



## CERIUM(III) 2-ETHYLHEXANOATE

Safety Data Sheet CXCE040

Date of issue: 07/27/2015 Version: 1.0

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

#### 1.1. Product identifier

Product form : Substance  
 Physical state : Solid  
 Substance name : CERIUM(III) 2-ETHYLHEXANOATE  
 Product code : CXCE040  
 Formula : C<sub>24</sub>H<sub>45</sub>CeO<sub>6</sub>  
 Synonyms : CERIOUS OCTOATE; CERIUM TRIS(2-ETHYLHEXANOATE)  
 Chemical family : RARE EARTH COMPOUND

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

Use of the substance/mixture : Chemical intermediate  
 For research and industrial use only

#### 1.3. Details of the supplier of the safety data sheet

##### GELEST, INC.

11 East Steel Road  
 Morrisville, PA 19067

##### USA

T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST

[info@gelest.com](mailto:info@gelest.com) - [www.gelest.com](http://www.gelest.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Eye Irrit. 2A H319

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H319 - Causes serious eye irritation

Precautionary statements (GHS-US) :

P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P264 - Wash hands thoroughly after handling  
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P337+P313 - If eye irritation persists: Get medical advice/attention

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS US)

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Substance type : Multi-constituent  
 Name : CERIUM(III) 2-ETHYLHEXANOATE  
 CAS No : 56797-01-4  
 EC no : 260-386-3

| Name                  | Product identifier  | %    | Classification (GHS-US) |
|-----------------------|---------------------|------|-------------------------|
| Cerium 2-ethylhexoate | (CAS No) 56797-01-4 | > 95 | Eye Irrit. 2A, H319     |

# CERIUM(III) 2-ETHYLHEXANOATE

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| Name                 | Product identifier | %   | Classification (GHS-US)   |
|----------------------|--------------------|-----|---|
| 2-Ethylhexanoic acid | (CAS No) 149-57-5  | < 5 | Acute Tox. 4 (Oral), H302<br>Acute Tox. 4 (Dermal), H312<br>Eye Irrit. 2A, H319<br>Repr. 2, H361<br>Aquatic Acute 3, H402 |

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                       |  |
|---------------------------------------|--|
| First-aid measures general            | : Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label. |
| First-aid measures after inhalation   | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.  |
| First-aid measures after skin contact | : Wash with plenty of soap and water.  |
| First-aid measures after eye contact  | : Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.  |
| First-aid measures after ingestion    | : Never give anything by mouth to an unconscious person. Get medical advice/attention.   |

### 4.2. Most important symptoms and effects, both acute and delayed

|                                      |  |
|--------------------------------------|--|
| Symptoms/injuries after inhalation   | : May cause irritation to the respiratory tract. |
| Symptoms/injuries after skin contact | : May cause skin irritation.                     |
| Symptoms/injuries after eye contact  | : Causes serious eye irritation.                 |
| Symptoms/injuries after ingestion    | : May be harmful if swallowed.                   |

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Water spray. Foam. Carbon dioxide. Dry chemical. |
| Unsuitable extinguishing media | : None known.                                      |

### 5.2. Special hazards arising from the substance or mixture

|             |   |
|-------------|---|
| Fire hazard | : Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame. |
|-------------|---|

### 5.3. Advice for firefighters

|                                |  |
|--------------------------------|--|
| Firefighting instructions      | : Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.  |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. Avoid contact with skin and eyes. Do not breathe dust. |

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

|                      |  |
|----------------------|--|
| Protective equipment | : Wear protective equipment as described in Section 8. |
| Emergency procedures | : Evacuate unnecessary personnel.                      |

#### 6.1.2. For emergency responders

|                      |  |
|----------------------|--|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection". |
|----------------------|--|

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

|                         |   |
|-------------------------|---|
| Methods for cleaning up | : Sweep or shovel spills into appropriate container for disposal. |
|-------------------------|---|

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with skin and eyes. Do not breathe dust. Provide local exhaust or general room ventilation to minimize exposure to dust. Avoid dust formation. Once opened, inert products before resealing.
- Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container tightly closed.
- Incompatible materials : Oxidizing agent.
- Storage area : Store in a well-ventilated place. Store away from heat.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 2-Ethylhexanoic acid (149-57-5)

|           |                                |  |
|-----------|--------------------------------|--|
| USA ACGIH | ACGIH TWA (mg/m <sup>3</sup> ) | 5 mg/m <sup>3</sup> (inhalable fraction and vapor) |
|-----------|--------------------------------|--|

#### 8.2. Exposure controls

- Appropriate engineering controls : Provide local exhaust or general room ventilation.
- Personal protective equipment : Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Hand protection : Neoprene or nitrile rubber gloves.
- Eye protection : Chemical goggles. Contact lenses should not be worn.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified dust and mist (orange cartridge) respirator.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Solid.
- Molecular mass : 569.74 g/mol
- Color : Yellow.
- Odor : No data available
- Odor threshold : No data available
- Refractive index : No data available
- pH : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : > 275 °C decomposes
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapor pressure : No data available
- Relative vapor density at 20 °C : No data available
- Relative density : > 1
- VOC content : < 3 %
- Solubility : Insoluble in water.  
Organic solvent:Soluble: methylene chloride, toluene
- Log Pow : No data available
- Log Kow : No data available
- Viscosity, kinematic : No data available
- Viscosity, dynamic : No data available
- Explosive properties : No data available

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Oxidizing properties : No data available  
Explosion limits : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Heat. Open flame. Sparks.

### 10.5. Incompatible materials

Oxidizing agent.

