



TRIMETHYLCHLOROTIN 1M in THF

Safety Data Sheet SNT8520.2

Issue date: 20/08/2018

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Version: 1.2

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

1.1. Product identifier

Product form	: Mixture
Physical state	: Liquid
Product name	: TRIMETHYLCHLOROTIN 1M in THF
Product code	: SNT8520.2
Formula	: C ₃ H ₉ ClSn
Synonyms	: TRIMETHYL TIN CHLORIDE CHLOROTRIMETHYLSTANNANE
Chemical family	: ORGANOTIN

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Chemical intermediate

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

GELEST, INC.

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USA

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1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 2	H225
Acute toxicity (oral), Category 3	H301
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Carcinogenicity, Category 2	H351
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation	H335

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

Adverse physicochemical, human health and environmental effects

No additional information available

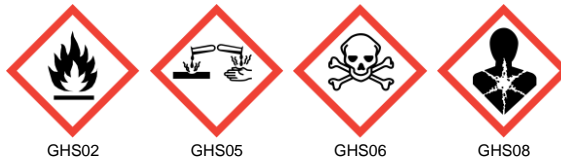
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2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Contains :

Trimethylchlorotin, Tetrahydrofuran

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.

H301 - Toxic if swallowed.

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H335 - May cause respiratory irritation.

H351 - Suspected of causing cancer.

Precautionary statements (CLP) :

P202 - Do not handle until all safety precautions have been read and understood.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P240 - Ground and bond container and receiving equipment.

P271 - Use only outdoors or in a well-ventilated area.

P310 - Immediately call a POISON CENTER or doctor.

EUH-statements

: EUH019 - May form explosive peroxides.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tetrahydrofuran	CAS-No.: 109-99-9 EC-No.: 203-726-8 EC Index-No.: 603-025-00-0	78 – 82	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335
Trimethylchlorotin	CAS-No.: 1066-45-1 EC-No.: 213-917-8	18 – 22	Acute Tox. 2 (Oral), H300 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Tetrahydrofuran	CAS-No.: 109-99-9 EC-No.: 203-726-8 EC Index-No.: 603-025-00-0	(25 \leq C < 100) Eye Irrit. 2, H319 (25 \leq C < 100) STOT SE 3, H335

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

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash with plenty of water/.... Get medical advice/attention.
First-aid measures after eye contact	: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.
First-aid measures after ingestion	: Never give anything by mouth to an unconscious person. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects	: Suspected of causing cancer.
Symptoms/effects after inhalation	: May cause respiratory irritation.
Symptoms/effects after skin contact	: Causes skin irritation. Organotins may be absorbed through the skin.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
Chronic symptoms	: Trimethylchlorotin is a cumulative toxin. Symptomatic manifestations can follow exposure up to five days. Reported symptoms include memory loss, exhibition of rage and anger, and reduction of sexual function.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physician: Application of corticosteroid creams has been effective in treating severe skin irritation. If blisters develop, they may require abrasion to promote healing.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media	: Do not use straight streams.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
Explosion hazard	: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions	: Use water spray to cool exposed surfaces. Exercise caution when fighting any chemical fire.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapour and mist.
Other information	: Extremely toxic. Self-contained breathing apparatus should be worn at all times to avoid inhalation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Eliminate every possible source of ignition. Use special care to avoid static electric charges.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear protective equipment as described in Section 8.
Emergency procedures	: Evacuate unnecessary personnel.

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6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid all eye and skin contact and do not breathe vapour and mist. Ground/bond container and receiving equipment. Take precautionary measures against static discharge. Use only outdoors or in a well-ventilated area.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. 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 : Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical/ventilating/lighting equipment.
Storage conditions : Keep container tightly closed. Store in sealed containers in a manner consistent with safe-handling and regulatory requirements for a hazardous substance. Keep in a cool place. Store locked up.
Incompatible materials : Oxidizing agent. Direct sunlight.
Storage area : Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Trimethylchlorotin (1066-45-1)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	0.1 mg/m ³ as Tin
Tetrahydrofuran (109-99-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	150 mg/m ³
IOEL TWA [ppm]	50 ppm
IOEL STEL	300 mg/m ³

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Tetrahydrofuran (109-99-9)	
IOEL STEL [ppm]	100 ppm
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	150 mg/m ³
MAK (OEL TWA) [ppm]	50 ppm
MAK (OEL STEL)	300 mg/m ³
MAK (OEL STEL) [ppm]	100 ppm
OEL chemical category	Skin notation
Belgium - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	Skin, Skin notation
Bulgaria - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	100 mg/m ³
OEL STEL [ppm]	300 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	150 mg/m ³
GVI (OEL TWA) [2]	50 ppm
KGVI (OEL STEL)	300 mg/m ³
KGVI (OEL STEL) [ppm]	100 ppm
OEL chemical category	Skin notation
Cyprus - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	Skin-potential for cutaneous absorption
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	150 mg/m ³
OEL chemical category	Potential for cutaneous absorption
Denmark - Occupational Exposure Limits	
OEL TWA [1]	150 mg/m ³
OEL TWA [2]	50 ppm
OEL chemical category	Potential for cutaneous absorption
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m ³

