

Section 1: Chemical Product and Company Information

1.1 Product Identifier

Common Name: Microgrit Cerium Oxide
Trade Name: CEO-1; CEO-2; CEO-3; CEO-4; CEO-5; CEO 403ST; CEO 1000; CEO 1000ST; CEO 2000; CEO 2000ST

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use: Polishing Compound
Uses Advised Against: None identified

1.3 Details of the Supplier of the Substance or Mixture

Manufacturer/Supplier:
Micro Abrasives Corporation
720 Southampton Road
P.O. Box 669
Westfield, MA 01085
Tel: 413-562-3641
Fax: 413-562-7409

1.4 Emergency Telephone Number

In United States, Canada, Puerto Rico, and the U.S. Virgin Islands: 1 (800) 255-3924
Outside the United States: +01 or +001 (813) 248-0585 (Call collect if necessary)

Email: SDS@microgrit.com

Website: <http://www.microgrit.com>

SDS Date of Preparation/Revision: January 02, 2023

Section 2: Hazards Identification

2.1 Classification of the Substance or Mixture

EU CLP Classification (1272/2008): Not classified as hazardous

GHS Classification: Not classified as hazardous

US OSHA Classification (29CFR1910.1200): Specific Target Organ Toxicity - Repeat Exposure Category 2

2.2 Label Elements:

Warning!



Contains Kaolin

Hazard statement(s)

H373 May cause damage to lungs through prolonged or repeated exposure by inhalation.

Precautionary statement(s)

P260 Do not breathe dust.
P314 Get medical /attention if you feel unwell.
P501 Dispose of contents and container in accordance with local and national regulations.

Supplemental Labeling: Prolonged exposure to elevated noise levels during operations may affect hearing. A greater hazard, in most cases, is the exposure to the dust/fumes from the material or paint/coatings being processed. Most of the dust generated during abrasive processing is from the base material or coatings and the potential hazard from this exposure

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must be evaluated. This dust may present a fire or dust explosion hazard and may present a serious health hazard.

2.3 Other Hazards: None identified

Section 3: Composition/Information on Ingredients

3.2 Mixture

Component	CAS Number/ EINECS Number.	Amount	GHS Classification (1272/2008)
Rare Earth Oxide consisting of: Cerium Oxide Lanthanum Oxide Praseodymium Oxide Neodymium Oxide	1306-38-3 1312-81-8 12037-29-5 1313-97-9	60-70%	Not hazardous
Rare Earth Fluoride consisting of: Cerium Fluoride Lanthanum Fluoride	7758-88-5 13709-38-1	30-40%	Not hazardous
Kaolin	1332-58-7	<2%	STOT RE 2 (H373)

Refer to Section 16 for Full Text of GHS Classes and H Statements if applicable

Section 4: First Aid Measures

4.1 Description of First Aid Measures

First Aid

Eyes: Remove contact lenses if present and easy to do. Flush eyes thoroughly with large amounts of water, holding eyelids open. If irritation persists, seek medical attention.

Skin: Wash skin with soap and water. If irritation or other symptoms develop, seek medical attention.

Ingestion: Do not induce vomiting. Rinse mouth with water. Seek medical attention if large amount is swallowed or if you feel unwell.

Inhalation: Move person to fresh air. If breathing is difficult, have qualified personnel administer oxygen. Seek medical attention if irritation or other symptoms persist.

See Section 11 for more detailed information on health effects.

4.2 Most Important symptoms and effects, both acute and delayed: Dust may cause eye and respiratory irritation. Prolonged inhalation of high concentration of dust may cause adverse effects on the lungs. Exposure to dust generated from processing the base material or coatings may present additional health hazards.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical attention should not be required.

Section 5: Fire Fighting Measures

5.1 Extinguishing Media: Use any media that is suitable for the surrounding fire. .

5.2 Special Hazards Arising from the Substance or Mixture: This product is not flammable or combustible; however, consideration must be given to the potential fire/explosion hazards from the base material being processed. Many materials create flammable/explosive dusts when polished.

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5.3 Advice for Fire-Fighters: Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus.

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate respirator and protective clothing as needed to avoid eye contact and inhalation of dust.

6.2 Environmental Precautions: Avoid contamination of water supplies and environmental releases. Report spills as required to authorities.

