15: Other Regulatory Information

#### US FEDERAL

##### TSCA

CAS# 1306-38-3 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.

**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# 1306-38-3 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:**

Not available.

**Risk Phrases:****Safety Phrases:**

S 24/25 Avoid contact with skin and eyes.

**WGK (Water Danger/Protection)**

CAS# 1306-38-3: No information available.

**Canada - DSL/NDSL**

CAS# 1306-38-3 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of Not controlled..

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

**Canadian Ingredient Disclosure List.****Section 16: Other Information**

**References:** Not available.

**Other Special Considerations:** Not available.

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