

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 12/05/2017 ULM-10302-S Revision date:

Version: 1.0

1.1. Product identifier	
Product form	: Mixtures
Product name	: CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(4-METHYL-7-OXOOCTYL) ESTER (UNLABELED) 100 UG/ML IN MTBE
Product code	: ULM-10302-S
1.2. Relevant identifie	d uses of the substance or mixture and uses advised against
1.2.1. Relevant identifie	d uses
Main use category	: Professional use
Industrial/Professional use sp	ec : For professional use only
1.2.2. Uses advised aga	inst
No additional information ava	
1.3. Details of the sup	olier of the safety data sheet
Cambridge Isotope Laborato 50 Frontage Road Andover, MA 01810 USA	ies, Inc.
USA: 1-800-322-1174 Int: <u>cilsales@isotope.com</u> www	1-978-749-8000 v.isotope.com
Emergency teleph	one number
Emergency numbers:	
Chemtrec: 1-800-424-9300 International: 1-703-741-597	
SECTION 2: Hazards	dentification
2.1. Classification of t	he substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225 Skin Irrit. 2 H315

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

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F+; R12 Xi; R38 Full text of R-phrases: see section 16

GHS-US classification

Flam. Liq. 2 H225 Skin Irrit. 2 H315 Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

Eyes, Kidney, Liver, Heart, Central nervous system. Highly flammable liquid and vapour. Causes skin irritation.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.2. Label elements	
Labelling according to Regulation (EC) N	o. 1272/2008 [CLP]
Hazard pictograms (CLP)	
	GHS02 GHS07
Signal word (CLP)	: Danger
Hazard statements (CLP)	: H225 - Highly flammable liquid and vapour H315 - Causes skin irritation
Precautionary statements (CLP)	 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P233 - Keep container tightly closed P240 - Ground/bond container and receiving equipment P241 - Use explosion-proof electrical, lighting, ventilating equipment P264 - Wash both hands 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
GHS-US labelling	
Hazard pictograms (GHS-US)	
Signal word (GHS-US)	GHS02 GHS07 : Danger
Hazard statements (GHS-US)	: H225 - Highly flammable liquid and vapour H315 - Causes skin irritation
Precautionary statements (GHS-US)	 P210 - Keep away from heat, hot surfaces, open flames, sparks No smoking P233 - Keep container tightly closed P240 - Ground/Bond container and receiving equipment P241 - Use explosion-proof electrical, lighting, ventilating equipment P242 - Use only non-sparking tools P243 - Take precautionary measures against static discharge P264 - Wash Both hands 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 Hazard pictograms (CLP) on this label) P332+P313 - If skin irritation occurs: Get medical advice/attention P362 - Take off contaminated clothing and wash before reuse P370+P378 - In case of fire: Use Alcohol resistant foam, Carbon dioxide, Dry chemical, Water spray to extinguish P403+P235 - Store in a well-ventilated place. Keep cool P501 - Dispose of contents/container to Comply with applicable regulations

Other hazards 2.3.

No additional information available

SECT	ION 3: Composition/informatio	n on ingredients		
3.1.	Substances			
Not app	blicable			
3.2.	Mixtures			
Name)	Product identifier	%	Classification according to Directive 67/548/EEC
METH	YL TERT-BUTYL ETHER UNLABELED	(CAS No) 1634-04-4 (EC No) 216-653-1 (EC Index No) 603-181-00-X (REACH-no) 01-2119452786-27	99.987	F; R11 Xi; R38
29/08/20	017	EN (English)		2/10

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	Classification according to Directive 67/548/EEC
CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(4- METHYL-7-OXOOCTYL) ESTER (UNLABELED)	(CAS No) 1588520-62-0	0.013	Not classified
Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
METHYL TERT-BUTYL ETHER UNLABELED	(CAS No) 1634-04-4 (EC No) 216-653-1 (EC Index No) 603-181-00-X (REACH-no) 01-2119452786-27	99.987	Flam. Liq. 2, H225 Skin Irrit. 2, H315
CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(4- METHYL-7-OXOOCTYL) ESTER (UNLABELED)	(CAS No) 1588520-62-0	0.013	Not classified
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-(4- METHYL-7-OXOOCTYL) ESTER (UNLABELED)	(CAS No) 1588520-62-0	0.013	Not classified