6.3 Methods and Material for Containment and Cleaning Up: Carefully collect dry material, avoiding the creation of airborne dust. Place in a suitable container for disposal.

6.4 Reference to Other Sections:

Refer to Section 13 for disposal information and Section 8 for protective equipment.

Section 7: Handling and Storage

7.1 Precautions for Safe Handling:

Avoid breathing dust. Use with adequate ventilation. Avoid contact with the eyes, skin and clothing. Wear suitable gloves, eye protection and appropriate protective clothing according to the operation. Wash thoroughly after handling. Consider potential exposure to components of the materials or coatings being processed. Refer to OSHA's substance specific standards for additional work practice requirements where applicable.

7.2 Conditions for Safe Storage, Including any Incompatibilities: No special storage required.

7.3 Specific end use(s):

Industrial uses: Abrasive

Professional uses: None identified

Section 8: Exposure Controls / Personal Protection

8.1 Control Parameters:

Chemical Name	US OEL	EU IOEL	UK OEL	Belgium OEL	Germany OEL	China OEL	Biological Limit Value
Rare Earth Oxide	5 mg/m ³ TWA (respirable), 15 mg/m ³ TWA (total dust) OSHA PEL None Established TWA ACGIH TLV	None Established	4 mg/m ³ TWA (respirable) 10 mg/m ³ TWA (inhalable)	None Established	None Established	2.5 mg/m ³ TWA (inhalable fraction)	None Established
Rare Earth Fluoride (as fluorides)	2.5 mg/m ³ TWA OSHA PEL 2.5 mg/m ³ TWA ACGIH TLV	2.5 mg/m ³ TWA	2.5 mg/m ³ TWA	2.5 mg/m ³ TWA	1 mg/m ³ TWA (inhalable) 4 mg/m ³ STEL (inhalable)	None Established	Fluorides in urine: 2 mg/L (prior to shift) 3 mg/L (end of shift)
Kaolin	5 mg/m ³ TWA (respirable), 15 mg/m ³ TWA (total dust) OSHA PEL 2 mg/m ³ TWA (respirable) ACGIH	None Established	2 mg/m ³ TWA (respirable)	2 mg/m ³ TWA	None Established	None Established	None Established

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	TLV						
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DNEL: None established

PNEC: None established

8.2 Exposure Controls:

Recommended Monitoring Procedures: None identified.

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to maintain exposure levels below the occupational exposure limits.

Personal Protective Measurers

Respiratory Protection: Not necessary unless workplace concentrations of hazardous constituents exceed the exposure limits. If the exposure levels are excessive and irritation or other symptoms are experienced, an approved respirator should be worn. Consider the potential for exposure to components of the coatings or base material being processed in selecting proper respiratory protection. Refer to OSHA's specific standards for lead, cadmium, etc. where appropriate. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134 and ANSI Z88.2 or other applicable regulations and standards and good Industrial Hygiene practice.

Eye Protection: Use safety glasses with side shields or goggles.

Skin Protection: Protective gloves recommended to avoid skin abrasion when handling. Wear protective clothing as required to avoid skin contact when handling.

Other protection: Hearing protection recommended if operation is noisy.

Section 9: Physical and Chemical Properties

9.1 Information on basic Physical and Chemical Properties:

Appearance and Odor: Reddish brown powder, odorless.

Solubility in Water:	Insoluble	Boiling Point:	Not applicable
Odor Threshold:	Not applicable	Partition Coefficient:	Not applicable
pH:	Not applicable	Melting Point:	>2300°C / 4172°F
Specific Gravity:	5.4	Vapor Density:	Not applicable
Evaporation Rate:	Not applicable	Vapor Pressure:	Not applicable
Flammability(solid/gas):	Not applicable	Flash Point:	Not applicable
Explosive Limits:	Not applicable	Autoignition Temperature:	Not applicable
Decomposition Temperature:	Not applicable	Viscosity:	Not applicable
Explosive Properties:	None	Oxidizing Properties:	None

9.2 Other Information: None

Section 10: Stability and Reactivity

10.1 Reactivity: Not reactive under normal conditions of use and storage.

10.2 Chemical Stability: Stable.

10.3 Possibility of Hazardous Reactions: None known.

10.4 Conditions to Avoid: None known.

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10.5 Incompatible Materials: Avoid strong acids

10.6 Hazardous Decomposition Products: None known. Dust from abrasive processing could contain potentially hazardous components of the base material being processed or coatings applied to the base material.

