

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

:

Revision date:

Date of issue: 17/09/2014

ULM-4662-MT-S

SECTION 1: Identification of the	substance/mixture and of the company/undertaking
1.1. Product identifier	
Product form	: Mixtures
Product name.	: MONO-(2-ETHYL-5-HYDROXYHEXYL)PHTHALATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE
Product code	: ULM-4662-MT-S
1.2. Relevant identified uses of the	e substance or mixture and uses advised against
1.2.1. Relevant identified uses	
Industrial/Professional use spec	: For professional use only.
1.2.2. Uses advised against No additional information available	
1.3.Details of the supplier of the saCambridge Isotope Laboratories, Inc.50 Frontage RoadAndover, MA 01810USAUSA: 1-800-322-1174Int: 1-978-749-800cilsales@isotope.comwww.isotope.com	00
Emergency telephone number	
Emergency numbers:	
Chemtrec: 1-800-424-9300 (24 hours) International: 1-202-483-7616 (24 hours)	
SECTION 2: Hazards identificati	on
2.1. Classification of the substance	e or mixture
Classification according to Regulation (Flam. Liq. 2 H225 Skin Irrit. 2 H315	EC) No. 1272/2008 [CLP]
Full text of H-phrases: see section 16	
Classification according to Directive 67/ Xn; R22 Xi; R38	/548/EEC or 1999/45/EC
Full text of R-phrases: see section 16	
Classification (GHS-US)	
Flam. Liq. 2 H225 Skin Irrit. 2 H315	
Adverse physicochemical, human healt	h and environmental effects
Kidney, Central nervous system.	
2.2. Label elements	
Labeling according to Regulation (EC) N	No. 1272/2008 [CLP]
Hazard pictograms (CLP)	

GHS02

GHS07

Version: 1.0

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Signal word (CLP) Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- : H225 Highly flammable liquid and vapor H315 - Causes skin irritation
- : 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 labeling

Hazard pictograms (GHS-US)



Signal word (GHS-US) Hazard statements (GHS-US)

Precautionary statements (GHS-US)

- : Danger
- : H225 Highly flammable liquid and vapor
- H315 Causes skin irritation
- : 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 soap and water

P303+P361+P353 - IF ON SKIN (or hair): Remove/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 for extinction

- P403+P235 Store in a well-ventilated place. Keep cool
- P501 Dispose of contents/container to Comply with applicable regulations.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

J.Z. WIXTURES			
Name	Product identifier	%	Classification according to Directive 67/548/EEC
METHYL TERT-BUTYL ETHER UNLABELED	(CAS No) 1634-04-4 (EC no) 216-653-1 (EC index no) 603-181-00-X	99.9865	Xn; R22 Xi; R38
MONO-(2-ETHYL-5-HYDROXYHEXYL)PHTHALATE UNLABELED (DEHP METABOLITE IX)	(CAS No) 40321-99-1 (Unlabeled)	0.0135	Xi; R36/37/38
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	99.9865	Flam. Liq. 2, H225 Skin Irrit. 2, H315
MONO-(2-ETHYL-5-HYDROXYHEXYL)PHTHALATE UNLABELED (DEHP METABOLITE IX)	(CAS No) 40321-99-1 (Unlabeled)	0.0135	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Name	Product identifier	%	Classification (GHS-US)
METHYL TERT-BUTYL ETHER UNLABELED	(CAS No) 1634-04-4	99.9865	Flam. Liq. 2, H225 Acute Tox. Not classified (Oral) Skin Irrit. 2, H315

Full text of R-, H- and EUH-phrases: see section 16

SECTION 4: First aid measures	
4.1. Description of first aid measure	!S
First-aid measures general	: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
First-aid measures after inhalation	: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
First-aid measures after skin contact	: Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Flush eyes with water as a precaution.
First-aid measures after ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mout with water. Consult a physician.
4.2. Most important symptoms and	effects, both acute and delayed
Symptoms/injuries after inhalation	: May be harmful if inhaled. Causes respiratory tract irritation.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: May be harmful if swallowed.
4.3. Indication of any immediate me	dical attention and special treatment needed
No additional information available	
SECTION 5: Firefighting measure	es
5.1. Extinguishing media	
suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
5.2. Special hazards arising from th	
Fire hazard	: Highly flammable liquid and vapor.
Explosion hazard	: May form flammable/explosive vapor-air mixture.
Reactivity	: Vapor is explosive with air above.
5.3. Advice for firefighters	
Firefighting instructions	: Use water spray to cool unopened containers.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
SECTION 6: Accidental release n	neasures
6.1. Personal precautions, protectiv	e equipment and emergency procedures
General measures	: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.
6.1.1. For non-emergency personnel	
Emergency procedures	: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapour accumulating to form explosive concentrations. Vapours can accumulate in low areas.
6.1.2. For emergency responders	
No additional information available	
6.2. Environmental precautions	
Prevent further leakage or spillage if safe to	do so. Do not let product enter drains.
6.3. Methods and material for conta	inment and cleaning up
For containment	 Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet- brushing and place in container for disposal according to local regulations.
6.4. Reference to other sections	

