



Material Safety Data Sheet

CERIUM OXIDE OPALINE GRADE

Date Prepared: 4/19/07

Supersedes Date: 5/13/04

1. PRODUCT AND COMPANY DESCRIPTION

RHODIA INC.
ELECTRONICS AND CATALYSIS
CN 7500
8 Cedar Brook Drive
Cranbury NJ 08512

Emergency Phone Numbers:

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT CONTACT: CHEMTREC (800-424-9300 within the United States or 703-527-3887 for international collect calls) or Rhodia CAERS (Communication and Emergency Response System) at 800-916-3232.

For Product Information:

(800) 515-6065

Chemical Name or Synonym:

CERIUM OXIDE

Molecular Formula:

CeO₂

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Reg Number	OSHA Hazard	Percentage
CERIUM OXIDE	1306-38-3	Y	> 99

3. HAZARDS IDENTIFICATION

A. EMERGENCY OVERVIEW:**Physical Appearance and Odor:**

off-white powder solid, odorless.

Warning Statements:

CAUTION! DUSTS IN HIGH CONCENTRATIONS MAY CAUSE SKIN, EYE AND RESPIRATORY TRACT IRRITATION.

B. POTENTIAL HEALTH EFFECTS:**Acute Eye:**

Slightly irritating. May cause foreign body irritation only.

Acute Skin:

Non-irritating. Skin absorption not likely.

Acute Inhalation:

Low acute inhalation toxicity. May cause wheezing, upper respiratory tract irritation.

Acute Ingestion:

Low acute oral toxicity.

Chronic Effects:

This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens. Prolonged contact may cause chronic bronchitis.

4. FIRST AID MEASURES**FIRST AID MEASURES FOR ACCIDENTAL:****Eye Exposure:**

Rinse particulate matter from eye. Seek medical attention if irritation develops or persists or if visual changes occur.

Skin Exposure:

In case of contact, wash with plenty of soap and water. Seek medical attention if irritation develops or persists.

Inhalation:

If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues.

Ingestion:

If victim is conscious and alert, give 1-2 glasses of water to drink. Do not give anything by mouth to an unconscious person. Seek medical attention. Do not leave victim unattended.

MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.

NOTES TO PHYSICIAN:

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Treat symptomatically. No specific antidote available.

5. FIRE FIGHTING MEASURES**FIRE HAZARD DATA:**

Flash Point:
Not Applicable

Extinguishing Media:
Not combustible. Use extinguishing method suitable for surrounding fire.

Special Fire Fighting Procedures:
Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards:
Not combustible.

Hazardous Decomposition Materials (Under Fire Conditions):
none known

6. ACCIDENTAL RELEASE MEASURES

Evacuation Procedures and Safety:
Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Containment of Spill:
Follow procedure described below under Cleanup and Disposal of Spill.

Cleanup and Disposal of Spill:
Sweep or vacuum up and place in an appropriate closed container (see Section 7: Handling and Storage).

Environmental and Regulatory Reporting:
Do not flush to drain.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperatures:
Not Available

Handling:
Avoid direct or prolonged contact with skin and eyes. Avoid breathing dusts.

Dry powders can build static electricity charges when subjected to the friction of conveying, mixing or sliding. Provide adequate precautions, such as electrical grounding, or inert atmospheres when material is used in the presence of flammable materials to prevent ignition. When used for glass polishing, the suspension of polish becomes alkaline (pH > 8.5) following the hydrolysis of the glass. It is strongly recommended that gloves and goggles be worn to prevent contact with skin and eyes under these conditions.

Storage:
Store in closed containers. Store in an area that is dry.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Introductory Remarks:

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations.

Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

Exposure Guidelines:

Exposure limits represent regulated or recommended worker breathing zone concentrations measured by validated sampling and analytical methods, meeting the regulatory requirements. The following limits apply to this material, where, if indicated, S=skin and C=ceiling limit:

PARTICULATES NOT OTHERWISE REGULATED RESPIRABLE FRACTION

	Notes	TWA	STEL
OSHA		5 mg/cu m	

PARTICULATES NOT OTHERWISE REGULATED TOTAL DUST

	Notes	TWA	STEL
OSHA		15 mg/cu m	

Engineering Controls:

Where engineering controls are indicated by use conditions or a potential for excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures: general area dilution/exhaust ventilation, wet processing methods to reduce dust generation.

Respiratory Protection:

When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Under normal conditions, in the absence of other airborne contaminants, the following devices should provide protection from this material up to the conditions specified by the appropriate OSHA, WHMIS or ANSI standard(s): Air-purifying (half-mask/full-face) respirator with cartridges/canister approved for use against dusts, mists and fumes.

