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

1.1. Product identifier

Product form: Substance
Physical state: Liquid
Substance name: ZINC 2-ETHYLHEXANOATE
Product code: CXZN040
Formula: C16H30O4Zn
Synonyms: ZINC OCTOATE; 2-ETHYLHEXANOIC ACID, ZINC SALT
Chemical family: METAL 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 - 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): P264 - Wash hands thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
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: ZINC 2-ETHYLHEXANOATE
CAS No: 136-53-8
EC no: 205-251-1

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc 2-ethylhexoate</td>
<td>(CAS No) 136-53-8</td>
<td>&gt; 95</td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>
**ZINC 2-ETHYLHEXANOATE**

**Safety Data Sheet**

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


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 all eye and skin contact and do not breathe vapor and mist.

**SECTION 6: Accidental release measures**

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

**SECTION 7: Handling and storage**

7.1. Precautions for safe handling

Precautions for safe handling: Provide good ventilation in process area to prevent accumulation of vapors. Avoid all eye and skin contact and do not breathe vapor and mist.

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.

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ZINC 2-ETHYLHEXANOATE
Safety Data Sheet

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)

<table>
<thead>
<tr>
<th>USA ACGIH</th>
<th>ACGIH TWA (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 mg/m³ (inhaleable fraction and vapor)</td>
</tr>
</tbody>
</table>

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 organic vapor (black cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
Appearance: Liquid. Extremely viscous.
Molecular mass: 351.79 g/mol
Color: Yellow. Amber.
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: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: 127 °C
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: 1.18
VOC content: < 3 %
Solubility: Insoluble in water.
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
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
ZINC 2-ETHYLHEXANOATE
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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. Zinc oxide fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

2-Ethylhexanoic acid (149-57-5)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>1600 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>1140 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1600.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1140.000 mg/kg body weight</td>
</tr>
</tbody>
</table>

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
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)

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>70 mg/l (Exposure time: 96 h - Species: Pimephales promelas)</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
<td>85.4 mg/l (Exposure time: 48 h - Species: Daphnia magna)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No additional information available

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.
ZINC 2-ETHYLHEXANOATE
Safety Data Sheet

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

Zinc 2-ethylhexoate (136-53-8)
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

Zinc 2-ethylhexoate (136-53-8)
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)
Listed on INDSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

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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 INDSQ (Mexican national Inventory of Chemical Substances)
Listed on Turkish inventory of chemical

15.3. US State regulations

ZINC 2-ETHYLHEXANOATE (136-53-8)

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

Zinc 2-ethylhexoate (136-53-8)

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)
ZINC 2-ETHYLHEXANOATE
Safety Data Sheet

Zinc 2-ethylhexoate (136-53-6)

| 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: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
- Flammability: 2 Moderate Hazard
- Physical: 0 Minimal Hazard

Prepared by safety and environmental affairs.

Date of issue: 06/08/2015 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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