
SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

Section 1. *Identification*

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- **Product identifier**
 - **Trade name:** Cer-Optik Cerium Oxide
 - **Article number:** No other identifiers
 - **CAS Number:**
1306-38-3
 - **Recommended use and restriction on use**
 - **Recommended use:** Laboratory chemicals, Manufacture of substances
 - **Restrictions on use:**
 - **Details of the supplier of the Safety Data Sheet**
 - **Manufacturer/Supplier:**
His Glassworks, Inc.

 - **Emergency telephone number:**
215.444.9315

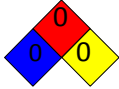
Section 2. *Hazard(s) Identification*

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- **Classification of the substance or mixture:**
Not a hazardous substance or mixture
 - **Additional information**
 - **Label elements**
 - **GHS label elements:**
Not a hazardous substance or mixture
 - **Hazard pictograms:** None
 - **Signal word:** None
 - **Hazard-determining components of labeling:** None.
 - **Hazard statements:** None
 - **Precautionary statements:** None
 - **Supplemental Hazard statements:**

SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

- **Hazard description:**
- **WHMIS-symbols:** Not hazardous under WHMIS.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH	0
FIRE	0
REACTIVITY	0

- **Other hazards:** None
- **Results of PBT and vPvB assessment**
- **PBT:**
- **vPvB:**

Section 3. *Composition/information on Ingredients*

- **Chemical characterization: Substances**
- **CAS No. Description**
1306-38-3 Cerium oxide

Section 4 *First-aid Measures*

- **Description of first aid measures**
 - **General information**
 - **After inhalation:**
Respiration of particulates is unlikely during normal usage. Supply fresh air; consult doctor in case of complaints.
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SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

· **After skin contact:**

Brush off loose particles from skin. Clean with water and soap. If skin irritation is experienced, consult a doctor.

· **After eye contact:**

Rinse eyes with water for several minutes, remove contact lenses (if present) and continue rinsing. If symptoms persist, consult a doctor.

· **After swallowing:**

Rinse out mouth with water. Consult a doctor in the event of symptoms following massive accidental ingestion.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed:**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or section 11

· **Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

Section 5 *Fire-fighting Measures*

· **Extinguishing media**

· **Suitable extinguishing agents:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

- **For safety reasons unsuitable extinguishing agents**

- **Special hazards arising from the substance or mixture:** Cerium oxides

- **Advice for firefighters**

- **Protective equipment:** Wear self-contained respiratory protective device.

· **Additional information:** No further relevant information available.

Section 6 *Accidental Release Measures*

· **Personal precautions, protective equipment and emergency procedures:**

Limit dust formation, use disposable (PN2, min.) dust protection mask.

· **Environmental precautions:** Do not let product enter drains.

· **Methods and material for containment and cleaning up:**

Pick up mechanically. Collect dust using a vacuum cleaner equipped with HEPA filter

Dispose contaminated material as waste according to item 13.

· **Reference to other sections:**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection

equipment. See Section 13 for disposal information.

SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

Section 7 *Handling and Storage*

- **Handling**
 - **Precautions for safe handling:**
 - Prevent formation of dust.
 - Any deposit of dust which cannot be avoided must be regularly removed. Use only in well ventilated areas.
 - Avoid breathing dust.
 - Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.
 - **Information about protection against explosions and fires**
 - **Conditions for safe storage, including any incompatibilities**
 - **Storage:** Keep container tightly closed in a dry and well-ventilated place. Handle and store under inert
 - **Requirements to be met by storerooms and receptacles:** No special requirements.
 - **Information about storage in one common storage facility**
 - **Further information about storage conditions:**
 - Store in cool, dry conditions in well-sealed receptacles. Store receptacle in a well ventilated area.
 - Protect from humidity and water. This product is hygroscopic.
 - **Specific end use(s):** No further relevant information available.
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Section 8 *Exposure Controls/Personal Protection*

- **Additional information about design of technical systems:** No further relevant information available.; see item 7.
 - **Control parameters**
 - **Components with limit values that require monitoring at the workplace:** Contains no substances with occupational exposure limit values.
 - **Additional information**
 - **Exposure controls**
 - **Personal protective equipment**

 - **General protective and hygienic measures:**
 - Provide adequate ventilation. The usual precautionary measures for handling chemicals should be followed. Keep away from food, beverages and feed.
 - Wash hands before breaks and at the end of work. Avoid contact with the eyes.
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SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

- Avoid close or long term contact with the skin. Do not inhale dust / smoke / mist.
- **Engineering controls:** No further relevant information available.
 - **Breathing equipment:**
Use suitable respiratory protective device in case of insufficient ventilation. For spills, respiratory protection may be advisable.
 - **Protection of hands:**
Wear gloves for the protection against mechanical hazards according to OSHA and NIOSH rules. Gloves are advised for repeated or prolonged contact. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
 - **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
Full and Splash Contact:
-Material: Nitrile rubber; Minimum layer thickness: 0.11mm; Break through time: 480 mins.
 - **Eye protection:**



Safety Glasses

- **Body protection:**
Not required under normal conditions of use. Protection may be required for spills.
- **Limitation and supervision of exposure into the environment:** No special requirements.
- **Risk management measures:** No special requirements.

