



# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Issue date: 8/28/2017 Revision date: 2/22/2023 Supersedes: 8/28/2017 Version: 2.0

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE  
Product code : CLM-10303-S

#### 1.2. Recommended use and restrictions on use

No additional information available

#### 1.3. Supplier

Cambridge Isotope Laboratories, Inc.  
50 Frontage Rd  
01810  
ANDOVER, MA, 01810  
USA  
T 1-800-322-1174  
[cilsales@isotope.com](mailto:cilsales@isotope.com) - [www.isotope.com](http://www.isotope.com)

#### 1.4. Emergency telephone number

Emergency number : 1-703-741-5970  
Chemtrec 1-800-424-9300 24 hours

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flammable liquids Category 2	H225	Highly flammable liquid and vapor
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Full text of H statements : see section 16		

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger  
Hazard statements (GHS US) : H225 - Highly flammable liquid and vapor  
H315 - Causes skin irritation  
Precautionary statements (GHS US) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. heat, hot surfaces, open flames, sparks  
P233 - Keep container tightly closed.  
P240 - Ground/Bond container and receiving equipment.  
P241 - Use explosion-proof electrical equipment.  
P242 - Use only non-sparking tools.

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

P243 - Take precautionary measures against static discharge.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P280 - Wear eye protection, face protection, protective clothing, protective gloves.  
P302+P352 - If on skin: Wash with plenty of water.  
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P321 - Specific treatment (see Hazardous component(s) for labeling on this label).  
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 Water spray, Alcohol resistant foam, Dry chemical, Carbon dioxide. to extinguish.  
P403+P235 - Store in a well-ventilated place. Keep cool.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	GHS US classification
METHYL TERT-BUTYL ETHER UNLABELED	CAS-No.: 1634-04-4	99.987	Flam. Liq. 2, H225 Skin Irrit. 2, H315
CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%)	CAS-No.: 1637562-51-6 (Unlabeled)	0.013	Not classified

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area.  
First-aid measures after inhalation : When symptoms occur: go into open air and ventilate suspected area. If not breathing, give artificial respiration. Get medical advice/attention.  
First-aid measures after skin contact : Wash with plenty of soap and water. Get immediate medical advice/attention.  
First-aid measures after eye contact : Rinse cautiously with water for several minutes.  
First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Rinse mouth out with water. Get medical advice/attention.

### 4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. nausea, vomiting. Dizziness. central nervous system. Aspiration of this material may cause chemical pneumonia.

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

### 4.3. Immediate medical attention and special treatment, if necessary

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>).

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO<sub>2</sub>).

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing apparatus.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
Other information	: Use water spray to cool exposed surfaces.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Use personal protective equipment as required. Avoid breathing vapors, mist, gas. Provide adequate ventilation to minimize dust and/or vapor concentrations. Avoid dust formation. Evacuate area. Remove all sources of ignition. Special attention should be given to low areas/pits where flammable vapors can accumulate.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage. This material and its container must be disposed of in a safe way, and as per local legislation.
Methods for cleaning up	: For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal.

### 6.4. Reference to other sections

No additional information available

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling	: Avoid contact with skin and eyes. Avoid breathing dust, fume, gas, mist, spray, vapors. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Prevent the build-up of electrostatic charge. Provide adequate ventilation to minimize dust and/or vapor concentrations.
Hygiene measures	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Store in a well-ventilated place. Keep container tightly closed.
Storage conditions	: Store refrigerated (-5 °C to 5 °C). Protect from light.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA [ppm]	50 ppm Basis: USA. ACGIH Threshold Limit Values (TLV) Remarks: Upper Respiratory Tract irritation. Kidney damage. Confirmed animal carcinogen with unknown relevance to humans.
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL C	144 mg/m <sup>3</sup> Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107).
OSHA PEL C [ppm]	40 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107).
<b>CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) (1637562-51-6 (Unlabeled))</b>	
No additional information available	
<b>METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA [ppm]	50 ppm Basis: USA. ACGIH Threshold Limit Values (TLV) Remarks: Upper Respiratory Tract irritation. Kidney damage. Confirmed animal carcinogen with unknown relevance to humans.
<b>USA - OSHA - Occupational Exposure Limits</b>	
OSHA PEL C	144 mg/m <sup>3</sup> Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107).
OSHA PEL C [ppm]	40 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107).