Section 11: Toxicological Information

11.1 Information on Toxicological Effects:

Potential Health Hazards

Inhalation: Breathing dust may cause irritation to the nose, throat and upper respiratory tract.

Skin Contact: May cause abrasive skin irritation.

Eye Contact: May cause abrasive irritation and injury.

Ingestion: Not toxic. Swallowing may cause gastrointestinal disturbances.

Chronic Health Effects: Prolonged inhalation of respirable dust may cause adverse lung effects. Most of the dust generated during abrasive processes is from the base material being processed and the potential hazard from this exposure must be evaluated.

Acute Toxicity Values:

Cerium Oxide: Oral rat LD50 > 5000 mg/kg; Inhalation rat LC50 > 5.05 mg/L/4 hr; Dermal rat LD50 > 2000 mg/kg

Lanthanum Oxide: Inhalation rat LC50 > 5.3 mg/L/4 hr; Dermal rabbit LD50 > 1087 mg/kg (no deaths occurred)

Praseodymium Oxide: Oral rat LD50 > 2000 mg/kg; Inhalation rat LC50 > 5.21 mg/L/4 hr

Neodymium Oxide: Oral rat LD50 > 5000 mg/kg; Inhalation rat LC50 > 4.98 mg/L/4 hr

Cerium Fluoride: Oral rat LD50 > 2000 mg/kg; Inhalation rat LC50 > 5.53 mg/L/4 hr

Lanthanum Fluoride: Oral rat LD50 > 2000 mg/kg; Inhalation rat LC50 > 5.1 mg/L/4 hr

Kaolin: Oral rat LD50 > 5000 mg/kg; Dermal rat LD50 > 5000 mg/kg

Skin corrosion/irritation: No data available for the product. Not expected to be a chemical skin irritant. Skin contact may result in abrasive irritation.

Eye damage/ irritation: No data available for this product. Not expected to be a chemical eye irritant. Eye contact may result in abrasive irritation and injury.

Respiratory Irritation: No chemical irritation expected.

Skin Sensitization: No data available for the product. Not expected to be a skin sensitizer based on human experience.

Respiratory Sensitization: No data available. Not expected to be a respiratory sensitizer based on human experience.

Germ Cell Mutagenicity: This product is not expected to present a risk of genetic damage.

Carcinogenicity: None of the components are listed as a carcinogen or potential carcinogen by ACGIH, IARC, NTP, OSHA or the EU CLP.

Developmental / Reproductive Toxicity: No specific data is available; however, this product is not expected to present a risk of adverse reproductive or developmental toxicity.

Specific Target Organ Toxicity (Single Exposure): No specific data is available.

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Specific Target Organ Toxicity (Repeated Exposure): Excessive inhalation of respirable kaolin dust may cause pneumoconiosis, a respiratory disease, which can result in delayed, progressive, disabling and sometimes fatal lung injury. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.

Section 12: Ecological Information

No adverse effects on aquatic organisms are expected. However, consideration must be given to potential environment effects of the base material being processed.

12.1 Toxicity:

Cerium Oxide: 72 hr EC50 Brachydanio rerio >200 mg/L; 48 hr EC50 daphnia magna > 1000 mg/L; 72 hr EC50 Pseudokirchnerella subcapitata 10.2 mg/L

Lanthanum Oxide: 96 hr NOELR Danio rerio >100 mg/L; 48 hr NOEC daphnia magna >100 mg/L;

Praseodymium Oxide: 96 hr NOELR Danio rerio >100 mg/L; 48 hr NOELR daphnia magna >100 mg/L; 72 hr NOELR Desmodesmus subspicatus 22 mg/L

Neodymium Oxide: 96 hr NOELR Danio rerio >100 mg/L; 48 hr NOELR daphnia magna >100 mg/kg; 72 hr NOELR Desmodesmus subspicatus 22 mg/L

Cerium Fluoride: 96 hr NOELR Oncorhynchus mykiss >100 mg/L; 48 hr NOELR daphnia magna >100 mg/kg; 72 hr NOELR Desmodesmus subspicatus 50 mg/L

Lanthanum Fluoride: 96 hr LL50 Brachydanio rerio >100 mg/L; 48 hr NOEC daphnia magna >100 mg/kg (structurally similar chemical)

