1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 700444
Product Name: CoA Europium Chloride

Manufacturer Information

Company Name: Cayman Chemical Company
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887
Information: Cayman Chemical Company +1 (734)971-3335
Web site address: www.caymanchem.com

2. Hazards Identification

Avoid contact and inhalation.

Emergency Overview:
Inhalation? Yes  Skin? Yes  Eyes? Yes  Ingestion? Yes  Other: Injection

Route(s) of Entry:
Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.

Potential Health Effects (Acute and Chronic):
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Signs and Symptoms Of Exposure:
No data available.

Medical Conditions Generally Aggravated By Exposure:
No data available.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Concentration</th>
<th>EC#</th>
<th>Risk Phrases</th>
<th>RTECS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Europium (III) chloride</td>
<td>10025-76-0</td>
<td>100.0 %</td>
<td>233-040-4</td>
<td>No phrases apply.</td>
<td>LE7525000</td>
</tr>
</tbody>
</table>

4. First Aid Measures

Emergency and First Aid Procedures:
If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.
In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt: No data.
Explosive Limits: LEL: No data. UEL: No data.
Autoignition Pt: No data available.
Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Flammable Properties and Hazards: No data available.
SAFETY DATA SHEET
CoA Europium Chloride

Hazardous Combustion Products: No data available.
Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media: A solid water stream may be inefficient.

6. Accidental Release Measures
Steps To Be Taken In Case Material Is Released Or Spilled:
Avoid release into the environment.
Avoid raising and breathing dust, and provide adequate ventilation.
As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
Transfer to a chemical waste container for disposal.

7. Handling and Storage
Hazard Label Information:
Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.
Wash thoroughly after handling
Precautions To Be Taken in Handling:
Avoid breathing (dust, vapor, mist, gas).
Avoid prolonged or repeated exposure.
Precautions To Be Taken in Storing:
Keep tightly closed.
Store at correct temperature.

8. Exposure Controls/Personal Protection
<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits</th>
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</thead>
<tbody>
<tr>
<td>Europium (III) chloride</td>
<td>10025-76-0</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
</tbody>
</table>

Protective Equipment Summary - Hazard Label Information:
Compatible chemical-resistant gloves
Eye wash station in work area
Lab coat
Safety glasses
Safety shower in work area
Vent Hood

Respiratory Equipment (Specify Type):
NIOSH approved respirator, as conditions warrant.

Eye Protection:
Safety glasses

Protective Gloves:
Compatible chemical-resistant gloves

Other Protective Clothing:
Lab coat

Engineering Controls (Ventilation etc.):
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Work/Hygienic/Maintenance Practices:
Do not take internally.
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Wash thoroughly after handling.

9. Physical and Chemical Properties
Physical States:
[ ] Gas  [ ] Liquid  [ X ] Solid
Melting Point:
No data.
Boiling Point:
No data.
Autoignition Pt:
No data.
Flash Pt:
No data.
Specific Gravity (Water = 1):
No data.
Vapor Pressure (vs. Air or mm Hg):
No data.
Vapor Density (vs. Air = 1):
No data.
Evaporation Rate (vs Butyl Acetate=1):
No data.
Solubility in Water:
No data.
SAFETY DATA SHEET
CoA Europium Chloride

Percent Volatile: No data.
Appearance and Odor: A lyophilized powder

10. Stability and Reactivity

Stability: Unstable [ ] Stable [ X ]
Conditions To Avoid - Instability: No data available.
Incompatibility - Materials To Avoid: strong oxidizing agents
Hazardous Decomposition Or Byproducts: europium oxides
hydrogen chloride gas
Possibility of Hazardous Reactions: Will occur [ ] Will not occur [ X ]
Conditions To Avoid - Hazardous Reactions: No data available.

11. Toxicological Information

The toxicological effects of this product have not been thoroughly studied.

Europium (III) chloride - Toxicity Data: Oral LD50 (mouse): 3,527 mg/kg; Intraperitoneal LD50 (mouse): 387 mg/kg;

Chronic Toxicological Effects: Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Europium (III) Chloride RTECS Number: LE7525000

12. Ecological Information

Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

14. Transport Information

LAND TRANSPORT (US DOT)
DOT Proper Shipping Name: Not dangerous goods.

LAND TRANSPORT (European ADR/RID)
ADR/RID Shipping Name: Not dangerous goods.

AIR TRANSPORT (ICAO/IATA)
ICAO/IATA Shipping Name: Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes
No data available.

European Community Risk and Safety Phrases
S24/25 - Avoid contact with skin and eyes.
S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

<table>
<thead>
<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>Sec.302 (EHS)</th>
<th>Sec.304 RQ</th>
<th>Sec.313 (TRI)</th>
<th>Sec.110</th>
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<tbody>
<tr>
<td>1. Europium (iii) chloride</td>
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</table>
### Other US EPA or State Lists

<table>
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<tr>
<th>Hazardous Components (Chemical Name)</th>
<th>CAS #</th>
<th>CAA HAP,ODC</th>
<th>CWA NPDES</th>
<th>TSCA</th>
<th>CA PROP.65</th>
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</thead>
<tbody>
<tr>
<td>1. Europium (iii) chloride</td>
<td>10025-76-0</td>
<td>No</td>
<td>No</td>
<td>Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

**Regulatory Information Statement:** This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

### 16. Other Information

**Company Policy or Disclaimer**

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A. = Not available, N.P. = Not applicable, N.D. = Not determined, N.E. = Not established, N.R. = Not required