

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name Cerium oxide, hydrated

CAS number 12014-56-1

Synonyms Cerium hydroxide

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC
12501 Pauls Valley Road
Austin, Texas 78737
U.S.A.

Telephone 512-668-9918

Fax 512-886-4008

1.4 Emergency telephone

| | | |
|--------------------------|------------------------------|----------|
| Emergency Phone # | US & Canada: 1-800-535-5053 | INFOTRAC |
| | International 1-352-323-3500 | INFOTRAC |


SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

| | |
|--|-------------|
| Skin Corrosion/Irritation | Category 1B |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Specific target organ toxicity (single exposure) | Category 3 |
| Target Organs - Respiratory system. | |

2.2 GHS Label elements, including precautionary statements

| | |
|----------------------------------|--|
| Pictogram |  |
| Signal Word | Danger |
| Hazard statements | Causes severe skin burns and eye damage. May cause respiratory irritation. |
| Precautionary statements: | |
| Prevention | Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. |
| Response | Immediately call a POISON CENTER or doctor/physician. |
| Inhalation | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| Skin | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. |
| Eyes | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| Ingestion | IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. |
| Storage | Store locked up. Store in a well-ventilated place. Keep container tightly closed. |
| Disposal | Dispose of contents/container to an approved waste disposal plant. |

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

| Chemical name | Common name and synonyms | CAS number | Concentration |
|------------------------|--------------------------|------------|---------------|
| Cerium oxide, hydrated | Cerium hydroxide | 12014-56-1 | 100% |

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

| | |
|--------------------------------|--|
| If inhaled | Remove to fresh air. If not breathing, give artificial respiration. Call a physician or poison control center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the air of a pocket mask equipped with a one-way valve or other proper respiratory medical device. |
| In case of skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately. |
| In case of eye contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing. |
| If swallowed | Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. |

4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Not combustible. CO₂, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Hazardous combustion products: metal oxides.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

5.4 Further information

Flash Point No data available.

Autoignition Temperature No information available.

Explosion limits

| | |
|----------------------------------|---------------------------|
| Upper | No data available. |
| Lower | No data available. |
| Sensitivity to Mechanical Impact | No information available. |
| Sensitivity to Static Discharge | No information available. |

NFPA

| Health | Flammability | Instability | Physical hazards |
|--------|--------------|-------------|------------------|
| 3 | 0 | 0 | N/A |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

6.2 Environmental precautions

Should not be released into the environment. Do not allow material to contaminate ground water system. See section 12 for additional ecological information. Do not flush into surface water or sanitary sewer system.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Wear personal protective equipment/fume protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Corrosives area. Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible materials.

Incompatibilities

Oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

None under normal use conditions. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

No protective equipment is needed under normal use conditions.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|---------------------------------|--------------------------|
| Physical State | Solid |
| Appearance | Yellow - Pale Brown |
| Odor | Odorless |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | No information available |
| Boiling Point/Range | No information available |
| Evaporation Rate | No information available |
| Flammability (solid) | No information available |
| Flammability or explosive limit | |
| Upper | No data available |
| Lower | No data available |

| | |
|--|--------------------------------------|
| Vapor Pressure | No information available |
| Vapor Density | No information available |
| Density | No information available |
| Solubility | No information available |
| Partition coefficient; n-octanol/water | No information available |
| Autoignition Temp | No information available |
| Decomposition Temp | No information available |
| Viscosity | No information available |
| Molecular Formula | CeO ₂ · xH ₂ O |
| Molecular Weight | 172.12 (anhy) |
| VOC Content(%) | No information available |
| Oxidizing properties | No information available |

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products.

10.5 Incompatible materials

Oxidizing agents.

10.6 Hazardous decomposition products

Metal oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

No information available.

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

| Component | CAS | IARC | NTP | ACGIH | OSHA | Mexico |
|------------------------|------------|------------|------------|------------|------------|------------|
| Cerium oxide, hydrated | 12014-56-1 | Not listed | Not listed | Not listed | Not listed | Not listed |

Specific target organ toxicity - single exposure

Respiratory system.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

No information available.

Chronic effects

No information available.

11.2 Additional Information

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

SECTION 12: Ecological information

12.1 Toxicity

May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

12.2 Persistence and degradability

Insoluble in water, may persist.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Is not likely in the environment due to its low water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

The toxicological properties have not been fully investigated.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

| | |
|----------------------|---|
| UN-No | UN3262 |
| Proper Shipping Name | CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. |
| Hazard Class | 8 |
| Packing Group | III |

IMDG

| | |
|----------------------|---|
| UN-No | UN3262 |
| Proper Shipping Name | CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. |
| Hazard Class | 8 |
| Packing Group | III |

IATA

| | |
|----------------------|---|
| UN-No | UN3262 |
| Proper Shipping Name | CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. |
| Hazard Class | 8 |
| Packing Group | III |

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

SARA 313 (TRI reporting)

Not listed.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed

US state regulations

US. Massachusetts RTK - Substance List

Not listed

US. New Jersey Worker and Community Right-to-Know Act

Not listed

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed

California Proposition 65

Not listed

SECTION 16: Other information

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Revision: 0

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.