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Tetrahydrofuran (109-99-9)	
OEL TWA [ppm]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	Sensitizer, Skin notation
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	150 mg/m ³
HTP (OEL TWA) [2]	50 ppm
HTP (OEL STEL)	300 mg/m ³
HTP (OEL STEL) [ppm]	100 ppm
OEL chemical category	Potential for cutaneous absorption
France - Occupational Exposure Limits	
VME (OEL TWA)	150 mg/m ³ (restrictive limit)
VME (OEL TWA) [ppm]	50 ppm (restrictive limit)
VLE (OEL C/STEL)	300 mg/m ³ (restrictive limit)
VLE (OEL C/STEL) [ppm]	100 ppm (restrictive limit)
OEL chemical category	Risk of cutaneous absorption
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	150 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	50 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Chemical category	Skin notation
Germany - Biological limit values (TRGS 903)	
Biological limit value	2 mg/l (Medium: urine - Time: end of shift - Parameter: Tetrahydrofuran)
Gibraltar - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	Skin notation
Greece - Occupational Exposure Limits	
OEL TWA	590 mg/m ³
OEL TWA [ppm]	200 ppm
OEL STEL	735 mg/m ³
OEL STEL [ppm]	250 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	150 mg/m ³
CK (OEL STEL)	300 mg/m ³
OEL chemical category	Potential for cutaneous absorption

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Tetrahydrofuran (109-99-9)	
Ireland - Occupational Exposure Limits	
OEL TWA [1]	150 mg/m ³
OEL TWA [2]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	Potential for cutaneous absorption
Italy - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	skin - potential for cutaneous absorption
Latvia - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL chemical category	skin - potential for cutaneous exposure
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	150 mg/m ³
IPRV (OEL TWA) [ppm]	50 ppm
TPRV (OEL STEL)	300 mg/m ³
TPRV (OEL STEL) [ppm]	100 ppm
OEL chemical category	Skin notation
Luxembourg - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	Possibility of significant uptake through the skin
Malta - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	Possibility of significant uptake through the skin
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	300 mg/m ³
TGG-15min (OEL STEL)	600 mg/m ³
MAC chemical category	Skin notation

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Tetrahydrofuran (109-99-9)	
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	150 mg/m ³
NDSch (OEL STEL)	300 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	150 mg/m ³ (indicative limit value)
OEL TWA [ppm]	50 ppm (indicative limit value)
OEL STEL	300 mg/m ³ (indicative limit value)
OEL STEL [ppm]	100 ppm (indicative limit value)
OEL chemical category	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, skin - potential for cutaneous exposure indicative limit value
Romania - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	Skin notation
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA) [1]	150 mg/m ³
NPHV (OEL TWA) [2]	50 ppm
NPHV (OEL C)	300 mg/m ³
OEL chemical category	Potential for cutaneous absorption
Slovenia - Occupational Exposure Limits	
OEL TWA	150 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	300 mg/m ³
OEL STEL [ppm]	100 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	150 mg/m ³ (indicative limit value)
VLA-ED (OEL TWA) [2]	50 ppm (indicative limit value)
VLA-EC (OEL STEL)	300 mg/m ³
VLA-EC (OEL STEL) [ppm]	100 ppm
OEL chemical category	skin - potential for cutaneous exposure
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	150 mg/m ³
NGV (OEL TWA) [ppm]	50 ppm
KTV (OEL STEL)	250 mg/m ³
KTV (OEL STEL) [ppm]	80 ppm

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Tetrahydrofuran (109-99-9)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	150 mg/m ³
WEL TWA (OEL TWA) [2]	50 ppm
WEL STEL (OEL STEL)	300 mg/m ³
WEL STEL (OEL STEL) [ppm]	100 ppm
WEL chemical category	Potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	150 mg/m ³
Grenseverdi (OEL TWA) [2]	50 ppm
Korttidsverdi (OEL STEL)	150 mg/m ³
Korttidsverdi (OEL STEL) [ppm]	50 ppm
OEL chemical category	Skin notation
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	150 mg/m ³
MAK (OEL TWA) [2]	50 ppm
KZGW (OEL STEL)	300 mg/m ³
KZGW (OEL STEL) [ppm]	100 ppm
OEL chemical category	Skin notation
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	50 ppm
ACGIH OEL STEL [ppm]	100 ppm
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route, Confirmed Animal Carcinogen with Unknown Relevance to Humans
USA - ACGIH - Biological Exposure Indices	
BEI	2 mg/l (Medium: urine - Time: end of shift - Parameter: Tetrahydrofuran)