Full text of R- and H-statements: see section 16

SECTION 4: First aid measures	
4.1. Description of first aid measure	
First-aid measures general First-aid measures after inhalation	 If you feel unwell, seek medical advice (show the label where possible). Evacuate danger area Remove person to fresh air and keep comfortable for breathing. 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. Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing. If skin irritation occurs: Get 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. Call a poison center or a doctor if you feel unwell.
4.2. Most important symptoms and	effects, both acute and delayed
Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: May cause eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.
4.3. Indication of any immediate me	dical attention and special treatment needed
Treat symptomatically.	
SECTION 5: Fire-fighting measur	es
5.1. Extinguishing media	
Suitable extinguishing media	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2). Water spray. Dry powder. Foam. Carbon dioxide.
5.2. Special hazards arising from the	e substance or mixture
Reactivity	: Highly flammable liquid and vapour.
5.3. Advice for firefighters	
Firefighting instructions	: Fight fire with normal precautions from a reasonable distance. Wear a self contained breathing

Firengnting instructions	apparatus.
Protection during firefighting	Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing

apparatus. Complete protective clothing.

: Use water spray to cool exposed surfaces.

Other information

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTIO	ON 6: Accidental r	elease measu	res	
6.1.	Personal precautions	, protective equip	ment and emergency procedures	
6.1.1.	For non-emergency p	ersonnel		
Emergen	cy procedures	:	vapours, mist, gas. Provide adequate concentrations. Avoid dust formation. I	protective equipment as required. Avoid breathing ventilation to minimize dust and/or vapour Evacuate area. Remove all sources of ignition. Special /pits where flammable vapours can accumulate. No open /oid contact with skin and eyes.
6.1.2.	For emergency respo	nders		
Protective	equipment	:	Do not attempt to take action without s refer to section 8: "Exposure controls/p	uitable protective equipment. For further information personal protection".
6.2.	Environmental precau	utions		
Avoid rele	ease to the environment	. Prevent entry to s	sewers and public waters.	
6.3.	Methods and material	for containment	and cleaning up	
For conta	inment	:	Collect spillage. This material and its clocal legislation.	ontainer must be disposed of in a safe way, and as per
Methods	for cleaning up	:		erial. Notify authorities if product enters sewers or public must be disposed of in a safe way, and as per local
Other info	ormation	:	Dispose of materials or solid residues	at an authorized site.
6.4.	Reference to other se	ctions		
For furthe	r information refer to se	ction 13.		
SECTIO	ON 7: Handling an	d storage		
7.1.	Precautions for safe h	nandling		
Precautio	ns for safe handling	:	vapours. Use explosion-proof equipme Prevent the build-up of electrostatic ch and/or vapour concentrations. Keep as other ignition sources. No smoking. Gr non-sparking tools. Take precautionary	ation. Avoid breathing dust, fume, gas, mist, spray, ent. Keep away from sources of ignition - No smoking. arge. Provide adequate ventilation to minimize dust way from heat, hot surfaces, sparks, open flames and round/bond container and receiving equipment. Use only y measures against static discharge. Flammable vapours explosion-proof equipment. Wear personal protective d eyes.
Hygiene r	neasures	:	smoking and when leaving work. Wash	with mild soap and water before eating, drinking or n contaminated clothing before reuse. Do not eat, drink or s wash hands after handling the product.
7.2.	Conditions for safe st	orage, including	any incompatibilities	
Technical	measures	:	Store in a well-ventilated place. Keep or receiving equipment.	container tightly closed. Ground/bond container and
Storage of	onditions	:	Store refrigerated (-5°C to 5°C). Protect	ct from light.
7.3.	Specific end use(s)			
No additio	onal information availab	e		
SECTIO	ON 8: Exposure co	ontrols/person	al protection	
8.1.	Control parameters			
CYCLO	HEXANE-1,2-DICARBO	DXYLIC ACID, MO	NO-(4-METHYL-7-OXOOCTYL) ESTE	R (UNLABELED) 100 UG/ML IN MTBE
Italy - P	ortugal - USA ACGIH	ACGIH TWA (ppm	n)	50.00000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV) Remarks: Upper Respiratory Tract

USA OSHA

USA OSHA

Italy - Portugal - USA ACGIH

OSHA PEL (Ceiling) (mg/m³)

OSHA PEL (Ceiling) (ppm)

ACGIH TWA (ppm)

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

irritation. Kidney damage. Confirmed animal carcinogen with unknown relevance to humans.

144 mg/m³ Basis: California permissible exposure limits for chemical contaminants. (Title 8. Article 107).

40 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107).

