

MATERIAL SAFETY DATA SHEET

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MSDS Number: C0301 ; C0305 ; C0310 ; C0453 ; CDS72 ;

I. CHEMICAL PRODUCT IDENTIFICATION

Product Name: Cerium Oxide Polishing Compound
HMIS Ratings:

Health: Slight(1)
 Flammability: Minimal(0)
 Instability/Reactivity: Minimal(0)
 Personal Protective Equipment: X

NFPA Ratings:

Other:

HMIS Health = Chronic

II. COMPOSITION, INFORMATION ON INGREDIENTS

Chemical Ingredients	C.A.S. Number	% By Weight	ACGIH TLV TWA/STEL	OSHA PEL TWA/STEL	Other TWA/STEL	LD50	LC50
Rare Earth Oxide	68188-83-0	20-75	10 mg/m3 Total*	15 mg/m3 Total**			
Notes	ACGIH TLV = *3 mg/m3 respirable. OSHA PEL = **5 mg/m3 respirable.						
Kaolin	1332-58-7		2 mg/m3 Respirable	15 mg/m3 Total**			
Notes	OSHA PEL = **5 mg/m3 respirable.						
Zinc Sulfate	7733-02-0	1-5	10 mg/m3	10 mg/m3			
Notes							
Thorium Phosphate	14485-31-5		See Notes***	See Notes***			
Notes	***1x10 ⁻¹² Microcuries/ML-Air for Th232(NRC).						

III. HAZARDS IDENTIFICATION PRIMARY ROUTE OF ENTRY

Eyes: Dust may irritate eyes. Contact with dust or slurry may be abrasive and irritating causing tearing and redness.

Skin: Not absorbed through skin. Dust may be abrasive and mildly irritating. No adverse effects expected.

Ingestion: All accidental ingestion of dust or slurry may cause irritation of the digestive tract.

Inhalation: Breathing dust may result in irritation of the nose and throat, coughing, shortness of breath and bronchitis. Existing respirable disorders may be aggravated by exposure.

Other: Emergency Overview: If caused to dust, this material has silica and inert or nuisance dust limits. Read above ingredient limit levels. Prolonged overexposure to dust may cause irreversible lung damage. This product is under TCLP limits. This material contains low levels of naturally occurring radioactive material (NORM).

IV. FIRST AID MEASURES

Eyes:	Flush the eyes immediately with large amounts of running water, lifting the upper and lower lids occasionally. If irritation persists or for imbedded foreign body, get immediate medical attention. Avoid rubbing, may cause to scratch eye.
Skin:	No first aid should be needed since this product does not affect the skin. Wash exposed skin with soap and water before breaks and at the end of the shift. Obtain first aid or medical assistance if needed.
Ingestion:	If large amounts are swallowed, get immediate medical attention. Drink large amounts of water if patient is conscious.
Inhalation:	Remove victim to fresh air, apply artificial respiration as needed, obtain first aid or medical assistance.
Other:	Note to Physician: Lanthanides, because of their high density, can produce abnormalities on chest x-ray. Lanthanides generally are not felt to be and the lesions typically have little or no clinical significance. However, occasional cases of pneumoconiosis have been reported.

V. FIRE FIGHTING MEASURES

Flash Point:	Will not burn, N/A
Test Method:	N/A
Lower Flammability Limit:	N/A
Upper Flammability Limit:	N/A
Extinguishing Agents:	Extinguishing Media: This product will not burn but is compatible with all extinguishing media. Use any media that is appropriate for the surrounding fire.
Unusual Fire or Explosion Hazards:	Fire and explosion hazards: Not flammable. No flash point. No fire or explosion hazard.
Fire Fighting Procedures:	Fire Fighting Instructions: Use sufficient local exhaust to reduce the dust. Fire Fighting Equipment: Use self-contained breathing apparatus, NOISH approved, to avoid the dust or fumes generated during fire fighting efforts.

