

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

Date of issue: 01/09/2016 Revision date: Version: 1.0

ULM-6935-MT-S

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product form : Mixture

Product name : TRICLOSAN UNLABELED 100 UG/ML IN MTBE (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL

ETHER)

Product code : ULM-6935-MT-S

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1 Relevant identified uses

Main use category : Professional use

Industrial/Professional use spec : For professional use only.

Uses advised against 1.2.2.

No additional information available

Details of the supplier of the safety data sheet

Cambridge Isotope Laboratories, Inc.

50 Frontage Road Andover, MA 01810

USA: 1-800-322-1174 Int: 1-978-749-8000 cilsales@isotope.com www.isotope.com

Emergency telephone number

Emergency numbers:

Chemtrec: 1-800-424-9300 (24 hours) International: 1-703-741-5970 (24 hours)

SECTION 2: Hazards identification

Classification of the substance or mixture

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

Flam. Liq. 2 H225 Skin Irrit. 2 H315

Full text of H-phrases: see section 16

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

Xi; R38

Full text of R-phrases: see section 16

Classification (GHS-US)

Flam. Liq. 2 H225 Skin Irrit. 2 H315

Adverse physicochemical, human health and environmental effects

Kidney, Central nervous system.

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2.2. Label elements

Signal word (CLP)

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

Hazard pictograms (CLP)





: Danger

Hazard statements (CLP) : H225 - Highly flammable liquid and vapor

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 IF ON SKIN: Wash with plenty of {0|message=<specify appropriate media>|default=water|filter=(_)?WASH_.+}

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)





GHS02

GHS07

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, 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 it 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.

2.3. Other hazards

No additional information available

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

one mixture			
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	99.987	Xn; R22 Xi; R38

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Name	Product identifier	%	Classification according to Directive 67/548/EEC
TRICLOSAN UNLABELED (2',4,4'-TRICHLORO-2- HYDROXYDIPHENYL ETHER)	(CAS No) 3380-34-5 (EC no) 222-182-2 (EC index no) 604-070-00-9	0.013	Xi; R36/38 N; R50/53
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	99.987	Flam. Liq. 2, H225 Skin Irrit. 2, H315
TRICLOSAN UNLABELED (2',4,4'-TRICHLORO-2- HYDROXYDIPHENYL ETHER)	(CAS No) 3380-34-5 (EC no) 222-182-2 (EC index no) 604-070-00-9	0.013	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Name	Product identifier	%	Classification (GHS-US)
METHYL TERT-BUTYL ETHER UNLABELED	(CAS No) 1634-04-4	99.987	Flam. Liq. 2, H225 Acute Tox. Not classified (Oral) Skin Irrit. 2, H315

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

SECTION 4: First aid measures

4.1. Description of first aid measures

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 : Wash with soap and plenty of water. Consult a physician.

First-aid measures after eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

First-aid measures after ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth

with water. Consult a physician.

1.2. 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 medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapor.

Explosion hazard : May form flammable/explosive vapor-air mixture.

Reactivity : Vapors may form explosive mixture with air.

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 measures

6.1. Personal precautions, protective 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 vapours

accumulating to form explosive concentrations. Vapours can accumulate in low areas.

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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. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

For containment : Contain spillag

: 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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

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 storage, including any incompatibilities

Technical measures : Keep container tightly closed in a cool, dry and well-ventilated place.

Storage conditions : Store at room temperature away from light and moisture.

Incompatible materials : Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

TRICLOSAN UNLABELED 100 UG/ML IN MTBE (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER)

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

Italy - Portugal - USA ACGIH ACGIH TWA (ppm) 50.0000000000 ppm Upper Respiratory Tract irritation,

Kidney damage, Confirmed animal carcinogen

8.2. Exposure controls

Personal protective equipment : Gloves. Protective clothing. Protective goggles. Self-contained breathing apparatus.



Hand protection : Wear suitable protective clothing and gloves.

Eye protection : Wear safety glasses with side shields (or goggles) and a face shield.

Skin and body protection : Wear suitable protective clothing

Respiratory protection : When appropriate, use NIOSH/CEN approved respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

The properties listed below are for the solvent, the main component of this mixture.

Physical state: LiquidAppearance: Liquid.Molecular mass: 88.15 g/molColor: Colorless.

Odor : No data available.
Odor threshold : No data available
pH : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Melting point : No data available
Freezing point : No data available

Boiling point : 55 - 56 °C (131 - 133 °F) - lit

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Flash point : -33.0 °C (- 27.4 °F) - closed cup

Auto-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 mmHg) at 55°C (131°F)

Relative vapor density at 20 °C No data available Relative density : No data available : No data available Solubility Log Pow : 0.94 - 1.77 Log Kow : No data available : No data available Viscosity, kinematic Viscosity, dynamic : No data available : No data available Explosive properties Oxidizing properties : No data available : 1.6 - 15.1 % (V) **Explosive limits**

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Vapors may form explosive mixture with air.