#### 8.2. Appropriate engineering controls

Appropriate engineering controls	: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Environmental exposure controls	: Avoid release to the environment.

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### 8.3. Individual protection measures/Personal protective equipment

#### Personal protective equipment:

Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.

#### Materials for protective clothing:

Wear suitable protective clothing and gloves

#### Hand protection:

Wear suitable protective clothing and gloves

#### Eye protection:

Wear eye protection. Chemical goggles or face shield with safety glasses

#### Skin and body protection:

Wear suitable protective clothing, gloves and eye/face protection

#### Respiratory protection:

In case of inadequate ventilation wear respiratory protection. Approved supplied air respirator

#### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: Colorless
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: -108.6 °C (-163.5 °F)
Freezing point	: No data available
Boiling point	: 55 – 56 °C (131 - 133 °F) - lit.
Flash point	: -33 °C (- 27.4 °F) - closed cup
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 1018.7 hPa (764.1 mmHg) at 55°C (131°F), 279.2 hPa (209.4 mmHg) at 20 °C (68°F)
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Density	: 0.74 g/ml at 25 °C (77 °F)
Molecular mass	: 88.15 g/mol
Solubility	: Water: 42 g/l
Partition coefficient n-octanol/water (Log Pow)	: 1.06
Auto-ignition temperature	: 374 °C (705.2 °F)
Decomposition temperature	: No data available
Viscosity, kinematic	: 0.464 mm <sup>2</sup> /s at 20 °C (68 °F) - 0.409 mm <sup>2</sup> /s at 40 °C (104 °F)
Viscosity, dynamic	: No data available

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Explosion limits : 1.6 – 15.1 % (V)  
Explosive properties : No data available  
Oxidizing properties : No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

See storage and expiration date on CoA.

### 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. Strong acids.

### 10.6. Hazardous decomposition products

Carbon oxides (CO, CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE	
LD50 oral rat	4000 mg/kg
LC50 Inhalation - Rat [ppm]	23576 ppm/4h - 4 h
ATE US (oral)	4000 mg/kg body weight
ATE US (gases)	23576 ppmV/4h
METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)	
LD50 oral rat	4000 mg/kg
LC50 Inhalation - Rat [ppm]	23576 ppm/4h
ATE US (oral)	4000 mg/kg body weight
ATE US (gases)	23576 ppmV/4h

Skin corrosion/irritation : Causes skin irritation.

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE	
IARC group	2B - Possibly carcinogenic to humans

METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: 0.464 mm <sup>2</sup> /s at 20 °C (68 °F) - 0.409 mm <sup>2</sup> /s at 40 °C (104 °F)

METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)	
Viscosity, kinematic	0.464 mm <sup>2</sup> /s at 20 °C (68 °F) - 0.409 mm <sup>2</sup> /s at 40 °C (104 °F)

Potential Adverse human health effects and symptoms : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. nausea, vomiting. Dizziness. central nervous system. Aspiration of this material may cause chemical pneumonia.

Symptoms/effects after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May be harmful if swallowed.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE	
LC50 - Fish [1]	672 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 - Crustacea [1]	472 mg/l Daphnia magna (Water flea) - 48 h
EC50 - Other aquatic organisms [1]	491 mg/l Pseudokirchneriella subcapitata (green algae) - 96 h
LC50 - Fish [2]	> 1000 mg/l other fish - 96 h

METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)	
LC50 - Fish [1]	672 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 - Crustacea [1]	472 mg/l Daphnia magna (Water flea) - 48 h
EC50 - Other aquatic organisms [1]	491 mg/l Pseudokirchneriella subcapitata (green algae) - 96 h
LC50 - Fish [2]	> 1000 mg/l other fish - 96 h

### 12.2. Persistence and degradability

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE	
Biodegradation	0 % - Not readily biodegradable. (OECD Test Guideline 301D)

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)

Persistence and degradability	Not readily biodegradable. (OECD 301D method).
Biodegradation	0 %

### 12.3. Bioaccumulative potential

### CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

Partition coefficient n-octanol/water (Log Pow)	1.06
---	------

### METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)

Partition coefficient n-octanol/water (Log Pow)	1.06
---	------

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Disposal must be done according to official regulations.