VI. ACCIDENTAL RELEASE MEASURES

Containment/Cleanup:	Wear appropriate protective equipment. If uncontaminated, collect using dustless method (HEPA vacuum or wet method) and place appropriate container for use. If contaminated: A) Use appropriate method for the nature of contamination; B) Consider possible toxic fire hazards associated with the contaminating substances. Collect for disposal.
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VII. HANDLING AND STORAGE

Other:	Do not breath dust. Use normal precautions against bag breakage or spills of bulk material. Avoid creation of respirable dust. Use good housekeeping in storage and use areas to prevent accumulation of dust in work area. Use adequate ventilation and dust collection. Maintain and use proper, clean respiratory equipment (See Section VIII). Warn your employees (and customers) by posting and training about OSHA precautions.
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VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes:	Safety goggles or glasses recommended.
Skin:	Protective gloves recommended.
Respiratory:	Use appropriate respiratory protection for respirable particulates based on consideration of airborne workplace concentrations and duration of exposure. Refer to the most recent

standards of ANSI (Z88.2) OSHA (29CFR 1910.134), and NIOSH respirator logic. In order to limit exposure to norm, production workers should wear appropriate NIOSH approved respirator when dusty.

Engineering: Engineering Controls: Handle with adequate ventilation for dust; see OSHA 29 CFR 1910.94 Ventilation and CFR 1910.1000 (air contaminants) normal clean-up procedures. A source of clean water should be available to flush eyes/skin.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Buff Color
Boiling Point:	NF
Freezing Point:	NF
pH:	5.0–8.0
Solubility in Water:	Insoluble
Specific Gravity:	5.4
Vapor Pressure:	NF
Vapor Density:	NF
Physical State:	Powder
Volatile Content:	0%

X. STABILITY AND REACTIVITY

Stability: Stable.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition: Will not occur.

Products:

Incompatible Products: None found.

XI. TOXICOLOGICAL INFORMATION

Acute Toxicology Data: The ingredients in this product have not been identified as carcinogens by NTP, IARC, or OSHA. A thorium compound not in this product has been identified as a human carcinogen by the U.S. National Toxicology Program based on reports of liver cancer in person given large intravenous injections for diagnostic purposes. The very small amount of highly insoluble thorium phosphate in this product is not thought to present a significant health hazard.

XII. ECOLOGICAL INFORMATION

Environmental Fate and Distribution: No ecotoxicity data is available. This product is not expected to present an environmental hazard.

XIII. DISPOSAL CONSIDERATIONS

Disposal Method: If uncontaminated, dispose as in inert, non-metallic mineral. If contaminated: dispose in accordance with all applicable Local, State and Federal Regulations.

RCRA Class: No

XIV. TRANSPORT INFORMATION

D.O.T. Shipping Name: Cerium Oxide Polishing Compound

D.O.T. Hazard Class: Not regulated.

XV. REGULATORY INFORMATION

TSCA Status: Listed in TSCA.

EPA Sara Title III Chemical Listings: Sara Title III: Section 302 Extremely: No. Sara Title III: Section 311/312: Yes – hazard categories for Sara 311/312 reporting: Chronic health. Sara Title III: Section 313 Toxic: No – this product contains the following chemicals subject to annual release reporting requirements: none.

California: California Proposition 65: This product contains the following substances known to the State of California to cause cancer and/or reproductive harm: Radionuclides (cancer).

Other: OSHA Status: Material contains low levels of naturally occurring radioactive material (NORM) present in the rare earth chronic Health Hazard under OSHA Hazcom Standard 1910.1200.

XVI. OTHER INFORMATION

WARRANTY INFORMATION

THIS INFORMATION IS OFFERED IN GOOD FAITH AS TYPICAL VALUES AND NOT AS A PRODUCT SPECIFICATION. NO WARRANTY, EXPRESSED OR IMPLIED, IS HEREBY MADE. THE RECOMMENDED INDUSTRIAL HYGIENE AND SAFE HANDLING PROCEDURES ARE BELIEVED TO BE GENERALLY APPLICABLE. HOWEVER, EACH USER SHOULD REVIEW THESE RECOMMENDATIONS IN THE SPECIFIC CONTEXT OF THE INTENDED USE AND DETERMINE WHETHER THEY ARE APPROPRIATE.