Kaolin: 48 hr LC50 daphnia pulex >1.1 g/L

12.2 Persistence and degradability: Biodegradation is not applicable to inorganic substances.

12.3 Bioaccumulative Potential: No data available.

12.4 Mobility in Soil: No data available.

12.5 Results of PVT and vPvB assessment: None required.

12.6 Other Adverse Effects: None known.

Section 13: Disposal Considerations

13.1 Waste Treatment Methods:

Dispose in accordance with all local, state and national regulations. Local regulations may be more stringent than regional and national requirements. It is the responsibility of the waste generator to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations

Section 14: Transport Information

	14.1 UN Number	14.2 UN Proper Shipping Name	14.3 Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	None	Not Regulated	None	None	
Canadian TDG	None	Not Regulated	None	None	
EU ADR/RID	None	Not Regulated	None	None	
IMDG	None	Not Regulated	None	None	
IATA/ICAO	None	Not Regulated	None	None	

14.6 Special Precautions for User: None identified

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14.7 Transport in Bulk According to Annex II MARPOL 73/78 and the IBC Code: Not determined

Section 15: Regulatory Information

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

INTERNATIONAL INVENTORIES

US EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory or exempt.

Australia: All of the components in this product are listed on the Australian Inventory of Chemical Substances (AICS) or exempt.

Canadian Environmental Protection Act: All of the components in this product are listed on the Domestic Substances List (DSL) or exempt.

China: All of the components in this product are listed on the Inventory of Existing Chemical Substances in China (IECSC) or exempt.

European Union: All the components in this product are listed on the EINECS inventory or exempt.

Japan: All of the components in this product are listed on the Japanese Existing and New Chemical Substances (ENCS) inventory or exempt.

Korea: All of the components in this product are listed on the Korean Existing Chemicals List (KECL) or exempt.

Philippines: All of the components of this product are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS) or exempt.

United States Regulations

EPA SARA Regulations:

SARA 311/312 Hazard Categories: Refer to Section 2 for OSHA Hazard Classification.

SARA 313: This contains the following chemicals above de minimus concentrations subject to the notification or reporting requirements of SARA 313: None

CERCLA Section 103: This product is not subject to CERCLA release reporting. Many states have more stringent spill reporting requirements. Report spills in accordance with all applicable regulations.

RCRA Status: This product, as sold, is not regulated under RCRA as a hazardous waste.

State Requirements

California Proposition 65: This product contains low levels of naturally occurring radioactive material (radionuclides) which is known to the State of California to cause cancer.

Connecticut Carcinogen Substances: None listed.

Florida Essential Chemical List: None listed

Maine Chemicals of High Concern: None listed

Massachusetts Right To Know List: Kaolin

Michigan Critical Materials List: None listed

Minnesota Hazardous Substances: Kaolin

New Jersey Right To Know Hazardous Substances List: Kaolin

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New York List of Hazardous Substances: None listed

Ohio Extremely Hazardous Substances List: None Listed

Pennsylvania RTK Hazardous Substance: Kaolin

Rhode Island Hazardous Substances List: Kaolin

Washington Persistent Bioaccumulative Toxins: None listed

Wyoming Process Safety Management – Highly Hazardous Chemicals: None listed

European Union

Regulation (EC) 1907/2006 REACH Article 59(1), Candidate List: None listed

Section 16: Other Information

NFPA RATING (NFPA 704) FIRE: 0 HEALTH: 1 INSTABILITY: 0

HMIS RATING FIRE: 0 HEALTH: 1* PHYSICAL HAZARD: 0

GHS Classes and Hazard Statements for Reference (See Sections 2 and 3):

STOT RE 2 Specific Target Organ Toxicity – Repeat Exposure Category 2

H373 May cause damage to lungs through prolonged or repeated exposure by inhalation.

SDS Revision History: Reviewed SDS. Updated Sections 2, 3, and 15.

SDS Date of Preparation: March 02, 2015

Date of last revision: January 02, 2023

This above information is believed to be correct but does not propose to be all inclusive and shall be used only as a guide.

MicroAbrasives Corporation shall not be held liable for any damage resulting from handling or from contact with the above product. This information relates only to the product designated herein and does not relate to its use in combination with any other material or process.