Section 9 *Physical and Chemical Properties*

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Powder
Color:

- **Odor:** No data available
 - **Odor threshold:** No data available
 - **pH-value:** No data available
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SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

- **Change in condition**
 - Melting point/Freezing point:** > 400°C (> 752°F) – OECD Test Guideline 102
 - Initial Boiling point/Boiling range:** > 400°C (> 752°F) – OECD Test Guideline 102
 - **Flash point:** Not applicable
 - **Evaporation rate:** No data available
 - **Flammability (solid, gas):** No data available
 - **Explosion limits:**
 - Lower:** No data available
 - Upper:** No data available
 - **Vapor pressure:** No data available
 - **Vapor density** No data available
 - **Relative density** 7.13 g/cm³ at 20°C (77°F)
 - **Solubility in Water:** Insoluble
 - **Partition coefficient (n-octanol/water):** No data available
 - **Auto-ignition temperature:** > 400°C (>752°F)
 - **Decomposition temperature:** No data available
 - **Viscosity:** No data available
 - **Explosive properties:** No data available
 - **Other information** No further relevant information available.
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Section 10 *Stability and Reactivity*

- **Reactivity:** No further relevant information available.
 - **Chemical stability:** Stable under recommended storage conditions.
 - **Thermal decomposition / conditions to be avoided**
 - **Possibility of hazardous reactions:** No data available
 - **Conditions to avoid:** No data available
 - **Incompatible materials:** Strong oxidizing agents
 - **Hazardous decomposition products:** No data available
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SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

Section 11 *Toxicological Information*

· Information on toxicological effects

· Acute toxicity:

LD50 Oral – rat – male and female: > 5,000 mg/kg (*OECD Test 401*)

LC50 Inhalation – rat – male and female – 4h: > 5.05 mg/l (*OECD Test 403*)

LD50 Dermal – rat – male and female: > 2,000 mg/kg (*OECD Test 402*)

· Skin corrosion/irritation:

Skin – rabbit; Result: No skin irritation – 4h (*OECD Test 404*)

· Serious eye damage/eye irritation:

Eyes – rabbit; Result: Mild eye irritation (*OECD Test 405*)

· Respiratory or skin sensitization:

Maximization Test: guinea pig; Result: Did not cause sensitization. (*OECD Test 406*)

· Germ cell mutagenicity:

Ames test; S. Typhimurium; Result: Negative

Mutagenicity (micronucleus test) – mouse – male and female; Result: Negative

· Carcinogenicity:

-IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

-ACGIH No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

-NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP

-OSHA No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

· Reproductive toxicity: No data available

· Specific target

-Single: No data available

-Repeated: No data available

· Aspiration hazard: No data available

· Additional Information:

RTECS: FK6310000 – Rare earth compounds may cause delayed blood clotting leading to hemorrhages. Inhalation of rare earths may cause sensitivity to heat, itching and increased awareness of order and taste. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

Section 12 *Ecological Information*

- **Toxicity**
 - **Toxicity to fish:** Semi-static test EC50 – Danio rerio (zebra fish), > 200 mg/l – 72h
 - **Toxicity to daphnia other aquatic invertebrates:** Immobilization EC50 – Daphnia magna (Water flea), > 1,000 mg/l – 48h (*OECD Test 202*)
 - **Persistence and degradability:** No data available
 - **Bioaccumulative potential:** No data available
 - **Mobility in soil:** No data available
 - **Results of PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
 - **Other adverse effects:** No data available
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Section 13 *Disposal Considerations*

- **Waste treatment methods**
 - **Recommendation:**
Contact waste processors for recycling information.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
 - **Uncleaned packaging:**
 - **Recommendation:** Disposal must be made according to official regulations.
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Section 14 *Transport Information*

SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

- **UN-Number**
- **DOT (US), IMDG, IATA:** Not dangerous goods

Section 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 (De Minimis) reporting levels established by SARA Title III, Section 313.
- **SARA 311/312 Hazards**
Chronic Health Hazard
- **Massachusetts Right to Know Components**
No components are subject to the Massachusetts Right to Know Act.
- **Pennsylvania Right to Know Components**
Cerium (IV) oxide CAS No. 1306-38-3 Revision Date:
- **New Jersey Right to Know Components**
Cerium (IV) oxide CAS No. 1306-38-3 Revision Date:
- **California prop. 65 Components**
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.
- **United States (USA)**
This product is not a "hazardous chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Section 16 *Other Information*

SAFETY DATA SHEET

Per OSHA HCS (29 CFR 1910.1200)

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 6/1/2015 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

SARA: Superfund Amendments and Reauthorization Act

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent
