



# SAFETY DATA SHEET

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## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Cerium (IV) Oxide**  
PRODUCT NO: 1424  
CAS NO: 1306-38-3  
SYNONYMS: Ceric oxide, ceria, cerium dioxide

### MANUFACTURER:

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## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Not a dangerous substance according to the GHS

### HMS CLASSIFICATION:

Health: 1      Chronic: \*      Flammability: 0      Reactivity: 0

### NFPA RATING:

Health: 0      Fire: 0      Reactivity Hazard: 0

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula: CeO<sub>2</sub>

Molecular Weight: 172.11

CHEMICAL NAME	CAS#	%
Cerium (IV) Oxide	1306-38-3	90-100

## SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

**SKIN EXPOSURE:** Wash affected area with soap and plenty of water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.

**INGESTION:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek medical assistance.

## SECTION 5 FIREFIGHTING MEASURES

**FLASH POINT:** Product is not flammable.

**AUTO IGNITION TEMPERATURE:** None

**EXPLOSION LIMITS:** None

**EXTINGUISHING MEDIUM:** Use fire fighting measures that suit the surrounding fire.

**SPECIAL FIRE FIGHTING PROCEDURES:** If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** None

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid breathing dust.

**ENVIRONMENTAL PRECAUTIONS:** Do not let enter drains or allow to be released into the environment.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Sweep up and place in suitable container for proper disposal.

## SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Ensure adequate ventilation. Wear personal protective equipment. Avoid breathing dust.

**CONDITIONS FOR SAFE STORAGE:** Store in a cool, dry, and well-ventilated area.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

**EYE PROTECTION:** Always wear approved safety glasses with side shields, safety goggles, or face shield when handling a chemical substance in the laboratory.

**SKIN PROTECTION:** Chemical resistant gloves.

**VENTILATION:** If possible, handle the material in an efficient fume hood.

**RESPIRATOR:** Respirator selection should be based on anticipated exposure levels.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** White to pale yellow solid

**ODOR:** None

**MOLECULAR WEIGHT:** 172.11

**MELTING POINT:** 3500° C

**BOILING POINT:** No data available

**SPECIFIC GRAVITY** 7.13 gm/ml

**VAPOR PRESSURE:** No data

**SOLUBILITY IN WATER:** Insoluble

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** No data

**INCOMPATIBILITY:** Strong oxidizing agents

**DECOMPOSITION PRODUCTS:** None

## SECTION 11 TOXICOLOGICAL DATA

**ACUTE TOXICITY:** LD50 Oral – > 5,000 mg/kg (rat). LC50 Inhalation -4 h - > 5.05 mg/l (rat). LD50 Dermal - >2,000 mg/kg (rat).

**CARCINOGENIC EFFECTS:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.

**MUTAGENIC EFFECTS:** No dat

## SECTION 11 TOXICOLOGICAL DATA (Cont.)

**TETRATOGENIC EFFECTS:** No data

**RTECS:** FK6310000

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

## SECTION 12 ECOLOGICAL DATA

**TOXICITY TO FISH:** Semi-static test EC50 – Danio rerio (zebra fish)-> 200 mg/l – 72 h.

**TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES:** Immobilization EC50 – Daphnia magna (Water flea) - > 1,000 mg/l – 48 h.

**TOXICITY TO BACTERIA:** EC50 – Sludge Treatment - > 1,000 mg/l – 3 h.

## SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local, state, and federal regulations.

## SECTION 14 TRANSPORTATION DATA

Non-hazardous material

## SECTION 15 REGULATORY INFORMATION

**TSCA:** Listed in the TSCA Inventory

**SARA 302 COMPONENTS:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 311/312:** Chronic Health Hazard

**SARA (TITLE 313):** Title compound not listed

**PENNSYLVANIA RIGHT TO KNOW:** Cerium (IV) oxide

**NEW JERSEY RIGHT TO KNOW:** Cerium (IV) oxide

**CALIFORNIA PROP. 65:** Not listed

## SECTION 16 OTHER INFORMATION

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**DATE PREPARED:** 12/14

**SDS DEPT.**