No additional information available

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 7: Handling an	nd storage			
7.1. Precautions for safe				
Additional hazards when proces	sed	: Handle empty containers with care because residual vapors are flar	nmable.	
Precautions for safe handling	:	: No naked lights. No smoking. Use only non-sparking tools.		
Hygiene measures	:	: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.		
7.2. Conditions for safe s	storage, including	any incompatibilities		
Technical measures	:	: Proper grounding procedures to avoid static electricity should be fol container and receiving equipment.	lowed. Ground/bond	
Storage conditions	:	: Store refrigerated (-5 C to 5 C). Protect from light.		
Incompatible materials	:	: Heat sources.		
7.3. Specific end use(s)				
No additional information available	ble			
SECTION 8: Exposure c	ontrols/perso	nal protection		
8.1. Control parameters				
•	YHEXYL)PHTHAL	ATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE		
Italy - Portugal - USA ACGIH	ACGIH TWA (pp		Respiratory Tract irritation,	
		Kidney damage, Confirmed		
METHYL TERT-BUTYL ETHE	R UNLABELED (1634-04-4)		
Italy - Portugal - USA ACGIH	ACGIH TWA (pp			
		Kidney damage, Confirmed	animal carcinogen	
8.2. Exposure controls				
Personal protective equipment	:	: Safety glasses. Gloves. Respiratory protection of the dependent typ	e. Protective clothing.	
Hand protection	:	: Wear suitable protective clothing and gloves.		
Eye protection	:	: Wear safety glasses with side shields (or goggles) and a face shield	1.	
Skin and body protection	:	: Wear suitable protective clothing.		
Respiratory protection	:	: When appropriate, use NIOSH/CEN approved respirator.		
SECTION 9: Physical an	d chemical pr	operties		
9.1. Information on basic	physical and che	emical properties		
The properties listed below are for the solu				
Physical state		: Liquid		
Appearance Molecular mass		: Liquid. : 88.15		
Color		No data available.		
Odor		No data available.		
Odor threshold		No data available		
pH		: No data available		
Relative evaporation rate (butyl		: No data available		
Melting point				
Freezing point		: No data available		
Boiling point				
Flash point		: -33.0 °C (- 27.4 °F) - closed cup		
Self ignition temperature		: 374 °C (705 °F)		
Decomposition temperature		: No data available		
Flammability (solid, gas)	:	: Highly flammable liquid and vapor		
Vapor pressure	:	: 1018.7 hPa (764.1 mmHg) at 55°C (131°F), 279.2 hPa (209.4 mmH	lg) at 55°C (131°F)	
Relative vapor density at 20 °C	:	: No data available		
Relative density	:	: No data available		
Solubility	:	: No data available		

	to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Log Pow	: 0.94 - 1.77
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: 1.6 - 15.1 % (V)
9.2. Other information	
No additional information available	
SECTION 10: Stability and reactivity	
10.1. Reactivity	
Vapor is explosive with air above.	
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	
Open flame. Direct sunlight.	
10.5. Incompatible materials	
Oxidizing agents, Strong acids.	
10.6. Hazardous decomposition products	
May release flammable gases.	
SECTION 11: Toxicological informati	on
11.1. Information on toxicological effects	
Acute toxicity	: Not classified
	ALATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE
LD50 oral rat	4000 mg/kg
LC50 inhalation rat (ppm)	23576 ppm - 4h
ATE (oral)	4000.000 mg/kg body weight
METHYL TERT-BUTYL ETHER UNLABELED	
LD50 oral rat	4000 mg/kg
LC50 inhalation rat (ppm)	23576 ppm - 4h
ATE (oral)	4000.000 mg/kg body weight
Skin corrosion/irritation	: Causes skin irritation.
	Skin - rabbit - Skin irritation
Serious eye damage/irritation	: Not classified
	Eyes - rabbit - No eye irritation
Respiratory or skin sensitization	: Will not occur.
	No data available
Germ cell mutagenicity	: Not available
Carcinogenicity	: This product is or contains a component that is not classifiable as to its carcinogenicity on its IARC, ACGIH, NTP, or EPA classification.
Reproductive toxicity	: Not available
Specific target organ toxicity (single exposure)	: Not classified
	No data available
Specific target organ toxicity (repeated	: Not classified
exposure)	No data available
A substitute have ad	
•	: Not classified
Potential Adverse human health effects and	
Aspiration hazard Potential Adverse human health effects and symptoms IARC group	: Nausea. Vomiting. Dizziness. Central nervous system depression. Pneumonitis. The chemica

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- Symptoms/injuries after skin contact Symptoms/injuries after eye contact
- : Causes skin irritation.
- Symptoms/injuries after eye contact Symptoms/injuries after ingestion
- : Causes eye irritation.

: May be harmful if swallowed.

