

Cayman Chemical Company  
1180 E. Ellsworth Rd.  
Ann Arbor, MI 48108



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

**Product Code:** 10007250

**Product Name:** 12(S)-HHTrE Lipid Maps MS Standard

**Synonyms:** 12S-hydroxy-5Z,8E,10E-heptadecatrienoic acid; 12-HHT;

**Intended Use:** For research use only, not for human or veterinary use.

**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

| GHS Classification  | Placard  | Key word | GHS Hazard                        |
|---|--|----------|-----------------------------------|
| Flammable Liquids, Category 2                               | Flame  | Danger   | Highly flammable liquid and vapor |
| <b>GHS Hazard Phrases:</b>                                  | H225: Highly flammable liquid and vapor  |          |                                   |
| <b>GHS Precaution Phrases:</b>                              | P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.<br>P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.  |          |                                   |
| <b>GHS Response Phrases:</b>                                | P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.   |          |                                   |
| <b>GHS Storage and Disposal Phrases:</b>                    | Please refer to Section 7 for Storage and Section 13 for Disposal information.   |          |                                   |
| <b>Route(s) of Entry:</b>                                   | Inhalation? Yes   Skin? Yes   Eyes? Yes   Ingestion? Yes   Other: Injection  |          |                                   |
| <b>Potential Health Effects (Acute and Chronic):</b>        | Causes eye, skin, or respiratory system irritation.<br>Material is irritating to the mucous membranes and upper respiratory tract.<br>May be harmful by inhalation, ingestion, or skin absorption.   |          |                                   |
| <b>Target Organs:</b>                                       | Central nervous system, Blood, Eyes, Reproductive system, Heart, Respiratory system, Liver, Skin.  |          |                                   |
| <b>LD 50 / LC 50:</b>                                       | Please refer to Section 11.  |          |                                   |
| <b>Signs and Symptoms Of Exposure:</b>                      | Irritating to eyes, skin, nose; may cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects.<br>To the best of our knowledge, the toxicological properties have not been thoroughly investigated. |          |                                   |
| <b>Medical Conditions Generally Aggravated By Exposure:</b> | No data available.   |          |                                   |

### 3. Composition/Information on Ingredients

| Hazardous Components (Chemical Name) | CAS #      | Concentration | EC#       | Risk Phrases      | RTECS #   |
|--------------------------------------|------------|---------------|-----------|-------------------|-----------|
| 1. 12(S)-HHTrE                       | 54397-84-1 | 0.01 %        | NA        | No phrases apply. | NA        |
| 2. Ethyl alcohol                     | 64-17-5    | 99.99 %       | 200-578-6 | R11               | KQ6300000 |

### 4. First Aid Measures

**Emergency and First Aid Procedures:**

|  |   |
|--|---|
| <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.  |
| <b>In Case of Skin Contact:</b>  | 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.                             |
| <b>In Case of Eye Contact:</b>   | Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.   |
| <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. |
| <b>Indication of any immediate medical attention and special treatment needed:</b> | No data available.  |

### 5. Fire Fighting Measures

|  |  |
|--|--|
| <b>Suitable Extinguishing Media:</b>     | Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray.<br>Use water spray to cool fire-exposed containers.  |
| <b>Unsuitable Extinguishing Media:</b>   | A solid water stream may be inefficient.   |
| <b>Flammable Properties and Hazards:</b> | Can release vapors that form explosive mixtures at temperatures at or above the flashpoint.<br>Container explosion may occur under fire conditions.<br>Emits toxic fumes under fire conditions.<br>Sensitive to static discharge.<br>Vapors can travel to a source of ignition and flash back. |
| <b>Flash Pt:</b>                         | 14.00 C Method Used: Closed Cup  |
| <b>Autoignition Pt:</b>                  | 363.00 C   |
| <b>Explosive Limits:</b>                 | LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C   |
| <b>Hazardous Combustion Products:</b>    | No data available.   |
| <b>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.<br>Note: Flammable as diluted in ethanol.  |

### 6. Accidental Release Measures

|   |  |
|---|--|
| <b>Protective Precautions, Protective Equipment and Emergency Procedures:</b> | Avoid breathing vapors and provide adequate ventilation.<br>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). |
| <b>Environmental Precautions:</b>   | Take steps to avoid release into the environment, if safe to do so.  |
| <b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>             | Contain spill and collect, as appropriate.<br>Transfer to a chemical waste container for disposal in accordance with local regulations.  |

