



## Safety Data Sheet

acc. to OSHA HCS

Printing date 06/01/2023

Revision date 06/01/2023

### 1 Identification

- **Product identifier**
- **Trade name:** Heptanoic Acid methyl ester
- **Article number:** 33673
- **CAS Number:**  
106-73-0
- **EC number:**  
203-428-8
- **Application of the substance / the mixture**  
This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Cayman Chemical Co.  
1180 E. Ellsworth Rd.  
Ann Arbor, MI 48108  
USA
- **Information department:** Product safety department
- **Emergency telephone number:**  
During normal opening times: +1 (734) 971-3335  
US/CANADA: 800-424-9300  
Outside US/CANADA: 703-741-5970

### 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 3 H226 Flammable liquid and vapor.



GHS07

Skin Irritation 2 H315 Causes skin irritation.

- **Label elements**
- **GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/01/2023

Revision date 06/01/2023

Trade name: Heptanoic Acid methyl ester

(Contd. from page 1)

- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Warning

- **Hazard statements**

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

- **Precautionary statements**

P210

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233

Keep container tightly closed.

P240

Ground/bond container and receiving equipment.

P241

Use explosion-proof electrical/ventilating/lighting/equipment.

P242

Use only non-sparking tools.

P243

Take precautionary measures against static discharge.

P264

Wash thoroughly after handling.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P321

Specific treatment (see on this label).

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P332+P313

If skin irritation occurs: Get medical advice/attention.

P362+P364

Take off contaminated clothing and wash it before reuse.

P370+P378

In case of fire: Use CO<sub>2</sub>, powder or water spray to extinguish.

P403+P235

Store in a well-ventilated place. Keep cool.

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 2

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 1 Health = 1

FIRE 2 Fire = 2

REACTIVITY 0 Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description**

106-73-0 Heptanoic Acid methyl ester

(Contd. on page 3)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/01/2023

Revision date 06/01/2023

**Trade name: Heptanoic Acid methyl ester**

(Contd. from page 2)

- **Identification number(s)**
- **EC number:** 203-428-8

## 4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## \* 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

## \* 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
No special precautions are necessary if used correctly.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Avoid prolonged or repeated exposure.  
Keep away from sources of ignition.  
Take precautionary measures against static discharge.re.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/01/2023

Revision date 06/01/2023

Trade name: Heptanoic Acid methyl ester

(Contd. from page 3)

- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** Store in accordance with information listed on the product insert.
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

US

(Contd. on page 5)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 06/01/2023

Revision date 06/01/2023

Trade name: Heptanoic Acid methyl ester

(Contd. from page 4)

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

**Form:** Liquid  
    **Color:** Not determined.

- **Odor:** Characteristic

- **Structural Formula** C<sub>8</sub>H<sub>16</sub>O<sub>2</sub>

- **Molecular Weight** 144.2 g/mol

- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

**Melting point/Melting range:** -56 °C (-68.8 °F)

**Boiling point/Boiling range:** 172 °C (341.6 °F)

- **Flash point:** 56 °C (132.8 °F)

- **Flammability (solid, gaseous):** Flammable.

- **Decomposition temperature:** Not determined.

- **Ignition temperature:** Not determined.

- **Danger of explosion:** Not determined.

- **Explosion limits:**

**Lower:** Not determined.

**Upper:** Not determined.

- **Vapor pressure:** Not determined.

- **Density at 20 °C (68 °F):** 0.881 g/cm<sup>3</sup> (7.35195 lbs/gal)

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

**Water:** Not determined.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

**Dynamic:** Not determined.

**Kinematic:** Not determined.

**SOLUBILITY** Chloroform: soluble; Ethanol: soluble; Ethyl ether: soluble

- **Other information** No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.

- **Chemical stability**

- **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

- **Possibility of hazardous reactions** No dangerous reactions known.

- **Conditions to avoid** No further relevant information available.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/01/2023

Revision date 06/01/2023

Trade name: Heptanoic Acid methyl ester

(Contd. from page 5)

- **Incompatible materials:** strong oxidizing agents
- **Hazardous decomposition products:** carbon oxides

## 11 Toxicological information

- **RTECS Number** MJ2297500
- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

Oral	LD50	>5,000 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.
- **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Assessment by list): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

US

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS



Printing date 06/01/2023

Revision date 06/01/2023

Trade name: Heptanoic Acid methyl ester

(Contd. from page 6)

## 14 Transport information

<ul style="list-style-type: none"> <li>· UN-Number</li> <li>· DOT, IMDG, IATA</li> </ul>	UN1993
<ul style="list-style-type: none"> <li>· UN proper shipping name</li> <li>· DOT</li> <li>· IMDG</li> <li>· IATA</li> </ul>	Flammable liquids, n.o.s. (Heptanoic Acid methyl ester) FLAMMABLE LIQUID, N.O.S. (Heptanoic Acid methyl ester) Flammable liquid, n.o.s. (Heptanoic Acid methyl ester)
<ul style="list-style-type: none"> <li>· Transport hazard class(es)</li> <li>· DOT</li> </ul>	<div style="text-align: center;">  <p>FLAMMABLE LIQUID 3</p> </div>
<ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>	3 Flammable liquids 3
<ul style="list-style-type: none"> <li>· IMDG, IATA</li> </ul>	<div style="text-align: center;">  <p>FLAMMABLE LIQUID 3</p> </div>
<ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>	3 Flammable liquids 3
<ul style="list-style-type: none"> <li>· Packing group</li> <li>· DOT, IMDG, IATA</li> </ul>	III
<ul style="list-style-type: none"> <li>· Environmental hazards:</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· Special precautions for user</li> <li>· Hazard identification number (Kemler code):</li> <li>· EMS Number:</li> <li>· Stowage Category</li> </ul>	Warning: Flammable liquids 30 F-E, S-E A
<ul style="list-style-type: none"> <li>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· Transport/Additional information:</li> <li>· DOT</li> <li>· Quantity limitations</li> </ul>	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<ul style="list-style-type: none"> <li>· IATA</li> <li>· Remarks:</li> </ul>	When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis

(Contd. on page 8)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 06/01/2023

Revision date 06/01/2023

**Trade name: Heptanoic Acid methyl ester**

(Contd. from page 7)

	Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.
· <b>UN "Model Regulation":</b>	UN 1993 FLAMMABLE LIQUID, N.O.S. (HEPTANOIC ACID METHYL ESTER), 3, III

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is not listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- **Department issuing SDS:** Environment protection department.
- **Contact:** -
- **Date of preparation / last revision** 06/01/2023
- **Abbreviations and acronyms:**  
 IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 NFPA: National Fire Protection Association (USA)  
 HMIS: Hazardous Materials Identification System (USA)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 NIOSH: National Institute for Occupational Safety  
 OSHA: Occupational Safety & Health

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/01/2023

Revision date 06/01/2023

**Trade name: Heptanoic Acid methyl ester**

(Contd. from page 8)

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Flammable Liquids 3: Flammable liquids – Category 3

Skin Irritation 2: Skin corrosion/irritation – Category 2

· **\* Data compared to the previous version altered.**

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