50.0000000 ppm Basis: USA. ACGIH Threshold Limit Values (TLV) Remarks: Upper Respiratory Tract irritation. Kidney damage. Confirmed animal carcinogen with unknown relevance to humans.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

METHYL TERT-BUTYL ETHE	R UNLABELED (1634-04-4)	
USA OSHA	OSHA PEL (Ceiling) (mg/m ³)	144 mg/m ³ Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107).
USA OSHA	OSHA PEL (Ceiling) (ppm)	40 ppm Basis: California permissible exposure limits for chemical contaminants. (Title 8, Article 107).
8.2. Exposure controls		
Appropriate engineering controls	: Wash hands and other exposed areas smoking and when leaving work. Ensu	with mild soap and water before eating, drinking or re good ventilation of the work station.
Personal protective equipment	Gloves. Protective clothing. Protective	goggles. Self-contained breathing apparatus.
Materials for protective clothing Hand protection Eye protection Skin and body protection Respiratory protection Environmental exposure controls	Wear suitable protective clothing, gloveIn case of inadequate ventilation wear	, Joves. s or face shield with safety glasses. Safety glasses.

SECTION 9: Physical and chemical	properties
9.1. Information on basic physical and	chemical properties
Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 88.15 g/mol
Colour	: Colourless.
Odour	: No data available.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: 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
Auto-ignition temperature	: 374 °C (705.2 °F)
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 1018.7 hPa (764.1 mmHg) at 55°C (131°F), 279.2 hPa (209.4 mmHg) at 20 °C (68°F)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.74 g/ml at 25 °C (77 °F)
Solubility	: Water: 42 g/l at 20 °C (68 °F) - OECD Test Guideline 105
Log Pow	: 1.06
Log Kow	: No data available
Viscosity, kinematic	: 0.464 mm²/s at 20 °C (68 °F) - 0.409 mm2/s at 40 °C (104 °F)
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 1.6 - 15.1 % (V)
9.2. Other information	

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity 10.1. Reactivity

Highly flammable liquid and vapour.

Safety Data Sheet

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10.2. Chemical stability	
See storage and expiration date on CoA.	
10.3. Possibility of hazardous reactions	
No dangerous reactions known under normal con-	ditions of use
10.4. Conditions to avoid	
	es. Heat. No flames, no sparks. Eliminate all sources of ignition.
	es. meat. No names, no spans. L'iminate an sources or ignition.
10.5. Incompatible materials	
Oxidizing agent. Strong acids.	
10.6. Hazardous decomposition products	
Carbon oxides (CO, CO2).	
SECTION 11: Toxicological information	on
11.1. Information on toxicological effects	
Acute toxicity	: Not classified
CYCLOHEXANE-1,2-DICARBOXYLIC ACID, M	ONO-(4-METHYL-7-OXOOCTYL) ESTER (UNLABELED) 100 UG/ML IN MTBE
LD50 oral rat	4000 mg/kg
LC50 inhalation rat (ppm)	23576 ppm/4h - 4 h
ATE CLP (oral)	4000.000 mg/kg bodyweight
ATE CLP (gases)	23576.000 ppmv/4h
METHYL TERT-BUTYL ETHER UNLABELED	1634-04-4)
LD50 oral rat	4000 mg/kg
LC50 inhalation rat (ppm)	23576 ppm/4h - 4 h
Skin corrosion/irritation	: Skin - Rabbit Result: Skin irritation
Serious eye damage/irritation	: Eyes - Rabbit Result: No eye irritation
Respiratory or skin sensitisation	: Will not occur
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
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.
IARC group	: 2B
Symptoms/injuries after inhalation	: May be harmful if inhaled. May cause respiratory irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: May cause eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.
	-

SECTION 12: Ecological informa	ition
12.1. Toxicity	
Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
CYCLOHEXANE-1,2-DICARBOXYLIC A	CID, MONO-(4-METHYL-7-OXOOCTYL) ESTER (UNLABELED) 100 UG/ML IN MTBE
LC50 fish 1	672 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 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 UNLABI	ELED (1634-04-4)
LC50 fish 1	672 mg/l Pimephales promelas (fathead minnow) - 96 h
EC50 Daphnia 1	472 mg/l Daphnia magna (Water flea) - 48 h
EC50 other aquatic organisms 1	491 mg/l Pseudokirchneriella subcapitata (green algae) - 96 h
29/08/2017	EN (English) 6/10