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Regional legislation (waste)	: Waste materials should be disposed of under conditions which meet Federal, State, and local environmental control regulations.
Product/Packaging disposal recommendations	: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Ecology - waste materials	: Dispose of as unused product.

## SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

### 14.1. UN number

DOT NA No	: UN2398
UN-No. (TDG)	: UN2398
UN-No. (IMDG)	: 2398
UN-No. (IATA)	: 2398

### 14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Methyl tert-butyl ether
Proper Shipping Name (TDG)	: METHYL tert-BUTYL ETHER
Proper Shipping Name (IMDG)	: METHYL tert-BUTYL ETHER
Proper Shipping Name (IATA)	: Methyl tert-butyl ether

### 14.3. Transport hazard class(es)

<b>DOT</b>	
Transport hazard class(es) (DOT)	: 3
Hazard labels (DOT)	: 3



# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations



### TDG

Transport hazard class(es) (TDG) : 3  
Hazard labels (TDG) : 3



### IMDG

Transport hazard class(es) (IMDG) : 3  
Hazard labels (IMDG) : 3



### IATA

Transport hazard class(es) (IATA) : 3  
Hazard labels (IATA) : 3



## 14.4. Packing group

Packing group (DOT) : II  
Packing group (TDG) : II  
Packing group (IMDG) : II  
Packing group (IATA) : II

## 14.5. Environmental hazards

Other information : No supplementary information available.

## 14.6. Special precautions for user

Special transport precautions : Not classified as dangerous in the meaning of transport regulations

### DOT

UN-No.(DOT) : UN2398  
DOT Special Provisions (49 CFR 172.102) : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.  
T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)  
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling =  $97 / 1 + a (tr - tf)$  Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.  
DOT Packaging Exceptions (49 CFR 173.xxx) : 150  
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

DOT Packaging Bulk (49 CFR 173.xxx)	: 242
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
DOT Vessel Stowage Location	: E - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.

### TDG

UN-No. (TDG)	: UN2398
Explosive Limit and Limited Quantity Index	: 1 L
Excepted quantities (TDG)	: E2
Passenger Carrying Ship Index	: Forbidden
Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index	: 5 L
Emergency Response Guide (ERG) Number	: 127

### IMDG

Limited quantities (IMDG)	: 1 L
Excepted quantities (IMDG)	: E2
Packing instructions (IMDG)	: P001
IBC packing instructions (IMDG)	: IBC02
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	: S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	: E
Flash point (IMDG)	: below -18°C c.c.
Properties and observations (IMDG)	: Colourless liquid. Flashpoint: below -18°C c.c. Explosive limits: 1.7% to 8.4% Boiling point: 55°C. Immiscible with water.
MFAG-No	: 127

### IATA

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 353
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
ERG code (IATA)	: 3L

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

Subject to reporting requirements of United States SARA Section 313

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%)	1637562-51-6 (Unlabeled)	Not present	-	
METHYL TERT-BUTYL ETHER UNLABELED	1634-04-4	Present	Active	

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) (1637562-51-6 (Unlabeled))	
Not subject to reporting requirements of the United States SARA Section 313	
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporting requirements of the United States SARA Section 302.

METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)	
Subject to reporting requirements of United States SARA Section 313 Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	1000 lb
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

## 15.2. International regulations

### CANADA

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE
Listed on the Canadian DSL (Domestic Substances List)

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) (1637562-51-6 (Unlabeled))
Listed on the Canadian DSL (Domestic Substances List)

METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)
Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

No additional information available

# CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

### National regulations

#### CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

#### METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations

#### CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%) 100UG/ML IN MTBE

State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) List
----------------------------	---

Component	State or local regulations
CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(7-CARBOXY-4-METHYLHEPTYL) ESTER (13C4, 99%)(1637562-51-6 (Unlabeled))	U.S. - Pennsylvania - RTK (Right to Know) List; U.S. - New Jersey - Right to Know Hazardous Substance List
METHYL TERT-BUTYL ETHER UNLABELED(1634-04-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

### SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 02/22/2023

Other information : This product is not radioactive. The data given for this product are those of the corresponding unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled compounds are generally not available, but are assumed to be similar or identical to the corresponding unlabeled compound.

#### Full text of H-phrases

H225	Highly flammable liquid and vapor
H315	Causes skin irritation

Safety Data Sheet (SDS), USA

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.