

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 2015/830 and US OSHA HCS 2015

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

- 1.1 Product Code:** 28650  
**Product Name:** Medium-chain Saturated Fatty Acid Methyl Ester Mixture 2
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
**Relevant identified uses:** For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**  
**Company Name:** Cayman Chemical Company  
1180 E. Ellsworth Rd.  
Ann Arbor, MI 48108  
**Web site address:** www.caymanchem.com  
**Information:** Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**  
**Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300  
CHEMTREC Outside USA and Canada: +1 (703)527-3887

**Section 2. Hazards Identification****2.1 Classification of the Substance or Mixture:**

Skin Sensitization, Category 1

Aquatic Toxicity (Acute), Category 2

Aquatic Toxicity (Chronic), Category 2

**2.2 Label Elements:****GHS Signal Word:** **Warning****GHS Hazard Phrases:**

H317: May cause an allergic skin reaction.

H401: Toxic to aquatic life.

H411: Toxic to aquatic life with long lasting effects.

**GHS Precautionary Phrases:**

P261: Avoid breathing {dust/fume/gas/mist/vapors/spray}.

P272: Contaminated work clothing should not be allowed out of the workplace.

P273: Avoid release to the environment.

P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

**GHS Response Phrases:**

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P333+313: If skin irritation or rash occurs, seek medical advice/attention.

P362+364: Take off contaminated clothing and wash it before reuse.

P391: Collect spillage.

**GHS Storage and Disposal Phrases:**

Please refer to Section 7 for Storage and Section 13 for Disposal information.

**Medium-chain Saturated Fatty Acid Methyl Ester  
Mixture 2**

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<b>2.3 Adverse Human Health Effects and Symptoms:</b>	<p>Material may be irritating to the mucous membranes and upper respiratory tract.</p> <p>May be harmful by inhalation, ingestion, or skin absorption.</p> <p>May cause an allergic skin reaction</p> <p>May cause eye, skin, or respiratory system irritation.</p> <p>Toxic to aquatic life with long lasting effects.</p> <p>To the best of our knowledge, the toxicological properties have not been thoroughly investigated.</p>
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**Section 3. Composition/Information on Ingredients**

CAS # / RTECS #	Hazardous Components (Chemical Name)/ REACH Registration No.	Concentration	EC No./ EC Index No.	GHS Classification
111-11-5 RH0778000	Octanoic acid, methyl ester 01-2119487990-23	NA	203-835-0 NA	Skin Sens. 1: H317
1731-84-6 RA6906000	Methyl nonanoate	NA	217-052-7 NA	No GHS classifications apply.
110-42-9 HD9830000	Decanoic acid, Methyl ester 01-2119487998-07	NA	203-766-6 NA	No GHS classifications apply.
1731-86-8 YQ2573000	Undecanoic acid, methyl ester	NA	217-053-2 NA	No data available.
111-82-0 OF0670000	Dodecanoic acid, Methyl ester (Methyl laurate; Methyl dodecanoate) 01-2119487989-06	NA	203-911-3 NA	Aquatic (A) 1: H400 Aquatic (C) 1: H410

**Section 4. First Aid Measures**

<b>4.1 Description of First Aid Measures:</b>	<p><b>In Case of Inhalation:</b> Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.</p> <p><b>In Case of Skin Contact:</b> Immediately wash skin with soap and plenty of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.</p> <p><b>In Case of Eye Contact:</b> Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by medical personnel.</p> <p><b>In Case of Ingestion:</b> 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.</p>
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**Section 5. Fire Fighting Measures**

<b>5.1 Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.
<b>Media:</b>	Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.
<b>5.2 Flammable Properties and Hazards:</b>	No data available.
<b>Flash Pt:</b>	No data.
<b>Explosive Limits:</b>	LEL: No data. UEL: No data.
<b>Autoignition Pt:</b>	No data.
<b>5.3 Fire Fighting Instructions:</b>	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.

### Section 6. Accidental Release Measures

- 6.1 Protective Precautions,** Avoid raising and breathing dust, and provide adequate ventilation.  
**Protective Equipment and** As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,  
**Emergency Procedures:** and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental** Take steps to avoid release into the environment, if safe to do so.  
**Precautions:**
- 6.3 Methods and Material For** Contain spill and collect, as appropriate.  
**Containment and Cleaning** Transfer to a chemical waste container for disposal in accordance with local regulations.  
**Up:**

### Section 7. Handling and Storage

- 7.1 Precautions To Be Taken** Avoid breathing dust/fume/gas/mist/vapours/spray.  
**in Handling:** Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken** Keep container tightly closed.  
**in Storing:** Store in accordance with information listed on the product insert.