Safety Data Sheet

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6, 2012 / Rules and Regulations	
METHYL TERT-BUTYL ETHER UNLABELED	(1634-04-4)
LC50 fish 2	> 1000 mg/l other fish - 96 h
40.0 Develotence and developility	
12.2. Persistence and degradability	
	MONO-(4-METHYL-7-OXOOCTYL) ESTER (UNLABELED) 100 UG/ML IN MTBE
Biodegradation	0 % - Not readily biodegradable. (OECD Test Guideline 301D)
METHYL TERT-BUTYL ETHER UNLABELED	
Biodegradation	0 % - Not readily biodegradable. (OECD Test Guideline 301D)
12.3. Bioaccumulative potential	
CYCLOHEXANE-1,2-DICARBOXYLIC ACID,	MONO-(4-METHYL-7-OXOOCTYL) ESTER (UNLABELED) 100 UG/ML IN MTBE
Log Pow	1.06
METHYL TERT-BUTYL ETHER UNLABELED	(1634-04-4)
Log Pow	1.06
12.4. Mobility in soil	
No additional information available	
12.5. Results of PBT and vPvB assessme	nt
No additional information available	
12.6. Other adverse effects	
No additional information available	
SECTION 12: Disposal consideration	
SECTION 13: Disposal consideration	15
13.1. Waste treatment 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
- reader addamy disposar recommendations.	professional waste disposal service to dispose of this material.
Ecology - waste materials	professional waste disposal service to dispose of this material. Dispose of as unused product.
Ecology - waste materials	
Ecology - waste materials SECTION 14: Transport information	: Dispose of as unused product.
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / A	: Dispose of as unused product.
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / Al 14.1. UN number	: Dispose of as unused product.
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / Al 14.1. UN number UN-No.(DOT)	: Dispose of as unused product. DN : 2398
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / Al 14.1. UN number	: Dispose of as unused product.
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / Al 14.1. UN number UN-No.(DOT)	: Dispose of as unused product. DN : 2398
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / AI 14.1. UN number UN-No.(DOT) DOT NA no.	 Dispose of as unused product. DN 2398 UN2398 Methyl tert-butyl ether
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / AI 14.1. UN number UN-No.(DOT) DOT NA no. 14.2. UN proper shipping name	 Dispose of as unused product. DN 2398 UN2398
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / AI 14.1. UN number UN-No.(DOT) DOT NA no. 14.2. UN proper shipping name Proper Shipping Name (DOT)	 Dispose of as unused product. DN 2398 UN2398 Methyl tert-butyl ether
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / AI 14.1. UN number UN-No.(DOT) DOT NA no. 14.2. UN proper shipping name Proper Shipping Name (DOT) Class (DOT)	 Dispose of as unused product. DN 2398 UN2398 Methyl tert-butyl ether 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / Al 14.1. UN number UN-No.(DOT) DOT NA no. 14.2. UN proper shipping name Proper Shipping Name (DOT) Class (DOT) Hazard labels (DOT)	 Dispose of as unused product. 2398 2398 2398 Methyl tert-butyl ether 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 3 - Flammable liquid
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / AI 14.1. UN number UN-No.(DOT) DOT NA no. 14.2. UN proper shipping name Proper Shipping Name (DOT) Class (DOT)	 Dispose of as unused product. DN 2398 UN2398 Methyl tert-butyl ether 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 3 - Flammable liquid II - Medium Danger 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
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / AI 14.1. UN number UN-No.(DOT) DOT NA no. 14.2. UN proper shipping name Proper Shipping Name (DOT) Class (DOT) Hazard labels (DOT) Packing group (DOT) DOT Special Provisions (49 CFR 172.102)	 Dispose of as unused product. DN 2398 UN2398 Methyl tert-butyl ether 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 3 - Flammable liquid II - Medium Danger 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
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / AI 14.1. UN number UN-No.(DOT) DOT NA no. 14.2. UN proper shipping name Proper Shipping Name (DOT) Class (DOT) Hazard labels (DOT) Packing group (DOT) DOT Special Provisions (49 CFR 172.102) DOT Packaging Exceptions (49 CFR 173.xxx)	 Dispose of as unused product. DN 2398 UN2398 Methyl tert-butyl ether 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 3 - Flammable liquid II - Medium Danger II - Medium Danger IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31H21). 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
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / AI 14.1. UN number UN-No.(DOT) DOT NA no. 14.2. UN proper shipping name Proper Shipping Name (DOT) Class (DOT) Hazard labels (DOT) Packing group (DOT) DOT Special Provisions (49 CFR 172.102) DOT Packaging Exceptions (49 CFR 173.xxx) DOT Packaging Non Bulk (49 CFR 173.xxx)	 Dispose of as unused product. DN 2398 UN2398 Methyl tert-butyl ether 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 3 - Flammable liquid II - Medium Danger 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
Ecology - waste materials SECTION 14: Transport information In accordance with ADR / RID / IMDG / IATA / AI 14.1. UN number UN-No.(DOT) DOT NA no. 14.2. UN proper shipping name Proper Shipping Name (DOT) Class (DOT) Hazard labels (DOT) Packing group (DOT) DOT Special Provisions (49 CFR 172.102) DOT Packaging Exceptions (49 CFR 173.xxx)	 Dispose of as unused product. DN 2398 UN2398 Methyl tert-butyl ether 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120 3 - Flammable liquid II - Medium Danger II - Medium Danger IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31H21). 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