### 7. Handling and Storage

|   |  |
|---|--|
| <b>Precautions To Be Taken in Handling:</b> | Avoid breathing dust/fume/gas/mist/vapours/spray.<br>Avoid prolonged or repeated exposure.<br>Keep away from sources of ignition.<br>Take precautionary measures against static discharge. |
| <b>Precautions To Be Taken in Storing:</b>  | Keep away from heat, sparks, and flame.<br>Keep container tightly closed.<br>Store in accordance with information listed on the product insert.  |



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|                                  |  |
|----------------------------------|--|
| <b>Other Precautions:</b>        | Hygroscopic.   |
| <b>Hazard Label Information:</b> | Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.<br>Wash thoroughly after handling. |

## 8. Exposure Controls/Personal Protection

| Hazardous Components (Chemical Name) | CAS #      | OSHA PEL                               | ACGIH TLV   | Other Limits |
|--------------------------------------|------------|--|---|--------------|
| 1. 12(S)-HHTrE                       | 54397-84-1 | No data.                               | No data.  | No data.     |
| 2. Ethyl alcohol                     | 64-17-5    | 1000 ppm                               | 1000 ppm  | No data.     |
| Hazardous Components (Chemical Name) | CAS #      | Britain EH40                           | France VL   | Europe       |
| 1. 12(S)-HHTrE                       | 54397-84-1 | No data.                               | No data.  | No data.     |
| 2. Ethyl alcohol                     | 64-17-5    | TWA: 1920 mg/m3 (1000 ppm)<br>STEL: () | TWA: 1900 mg/m3 (1000 ppm)<br>STEL: 9500 mg/m3 (5000 ppm) | No data.     |

|   |   |                               |          |        |
|---|---|-------------------------------|----------|--------|
| <b>Protective Equipment Summary - Hazard Label Information:</b> | Compatible chemical-resistant gloves<br>glasses<br>Safety shower in work area<br>Vent Hood  | Eye wash station in work area | Lab coat | Safety |
| <b>Engineering Controls (Ventilation etc.):</b>                 | Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.                      |                               |          |        |
| <b>Eye Protection:</b>  | Safety glasses  |                               |          |        |
| <b>Protective Gloves:</b>                                       | Compatible chemical-resistant gloves  |                               |          |        |
| <b>Other Protective Clothing:</b>                               | Lab coat  |                               |          |        |
| <b>Respiratory Equipment (Specify Type):</b>                    | NIOSH approved respirator, as conditions warrant.   |                               |          |        |
| <b>Work/Hygienic/Maintenance Practices:</b>                     | Do not take internally.<br>Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.<br>Wash thoroughly after handling. |                               |          |        |
| <b>Environmental Exposure Controls:</b>                         | No data available.  |                               |          |        |

## 9. Physical and Chemical Properties

## Information on Basic Physical and Chemical Properties

|   |  |
|---|--|
| <b>Physical States:</b>                   | [ ] Gas [ X ] Liquid [ ] Solid           |
| <b>Appearance and Odor:</b>               | Solution                                 |
| <b>Melting Point:</b>                     | No data.                                 |
| <b>Boiling Point:</b>                     | No data.                                 |
| <b>Flash Pt:</b>                          | 14.00 C Method Used: Closed Cup          |
| <b>Evaporation Rate:</b>                  | No data.                                 |
| <b>Explosive Limits:</b>                  | LEL: 3.3% at 25.0 C UEL: 19.0% at 25.0 C |
| <b>Vapor Pressure (vs. Air or mm Hg):</b> | 43 MM_HG at 20.0 C                       |
| <b>Vapor Density (vs. Air = 1):</b>       | No data.                                 |
| <b>Specific Gravity (Water = 1):</b>      | No data.                                 |
| <b>Solubility in Water:</b>               | No data.                                 |
| <b>Autoignition Pt:</b>                   | 363.00 C                                 |
| <b>Explosive Properties:</b>              | No data available.                       |
| <b>Oxidizing Properties:</b>              | No data available.                       |
| <b>Other Information</b>                  |  |
| <b>Percent Volatile:</b>                  | No data.                                 |



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Formula: C17H28O3

Molecular Weight: 280.40

### 10. Stability and Reactivity

Reactivity: No data available.