SECTION 12: Ecological information	
12.1. Toxicity	
MONO-(2-ETHYL-5-HYDROXYHEXYL)PHTHAL	ATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE
LC50 fish 1	672 mg/l Pimephales promelas (fathead minnow) - 96h
METHYL TERT-BUTYL ETHER UNLABELED (1	1634-04-4)
LC50 fish 1	672 mg/l Pimephales promelas (fathead minnow) - 96h
12.2. Persistence and degradability	
· · · · · ·	ATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE
Persistence and degradability	Not available.
METHYL TERT-BUTYL ETHER UNLABELED (1	1634-04-4)
Persistence and degradability	Not available.
MONO-(2-ETHYL-5-HYDROXYHEXYL)PHTHAL	ATE UNLABELED (DEHP METABOLITE IX) (40321-99-1 (Unlabeled))
Persistence and degradability	Not available.
12.3. Bioaccumulative potential	
	ATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE
Log Pow	0.94 - 1.77
Bioaccumulative potential	Not available.
METHYL TERT-BUTYL ETHER UNLABELED (1	1634-04-4)
Log Pow	0.94 - 1.77
Bioaccumulative potential	Not available.
MONO-(2-FTHYL-5-HYDROXYHEXYL)PHTHAL	ATE UNLABELED (DEHP METABOLITE IX) (40321-99-1 (Unlabeled))
Bioaccumulative potential	Not available.
12.4. Mobility in soil	
	ATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE
Ecology - soil	Not available.
••	
METHYL TERT-BUTYL ETHER UNLABELED (1 Ecology - soil	Not available.
	ATE UNLABELED (DEHP METABOLITE IX) (40321-99-1 (Unlabeled))
Ecology - soil	Not available.
12.5. Results of PBT and vPvB assessment	
No additional information available	
12.6. Other adverse effects	
Other adverse effects	Not available.
SECTION 13: Disposal considerations	
13.1. Waste treatment methods	
	: Waste materials should be disposed of under conditions which meet Federal, State, and Local
	environmental control regulations.
Waste disposal recommendations	Dispose in a safe manner in accordance with local/national regulations.
Additional information :	: Handle empty containers with care because residual vapors are flammable.
SECTION 14: Transport information	
In accordance with ADR / RID / ADNR / IMDG / IC	AO / IATA
14.1. UN number	
UN-No.(DOT) :	: 2398
DOT NA no.	UN2398

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

14.2. UN proper shipping name	
DOT Proper Shipping Name	: Methyl tert-butyl ether
Department of Transportation (DOT) Hazard Classes	: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Hazard labels (DOT)	: 3 - Flammable liquid
	3
Packing group (DOT)	: II - Medium Danger
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
DOT Packaging Exceptions (49 CFR 173.xxx)	: 150
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 202
DOT Packaging Bulk (49 CFR 173.xxx)	: 242
14.3. Additional information	
Other information	: No supplementary information available.
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	: D/E
Limited quantities (ADR)	1L
EAC	: •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

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

14.4. Environmental hazards

Other information

: No supplementary information available.

14.5. Special precautions for user

14.6. 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		
MONO-(2-ETHYL-5-HYDROXYHEXYL)PHTHALATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE		
Listed on SARA Section 313 (Specific toxic cher	nical listings)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard	
METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)		
Listed on SARA Section 313 (Specific toxic cher	nical listings)	
SARA Section 311/312 Hazard Classes	Fire hazard Immediate (acute) health hazard Delayed (chronic) health hazard	

15.2. International regulations

CANADA

 MONO-(2-ETHYL-5-HYDROXYHEXYL)PHTHALATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE

 Listed on the Canadian DSL (Domestic Substances List) inventory.

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

 Listed on the Canadian DSL (Domestic Substances List) inventory.

15.2.1. National regulations

No additional information available

15.3. US State regulations

MONO-(2-ETHYL-5-HYDROXYHEXYL)PHTHALATE UNLABELED (DEHP METABOLITE IX) 100 UG/ML IN MTBE()		
State or local regulations	U.S Massachusetts - Right To Know List U.S New Jersey - Right to Know Hazardous Substance List This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.	

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

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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-phrases::

Serious eye damage/eye irritation Category 2
Flammable liquids Category 2
skin corrosion/irritation Category 2
Specific target organ toxicity (single exposure) Category 3
Highly flammable liquid and vapor
Causes skin irritation

Safety Data Sheet

according to Regulation (EC) No. 453/2010 and according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

H319	Causes serious eye irritation
H335	May cause respiratory irritation
R22	Harmful if swallowed
R36/37/38	Irritating to eyes, respiratory system and skin
R38	Irritating to skin
Xi	Irritant
Xn	Harmful

NFPA health hazard	: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.
NFPA fire hazard	: 3 - Liquids and solids that can be ignited under almost all ambient conditions.
NFPA reactivity	: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.
HMIS III Rating	
Health	: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability	: 3 Serious Hazard
Physical	: 0 Minimal Hazard

CIL 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