Safety Data Sheet

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14.3. Additional information	
Emergency Response Guide (ERG) Number	: 127
Other information	: No supplementary information available.
Special transport precautions	: Not classified as dangerous in the meaning of transport regulations.
Overland transport	
Packing group (ADR)	: 11
Class (ADR)	: 3 - Flammable liquid
Hazard identification number (Kemler No.)	: 33
Classification code (ADR)	: F1
Danger labels (ADR)	: 3 - Flammable liquids
	3
Orange plates	33 2398
Tunnel restriction code (ADR)	: D/E
Limited quantities (ADR)	11
EAC code	: •3YE
Excepted quantities (ADR)	: E2
Transport by sea	
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.
MFAG-No	: 127
Air transport	
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 5L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 60 L
Civil Aeronautics Law	: Flammable liquids
14.4. Environmental hazards	
Other information	: No supplementary information available.
14.5. Special precautions for user	
Special transport precautions	: Not classified as dangerous in the meaning of transport regulations.

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

Not applicable

SECTION 15: Regulatory information	1
15.1. US Federal regulations	
CYCLOHEXANE-1,2-DICARBOXYLIC ACID,	MONO-(4-METHYL-7-OXOOCTYL) ESTER (UNLABELED) 100 UG/ML IN MTBE
Subject to reporting requirements of United Sta	ites SARA Section 313
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporing requirements of the United States SARA Section 302.
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)		
Subject to reporting requirements of United States SARA Section 313		
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporing requirements of the United States SARA Section 302.	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard	
CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(4-METHYL-7-OXOOCTYL) ESTER (UNLABELED) (1588520-62-0)		
SARA Section 302 Threshold Planning Quantity (TPQ)	Not subject to reporing requirements of the United States SARA Section 302.	
SARA Section 313 - Emission Reporting	Not subject to reporing requirements of the United States SARA Section 313.	

15.2. International regulations

CANADA

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(4-METHYL-7-OXOOCTYL) ESTER (UNLABELED) 100 UG/ML IN MTBE	
Listed on the Canadian DSL (Domestic Substances List)	
METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)	
Listed on the Canadian DSL (Domestic Substances List)	

15.2.1. National regulations

No additional information available

15.3. US State regulations

CYCLOHEXANE-1,2-DICARBOXYLIC ACID, MONO-(4-METHYL-7-OXOOCTYL) ESTER (UNLABELED) 100 UG/ML IN MTBE()		
U.S California - Proposition 65 - Carcinogens List	No	
U.S California - Proposition 65 - Developmental Toxicity	No	
U.S California - Proposition 65 - Reproductive Toxicity - Female	No	
U.S California - Proposition 65 - Reproductive Toxicity - Male	No	
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	

METHYL TERT-BUTYL	ETHER UNLABELED (1634-04-	4)		
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
CYCLOHEXANE-1,2-DIC	CARBOXYLIC ACID, MONO-(4-	METHYL-7-OXOOCTYL) EST	ER (UNLABELED) (1588520-6	62-0)
U.S California - Proposition 65 - Carcinogens List	U.S California - Proposition 65 - Developmental Toxicity	U.S California - Proposition 65 - Reproductive Toxicity - Female	U.S California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
No	No	No	No	
METHYL TERT-BUTYL	ETHER UNLABELED (1634-04-	4)		
State or local regulation	ns			
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				
CYCLOHEXANE-1,2-DIO	CARBOXYLIC ACID, MONO-(4-	METHYL-7-OXOOCTYL) EST	ER (UNLABELED) (1588520-6	62-0)
State or local regulation	ns			

U.S. - Pennsylvania - RTK (Right to Know) List

U.S. - New Jersey - Right to Know Hazardous Substance List

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 16: Other information

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 R-, H- and EUH-statements:

Flam. Liq. 2	Flammable liquids, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H225	Highly flammable liquid and vapour
H315	Causes skin irritation
R11	Highly flammable
R12	Extremely flammable
R38	Irritating to skin
F	Highly flammable
F+	Extremely flammable
Xi	Irritant

NFPA health hazard

NFPA fire hazard

NFPA reactivity

: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

- : 3 Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.
- : 0 Material that in themselves are normally stable, even under fire conditions.



HMIS III Rating

Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 3 Serious Hazard
Physical	: 0 Minimal Hazard

CIL Multi-Solvent Mixture SDS

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