### Section 8. Exposure Controls/Personal Protection

- 8.1 Exposure Parameters:**
- 8.2 Exposure Controls:**
- 8.2.1 Engineering Controls** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne  
**(Ventilation etc.):** levels below recommended exposure limits.
- 8.2.2 Personal protection equipment:**
- Eye Protection:** Safety glasses
- Protective Gloves:** Compatible chemical-resistant gloves
- Other Protective Clothing:** Lab coat
- Respiratory Equipment** NIOSH approved respirator, as conditions warrant.  
**(Specify Type):**
- Work/Hygienic/Maintenan** Do not take internally.  
**ce Practices:** Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.  
 Wash thoroughly after handling.  
 No data available.

### Section 9. Physical and Chemical Properties

- 9.1 Information on Basic Physical and Chemical Properties**
- Physical States:** [ ] Gas [X] Liquid [ ] Solid
- Appearance and Odor:** A liquid
- pH:** No data.
- Melting Point:** No data.
- Boiling Point:** No data.
- Flash Pt:** No data.
- Evaporation Rate:** No data.
- Flammability (solid, gas):** No data available.
- Explosive Limits:** LEL: No data. UEL: No data.
- Vapor Pressure (vs. Air or mm** No data.  
**Hg):**
- Vapor Density (vs. Air = 1):** No data.

<b>Specific Gravity (Water = 1):</b>	No data.
<b>Solubility in Water:</b>	No data.
<b>Octanol/Water Partition Coefficient:</b>	No data.
<b>Autoignition Pt:</b>	No data.
<b>Decomposition Temperature:</b>	No data.
<b>Viscosity:</b>	No data.
<b>9.2 Other Information</b>	
<b>Percent Volatile:</b>	No data.

**Section 10. Stability and Reactivity**

<b>10.1 Reactivity:</b>	No data available.
<b>10.2 Stability:</b>	Unstable [ ] Stable [ X ]
<b>10.3 Stability Note(s):</b>	Stable if stored in accordance with information listed on the product insert.
<b>Polymerization:</b>	Will occur [ ] Will not occur [ X ]
<b>10.4 Conditions To Avoid:</b>	No data available.
<b>10.5 Incompatibility - Materials To Avoid:</b>	strong oxidizing agents
<b>10.6 Hazardous Decomposition or Byproducts:</b>	carbon dioxide carbon monoxide

**Section 11. Toxicological Information**

**11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
111-11-5	Octanoic acid, methyl ester	n.a.	n.a.	n.a.	n.a.
1731-84-6	Methyl nonanoate	n.a.	n.a.	n.a.	n.a.
110-42-9	Decanoic acid, Methyl ester	n.a.	n.a.	n.a.	n.a.
1731-86-8	Undecanoic acid, methyl ester	n.a.	n.a.	n.a.	n.a.
111-82-0	Dodecanoic acid, Methyl ester (Methyl laurate; Methyl dodecanoate}	n.a.	n.a.	n.a.	n.a.

**Section 12. Ecological Information**

<b>12.1 Toxicity:</b>	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
<b>12.2 Persistence and Degradability:</b>	No data available.
<b>12.3 Bioaccumulative Potential:</b>	No data available.
<b>12.4 Mobility in Soil:</b>	No data available.
<b>12.5 Results of PBT and vPvB assessment:</b>	No data available.
<b>12.6 Other adverse effects:</b>	No data available.

**Section 13. Disposal Considerations**

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

**Section 14. Transport Information**

**14.1 LAND TRANSPORT (US DOT):**

**DOT Proper Shipping Name:** Not dangerous goods.

**DOT Hazard Class:**

**UN/NA Number:**

**14.1 LAND TRANSPORT (European ADR/RID):**

**ADR/RID Shipping Name:** Not dangerous goods.

**UN Number:**

**Hazard Class:**

**14.3 AIR TRANSPORT (ICAO/IATA):**

**ICAO/IATA Shipping Name:** Not dangerous goods.

**UN Number:**

**Packing Group:**

**Hazard Class:**

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

**Section 15. Regulatory Information**

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
111-11-5	Octanoic acid, methyl ester	No	No	No
1731-84-6	Methyl nonanoate	No	No	No
110-42-9	Decanoic acid, Methyl ester	No	No	No
1731-86-8	Undecanoic acid, methyl ester	No	No	No
111-82-0	Dodecanoic acid, Methyl ester (Methyl laurate; Methyl dodecanoate}	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
111-11-5	Octanoic acid, methyl ester	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
1731-84-6	Methyl nonanoate	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory: Active; CA PROP.65: No
110-42-9	Decanoic acid, Methyl ester	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
1731-86-8	Undecanoic acid, methyl ester	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory: Active; CA PROP.65: No
111-82-0	Dodecanoic acid, Methyl ester (Methyl laurate; Methyl dodecanoate}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No



**SAFETY DATA SHEET**  
**Medium-chain Saturated Fatty Acid Methyl Ester**  
**Mixture 2**

**Regulatory Information Statement:** This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.

**Section 16. Other Information**

**Revision Date:** 12/14/2019

**Additional Information About This Product:** No data available.

**Company Policy or Disclaimer:** 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.