1. Identification

Product Name
Cerium Oxide Glass Polishing Powder

Catalog Numbers:
C0453, C0544, C0453W, C0453WA, C0653, C0853, C0301, C0305, C0310

Distributor Information Address:
C.R. Laurence Co., Inc.
2503 E. Vernon Ave.
Los Angeles, CA 90058-1826
Telephone: (323) 588-1281

Emergency Telephone Number: CHEMTREC: (800) 424-9300 (24 hours).

2. Hazards Identification

Classification of the substance or mixture
Not a hazardous substance or mixture.

Hazards not otherwise classified or not covered by GHS
None.

GHS label elements, including precautionary statements
Not a hazardous substance or mixture.

Signal word Warning

Precautionary statements
P261: Avoid breathing dust
P271: Use only in a well-ventilated area.
P280: Wear protective gloves and eye protection.
P284: Wear respiratory protection in case of inadequate ventilation
P402: Store in a dry place
P403: Store in a well ventilated place
P404: Store in a closed container

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rare Earth Oxide</td>
<td>68188-83-0</td>
<td>*</td>
</tr>
<tr>
<td>Rare Earth Fluoride</td>
<td>68188-85-2</td>
<td>*</td>
</tr>
<tr>
<td>Aluminum Silicate</td>
<td>1332-58-7</td>
<td>*</td>
</tr>
</tbody>
</table>

* The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret

Rare Earth Oxide is a mixture of Cerium Oxide (1306-38-3), Lanthanum Oxide (1312-81-8), Prasodymium Oxide (12037-29-5), and Neodymium Oxide (1313-97-9). Rare Earth Fluoride is a mixture of Cerium Fluoride (7758-88-5) and Lanthanum Fluoride (13709-38-1).

4. First Aid Measures

Description of first aid measures

Inhalation:
Remove to fresh air. If required, provide artificial respiration. If breathing is difficult, give oxygen. If symptoms persist, call a physician.

Eye Contact:
Flush eyes with water, as a precaution.

Ingestion:
Rinse mouth with water. Never give anything by mouth to an unconscious person.

Skin Contact:
Wash with soap and water, and rinse thoroughly.

Most important symptoms and effects, both acute and delayed
No data available

Indication of any immediate medical attention and special treatment needed:
No data available.
5. Fire Fighting Measures

Suitable extinguishing media
Use water spray, alcohol resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture
No data available. Product is non-flammable.

Advice for firefighters
Wear self-contained breathing apparatus for fire fighting, if necessary.

Further information
No data available.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:

Environmental Precautions:
Do not let product enter drains.

Methods and materials for containment and cleaning up
Wear personal protective equipment. Sweep up and shovel into suitable, closed containers for disposal.

7. Handling and Storage

Precautions for safe handling
Avoid dust formation. Avoid breathing dust.
Use only in area provided with appropriate exhaust ventilation. In case of insufficient ventilation, wear NIOSH approved respiratory equipment.
Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.
Work in a well ventilated area. Wear proper protective equipment.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
8. Exposure Controls / Personal Protection

Exposure Limits:

<table>
<thead>
<tr>
<th>Component</th>
<th>PEL (OSHA)</th>
<th>TLV (ACGIH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rare Earth Oxide</td>
<td>15 mg/m³ Total; 5 mg/m³ Respirable</td>
<td>10 mg/m³ Total; 3 mg/m³ Respirable</td>
</tr>
<tr>
<td>Rare Earth Fluoride</td>
<td>2.5 mg/m³ as F</td>
<td>2.5 mg/m³ as F</td>
</tr>
<tr>
<td>Aluminum Silicate</td>
<td>15 mg/m³ TWA (Total dust)</td>
<td>2 mg/m³ TWA (Respirable fraction)</td>
</tr>
<tr>
<td></td>
<td>5 mg/m³ TWA (Respirable)</td>
<td></td>
</tr>
</tbody>
</table>

Appropriate engineering controls
General industrial hygiene practice.

Personal protective equipment

Eye/face protection:
Use equipment for eye protection, tested and approved by NIOSH. Chemical goggles are recommended.

Skin Protection:
Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash hands afterwards.

Body Protection:
Wear protective clothing. Remove and wash contaminated clothing before re-use.

Respiratory Protection:
Use NIOSH approved respiratory protection in cases of insufficient ventilation, or if concentrations are above the exposure limits.

Control of Environmental Exposure:
Do not let product enter drains.

9. Physical and Chemical Properties
<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Light red powder or off white powder</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>6.5 - 7.5 in 10% slurry</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>NA, powder</td>
</tr>
<tr>
<td>Freezing Point:</td>
<td>NA, powder</td>
</tr>
<tr>
<td>Melting Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>NA. Non-flammable</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>NA, powder</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>NA. Non-flammable</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>4.5 – 6.5 g/ml</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Insoluble</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>NA, powder</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

**Reactivity**
No data available

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions:**
No data available
Conditions to avoid
No data available

Incompatible materials
Strong oxidizing agents.

Hazardous decomposition products
No data available. In the event of fire, see section 5

11. Toxicological Information

Information on toxicological effects

Acute toxicity
Rare Earth Oxide
NIOSH - LD50s and LC50s  Oral LD50 (rat) > 5,000 mg/kg

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
Not listed by IARC, NTP or OSHA as a carcinogen.

Reproductive toxicity
No data available

Specific target organ toxicity – single exposure
No data available

Specific target organ toxicity – repeated exposure
No data available

Aspiration hazard
No data available
12. Ecological Information

Toxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
Not data available

13. Disposal Considerations

Disposal instructions

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

Result indicates that Thorium is non-detectable at the limit of the test method (< 5 ppm) when tested by the ICP-MS method.

Per U.S. Nuclear Regulatory Commission Regulations 10 CFR 40.13, end user is exempt from the regulations and from the requirements for a license.

Unused product is nonhazardous for characteristic toxicity when tested by the EPA TCLP Method.
14. Transport Information

**DOT (US)**
Not dangerous goods

**IMDG**
Not dangerous goods

**IATA**
Not dangerous goods

15. Regulatory Information

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

**SARA 313 Components**
This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**
Chronic health hazard.

**Massachusetts Right To Know Components**
Aluminum silicate

**Pennsylvania Right To Know Components**
Aluminum silicate

**New Jersey Right To Know Components**
Aluminum silicate

**California Proposition 65 Components**
This product contains the following substances known to the state of California to cause cancer and/or reproductive harm:
Aluminum silicate.

16. Other Information
HMIS RATING
Health 1, Flammability 0, Reactivity 0, Personal Protection E

NFPA RATING
Health 1, Flammability 0, Reactivity 0

Issue Date
April 28, 2015
Version#: 01

June 18, 2015
Version#: 02

June 04, 2017
Version#: 03

August 02, 2017
Version#: 04

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