### 10.6. Hazardous decomposition products

Organic acid vapors. Cerium oxide fumes.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

#### Cerium 2-ethylhexoate (56797-01-4)

|               |              |
|---------------|--------------|
| LD50 oral rat | > 2000 mg/kg |
|---------------|--------------|

#### 2-Ethylhexanoic acid (149-57-5)

|                    |                            |
|--------------------|----------------------------|
| LD50 oral rat      | 1600 mg/kg                 |
| LD50 dermal rabbit | 1140 mg/kg                 |
| ATE US (oral)      | 1600.000 mg/kg body weight |
| ATE US (dermal)    | 1140.000 mg/kg body weight |

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Causes serious eye irritation.  
Respiratory or skin sensitization : Not classified  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified  
Reproductive toxicity : Not classified  
Specific target organ toxicity (single exposure) : Not classified  
Specific target organ toxicity (repeated exposure) : Not classified  
Aspiration hazard : Not classified  
Potential Adverse human health effects and symptoms : Compounds of cerium are generally of low toxicity. Workers exposed to cerium compounds have experienced sensitivity to heat, itching and skin lesions. Large doses to experimental animals have caused writhing, ataxia, labored respiration, sedation, hypotension and death by cardiovascular collapse. The toxicity of cerium oxalate, nonahydrate has not been studied.  
Symptoms/injuries after inhalation : May cause irritation to the respiratory tract.  
Symptoms/injuries after skin contact : May cause skin irritation.  
Symptoms/injuries after eye contact : Causes serious eye irritation.  
Symptoms/injuries after ingestion : May be harmful if swallowed.  
Reason for classification : Expert judgment

## SECTION 12: Ecological information

### 12.1. Toxicity

#### 2-Ethylhexanoic acid (149-57-5)

|                |  |
|----------------|--|
| LC50 fish 1    | 70 mg/l (Exposure time: 96 h - Species: Pimephales promelas) |
| EC50 Daphnia 1 | 85.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)     |

### 12.2. Persistence and degradability

No additional information available

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### 12.3. Bioaccumulative potential

#### 2-Ethylhexanoic acid (149-57-5)

|         |     |
|---------|-----|
| Log Pow | 2.7 |
|---------|-----|

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Effect on ozone layer : No additional information available  
Effect on the global warming : No known ecological damage caused by this product.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose of solid materials or residues at a licensed site. Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

### 14.1. UN number

Not regulated for transport.

### 14.2. UN proper shipping name

Not applicable

### 14.3. Additional information

Other information : No supplementary information available.

#### Transport by sea

No additional information available

#### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Cerium 2-ethylhexoate (56797-01-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 2-Ethylhexanoic acid (149-57-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

|                          |  |
|--------------------------|--|
| EPA TSCA Regulatory Flag | T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA. |
|--------------------------|--|

### 15.2. International regulations

#### Cerium 2-ethylhexoate (56797-01-4)

Listed on the AICS (Australian Inventory of Chemical Substances)  
Listed on the Canadian DSL (Domestic Substances List)  
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)  
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)  
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory  
Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

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Listed on the AICS (Australian Inventory of Chemical Substances)  
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Listed on the Korean ECL (Existing Chemicals List)  
Listed on NZIoC (New Zealand Inventory of Chemicals)  
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)  
Japanese Pollutant Release and Transfer Register Law (PRTR Law)  
Listed on the Canadian IDL (Ingredient Disclosure List)  
Listed on INSQ (Mexican national Inventory of Chemical Substances)  
Listed on Turkish inventory of chemical

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### 15.3. US State regulations

| CERIUM(III) 2-ETHYLHEXANOATE(56797-01-4)                            |    |
|---|----|
| U.S. - California - Proposition 65 - Carcinogens List               | No |
| U.S. - California - Proposition 65 - Developmental Toxicity         | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Female | No |
| U.S. - California - Proposition 65 - Reproductive Toxicity - Male   | No |

| Cerium 2-ethylhexoate (56797-01-4)                    |   |   |   |                                   |
|---|---|---|---|-----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significance risk level (NSRL) |
| No  | No  | No  | No  |                                   |

| 2-Ethylhexanoic acid (149-57-5)                       |   |   |   |                                   |
|---|---|---|---|-----------------------------------|
| U.S. - California - Proposition 65 - Carcinogens List | U.S. - California - Proposition 65 - Developmental Toxicity | U.S. - California - Proposition 65 - Reproductive Toxicity - Female | U.S. - California - Proposition 65 - Reproductive Toxicity - Male | No significance risk level (NSRL) |
| No  | No  | No  | No  |                                   |

### SECTION 16: Other information

Abbreviations and acronyms

: Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development.

Full text of H-phrases::

|                       |  |
|-----------------------|--|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal) Category 4                             |
| Acute Tox. 4 (Oral)   | Acute toxicity (oral) Category 4                               |
| Aquatic Acute 3       | Hazardous to the aquatic environment - Acute Hazard Category 3 |
| Eye Irrit. 2A         | Serious eye damage/eye irritation Category 2A                  |
| Repr. 2               | Reproductive toxicity Category 2                               |
| H302                  | Harmful if swallowed   |
| H312                  | Harmful in contact with skin                                   |
| H319                  | Causes serious eye irritation                                  |
| H361                  | Suspected of damaging fertility or the unborn child            |
| H402                  | Harmful to aquatic life  |

### HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur  
Flammability : 1 Slight Hazard  
Physical : 0 Minimal Hazard

Prepared by safety and environmental affairs.

Date of issue: 07/27/2015 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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## Safety Data Sheet

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