Eye/Face Protection:

Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material.

It is generally regarded as good practice to wear a minimum of safety glasses with side shields when working in industrial environments.

Skin Protection:

Skin contact should be minimized through use of gloves and suitable long-sleeved clothing (i.e., shirts and pants). Consideration must be given both to durability as well as permeation resistance.

Work Practice Controls:

Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

- (1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
- (2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
- (3) Wash exposed skin promptly to remove accidental splashes or contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

Physical Appearance:

off-white powder solid.

Odor:

odorless.

pH:

Not Applicable

Specific Gravity:

6.1 at 25 C (77 F).

Water Solubility:

insoluble

Melting Point Range:

2600 C (4712 F)

Boiling Point Range:

Not Available

Vapor Pressure:

Not Available

Vapor Density:

Not Available

Molecular Weight:

172.1

10. STABILITY AND REACTIVITY

Chemical Stability:

This material is stable under normal handling and storage conditions described in Section 7.

Conditions To Be Avoided:

dusting conditions

Materials/Chemicals To Be Avoided:

strong acids

The Following Hazardous Decomposition Products Might Be Expected:**Decomposition Type: thermal**

none known

Hazardous Polymerization Will Not Occur.

Avoid The Following To Inhibit Hazardous Polymerization:

not applicable

11. TOXICOLOGICAL INFORMATION

Acute Eye Irritation:

Toxicological Information and Interpretation:

eye - eye irritation, rabbit. Slightly irritating.

Acute Skin Irritation:

Toxicological Information and Interpretation:

skin - skin irritation, rabbit. Non-irritating.

skin - sensitization, guinea pig. Not sensitizing.

Acute Dermal Toxicity:

Toxicological Information and Interpretation:

LC50 - lethal concentration 50% of test species, > 2000 ppm/1 hr, rat.

Acute Respiratory Irritation:

No test data found for product.

Acute Inhalation Toxicity:

Toxicological Information and Interpretation:

LC50 - lethal concentration 50% of test species, > 5.05 mg/l/4 hr, rat.

Acute Oral Toxicity:

Toxicological Information and Interpretation:

LD50 - lethal dose 50% of test species, > 5000 mg/kg, rat.

Chronic Toxicity:

This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

Toxicological Information and Interpretation Ames Test: Negative. Mouse micronucleus assay: Negative.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ecotoxicological Information and Interpretation:

NOEC - no effect concentration, > 100 mg/l/96 hr, fish: Brachydanio rerio.

Chemical Fate Information:

No data found for product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Container Handling and Disposal:

Any containers or equipment used should be decontaminated immediately after use.

EPA Hazardous Waste - NO

14. TRANSPORTATION INFORMATION

Transportation Status: IMPORTANT! Statements below provide additional data on listed DOT classification.

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

US Department of Transportation

Shipping Name:
NOT REGULATED

15. REGULATORY INFORMATION

Inventory Status

Inventory	Status
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	Y
AUSTRALIA (AICS)	Y
JAPAN (MITI)	Y
SOUTH KOREA (KECL)	Y

Y = All ingredients are on the inventory.

E = All ingredients are on the inventory or exempt from listing.

P = One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

FEDERAL REGULATIONS
Inventory Issues:

All functional components of this product are listed on the TSCA Inventory.

SARA Title III Hazard Classes:

Fire Hazard - NO
Reactive Hazard - NO

Release of Pressure - NO
Acute Health Hazard - YES
Chronic Health Hazard - NO

STATE REGULATIONS:

This product does not contain any components that are regulated under California Proposition 65.

16. OTHER INFORMATION**National Fire Protection Association Hazard Ratings--NFPA(R):**

1 Health Hazard Rating--Slight
0 Flammability Rating--Minimal
0 Instability Rating--Minimal

National Paint & Coating Hazardous Materials Identification System--HMIS(R):

1 Health Hazard Rating--Slight
0 Flammability Rating--Minimal
0 Reactivity Rating--Minimal

Reason for Revisions:

Change and/or addition made to Section 11.

Key Legend Information:

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
TLV - Threshold Limit Value
PEL - Permissible Exposure Limit
TWA - Time Weighted Average
STEL - Short Term Exposure Limit
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer
ND - Not determined
RHODIA - Rhodia Established Exposure Limits

Disclaimer:

The information herein is given in good faith but no warranty, expressed or implied, is made.

**** End of MSDS Document ****