Stability: Unstable [ ] Stable [ X ]

Stability Note(s): Stable if stored in accordance with information listed on the product insert.

Conditions To Avoid: heat, flames and sparks

Polymerization: Will occur [ ] Will not occur [ X ]

Incompatibility - Materials To Avoid: alkali metals  
ammonia  
peroxides  
strong oxidizing agentsHazardous Decomposition Or Byproducts: carbon dioxide  
carbon monoxide

### 11. Toxicological Information

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

Ethanol - Toxicity Data: Oral TDLO (man): 1.14 ml/kg; Oral TDLO (man): 650 mg/kg; Oral LD50 (rat): 7,060 mg/kg; Oral LD50 (mouse): 3,450 mg/kg; Oral LD50 (mouse): 10.5 ml/kg; Oral LD50 (rabbit): 6,300 mg/kg; Inhalation LC50 (rat): 20,000 ppm (10h); Inhalation TCLO (human): 1,800 ppm (30m); Inhalation TCLO (human): 2,500 mg/m3 (20m); Inhalation LC50 (rat): 5,900 mg/m3 (6h); Inhalation LCLO (mouse): 29,300 ppm (7h);

Ethanol - Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit): 20 mg (24h) moderate;

Chronic Toxicological Effects: Ethanol - Investigated as a mutagen, reproductive effector, and tumorigen. Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information. Ethanol RTECS Number: KQ6300000

| Hazardous Components (Chemical Name) | CAS #      | NTP  | IARC | ACGIH | OSHA |
|--------------------------------------|------------|------|------|-------|------|
| 1. 12(S)-HHTrE                       | 54397-84-1 | n.a. | n.a. | n.a.  | n.a. |
| 2. Ethyl alcohol                     | 64-17-5    | n.a. | 1    | A4    | n.a. |

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

### 12. Ecological Information

General 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

#### Globally Harmonized System of Classification and Labelling

Flammable Liquids, Category 2 - Danger! Highly flammable liquid and vapor

#### LAND TRANSPORT (US DOT)

DOT Proper Shipping Name: Ethyl Alcohol Solution  
DOT Hazard Class: 3  
DOT Hazard Label: FLAMMABLE LIQUID  
UN/NA Number: 1170



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**Packing Group:** II

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

**ADR/RID Shipping Name** Ethyl Alcohol Solution

**UN Number:** 1170

**Hazard Class:** 3 - FLAMMABLE LIQUID

**Packing Group:** II

**ADR Classification:** 3

**AIR TRANSPORT (ICAO/IATA)**

**ICAO/IATA Shipping Name** Ethyl Alcohol Solution

**UN Number:** 1170

**Hazard Class:** 3 - FLAMMABLE LIQUID

**Packing Group:** II

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

## 15. Regulatory Information

**European Community Hazard Symbol codes** F: Highly Flammable

**European Community Risk and Safety Phrases**

- R11 - Highly flammable.
- S7 - Keep container tightly closed.
- S16 - Keep away from sources of ignition.
- S24/25 - Avoid contact with skin and eyes.
- S33 - Take precautionary measures against static discharges.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

**US EPA SARA Title III**

| Hazardous Components (Chemical Name) | CAS #      | Sec.302 (EHS) | Sec.304 RQ | Sec.313 (TRI) | Sec.110 |
|--------------------------------------|------------|---------------|------------|---------------|---------|
| 1. 12(S)-HHTrE                       | 54397-84-1 | No            | No         | No            | No      |
| 2. Ethyl alcohol                     | 64-17-5    | No            | No         | No            | No      |

**Other US EPA or State Lists**

| Hazardous Components (Chemical Name) | CAS #      | CAA HAP,ODC | CWA NPDES | TSCA      | CA PROP.65 |
|--------------------------------------|------------|-------------|-----------|-----------|------------|
| 1. 12(S)-HHTrE                       | 54397-84-1 | No          | No        | No        | No         |
| 2. Ethyl alcohol                     | 64-17-5    | No          | No        | Inventory | No         |

**Regulatory Information Statement:** This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

## 16. Other Information

**Revision Date:** 04/05/2013

**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