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 information

11.1. Information on toxicological effects

Acute toxicity : Not classified

TRICLOSAN UNLABELED 100 UG/ML IN MTBE (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER)	
LD50 oral rat	4000 mg/kg
LC50 inhalation rat (ppm)	23576 ppm - 4h
ATE CLP (oral)	4000.000 mg/kg body weight

TRICLOSAN UNLABELED (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER) (3380-34-5)	
LD50 oral rat	3700 mg/kg
LD50 dermal rabbit	9300 g/kg
ATE CLP (oral)	3700.000 mg/kg body weight
ATE CLP (dermal)	930000,000 mg/kg body weight

METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)	
LD50 oral rat	4000 mg/kg
LC50 inhalation rat (ppm)	23576 ppm - 4h
ATE CLP (oral)	4000 000 ma/ka 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

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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

: Not classified

Specific target organ toxicity (repeated

exposure)

No data available

Aspiration hazard Not classified

Potential Adverse human health effects and

symptoms

: Nausea. Vomiting. Dizziness. Central nervous system depression. Pneumonitis. The chemical,

physical, and toxicological properties have not been thoroughly investigated.

IARC group

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.

SECTION 12: Ecological information

12.1. **Toxicity**

TRICLOSAN UNLABELED 100 UG/ML IN MTBE (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER)	
LC50 fish 1	672 mg/l Pimephales promelas (fathead minnow) - 96h

TRICLOSAN UNLABELED (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER) (3380-34-5)	
LC50 fish 1	0.288 mg/l Oncorhynchus mykiss (rainbow trout) - 96.0 h
EC50 Daphnia 1	0.39 mg/l Daphnia magna (Water flea) - 48 h

METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4) LC50 fish 1 672 mg/l Pimephales promelas (fathead minnow) - 96h

12.2. Persistence and degradability

TRICLOSAN UNLABELED (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER) (3380-34-5)	
Persistence and degradability	Aerobic - exposure time: 28 d.
Biodegradation	37 % Not readily biodegradable.

12.3. **Bioaccumulative potential**

TRICLOSAN UNLABELED 100 UG/ML IN MTBE (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER)	
Log Pow	0.94 - 1.77

TRICLOSAN UNLABELED (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER) (3380-34-5) Log Pow

METHYL TERT-BUTYL ETHER UNLABELED (1634-04-4)		1634-04-4)
	Log Pow	0.94 - 1.77

12.4. Mobility in soil

No additional information available

Results of PBT and vPvB assessment

No additional information available

Other adverse effects

No additional information available

SECTION 13: Disposal considerations

Waste treatment methods

: Waste materials should be disposed of under conditions which meet Federal, State, and Local Regional legislation (waste) environmental control regulations.

Waste 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.

Additional information : Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials : Dispose as unused product.

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SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No.(DOT) : 2398 DOT NA no. UN2398

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Methyl tert-butyl ether

Transport hazard class(es) (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid



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..... 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
DOT Packaging Bulk (49 CFR 173.xxx) : 242
Marine pollutant : No

14.3. Additional information

Other information : No supplementary information available.

Overland transport

Packing group (ADR) : I

Class (ADR) : 3 - Flammable liquid

Hazard identification number (Kemler No.) : 33 Classification code (ADR) : F1

Hazard labels (ADR) : 3 - Flammable liquids



Orange plates :

33 2398

Tunnel restriction code : D/E
Limited quantities (ADR) 11
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

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Air transport

DOT Quantity Limitations Passenger aircraft/rail : 5 L

(49 CFR 173.27)

DOT Quantity Limitations Cargo aircraft only (49 : 60 L

CFR 175.75)

Civil Aeronautics Law : Flammable liquids

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

TRICLOSAN UNLABELED 100 UG/ML IN M	TBE (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER)
Listed on SARA Section 313 (Specific toxic chemical 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 chemical listings)			
	SARA Section 311/312 Hazard Classes	Fire hazard	
		Immediate (acute) health hazard	
		Delayed (chronic) health hazard	

15.2. International regulations

CANADA

TRICLOSAN UNLABELED 100 UG/ML IN MTBE (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER)

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

TRICLOSAN UNLABELED 100 UG/ML IN MTBE (2',4,4'-TRICHLORO-2-HYDROXYDIPHENYL ETHER)()	
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

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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:

, , , , , , , , , , , , , , , , , , , ,	
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Flam. Liq. 2	Flammable liquids Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
H225	Highly flammable liquid and vapor
H315	Causes skin irritation
H319	Causes serious eye irritation
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
R11	Highly flammable
R22	Harmful if swallowed
R36/38	Irritating to eyes and skin
R38	Irritating to skin
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
F	Highly flammable
N	Dangerous for the environment
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.

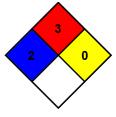
NFPA fire hazard

: 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

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