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Handle in an enclosing hood with exhaust ventilation. Insure that exhaust is vented properly- caustic scrubbing is recommended.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

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8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles. Contact lenses should not be worn

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Neoprene or nitrile rubber gloves

8.2.2.3. Respiratory protection

Respiratory protection:

NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 199.25 g/mol
Colour	: No data available
Odour	: characteristic.
Odour threshold	: No data available
Refractive index	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: < 1
Melting point	: 37 – 39 °C (neat)
Freezing point	: No data available
Boiling point	: 154 °C
Flash point	: -14 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapour.
Vapour pressure	: No data available
Relative vapour density at 20°C	: > 1
Relative density	: 0.988
Solubility	: Slightly soluble. Reacts.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Partition coefficient n-octanol/water (Log Kow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 1.8 – 11.6 vol % (lower; upper)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

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10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Direct sunlight causes slow degradation to an inorganic tin salt.

10.4. Conditions to avoid

Heat. Open flame. Sparks.

10.5. Incompatible materials

Oxidizing agent. Direct sunlight.

10.6. Hazardous decomposition products

Organic acid vapors. Trimethyltin oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Toxic if swallowed.

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ATE CLP (oral)	55.688 mg/kg bodyweight
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Trimethylchlorotin (1066-45-1)

LD50 oral rat	12.6 mg/kg
LD50 intravenous mouse	1.8 mg/kg
ATE CLP (oral)	12.6 mg/kg bodyweight

Tetrahydrofuran (109-99-9)

LD50 oral rat	1650 mg/kg
LC50 Inhalation - Rat [ppm]	21000 ppm (Exposure time: 3 h)
ATE CLP (oral)	1650 mg/kg bodyweight

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye damage.
Eye Irritation - rabbit: 100 mg: severe irritation effect
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Suspected of causing cancer.

Tetrahydrofuran (109-99-9)

National Toxicology Program (NTP) Status	1 - Evidence of Carcinogenicity
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Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Potential adverse human health effects and symptoms : Inhalation: At low levels exposure to trimethylchlorotin may produce coughing, headache and nausea. At higher levels trimethylchlorotin has been reported to cause cerebral edema. Human fatalities have been reported from exposure to trimethylchlorotin vapors. Laboratory animal studies have demonstrated neurotoxicity, decreases in oxidative phosphorylation associated with mitochondrial binding and inhibition of ATPase. Trimethylchlorotin is listed on the EPA Extremely Hazardous Substance List. Human fatalities have been reported for workers inhaling vapors of trimethylchlorotin.
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Causes skin irritation. Organotins may be absorbed through the skin.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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Chronic symptoms	: Trimethylchlorotin is a cumulative toxin. Symptomatic manifestations can follow exposure up to five days. Reported symptoms include memory loss, exhibition of rage and anger, and reduction of sexual function.
Reason for classification	: Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Tetrahydrofuran (109-99-9)

LC50 - Fish [1]	1970 – 2360 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
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LC50 - Fish [2]	2700 – 3600 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Tetrahydrofuran (109-99-9)

BCF - Fish [1]	(will not bioconcentrate)
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Partition coefficient n-octanol/water (Log Pow)	0.45 (at 25 °C)
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Other adverse effects : This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility..

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

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

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

14.1 UN number

UN-No. (ADR) : 2787

UN-No. (IMDG) : 2787

UN-No. (IATA) : 2787

UN-No. (ADN) : 2787

UN-No. (RID) : 2787

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC

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Proper Shipping Name (IMDG)	: ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC
Proper Shipping Name (IATA)	: Organotin pesticide, liquid, flammable, toxic
Proper Shipping Name (ADN)	: ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC
Proper Shipping Name (RID)	: ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC
Transport document description (ADR)	: UN 2787 ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC (TRIMETHYLCHLOROTIN 1M in THF), 3 (6.1), I, (C/E)
Transport document description (IMDG)	: UN 2787 ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC (TRIMETHYLCHLOROTIN 1M in THF), 3 (6.1), I, MARINE POLLUTANT (< 23°C c.c.)
Transport document description (IATA)	: UN 2787 Organotin pesticide, liquid, flammable, toxic (TRIMETHYLCHLOROTIN 1M in THF), 3 (6.1), I
Transport document description (ADN)	: UN 2787 ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC (TRIMETHYLCHLOROTIN 1M in THF), 3 (6.1), I
Transport document description (RID)	: UN 2787 ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC (TRIMETHYLCHLOROTIN 1M in THF), 3 (6.1), I

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3 (6.1)
Danger labels (ADR) : 3, 6.1



IMDG

Transport hazard class(es) (IMDG) : 3 (6.1)
Danger labels (IMDG) : 3, 6.1



IATA

Transport hazard class(es) (IATA) : 3 (6.1)
Danger labels (IATA) : 3, 6.1



ADN

Transport hazard class(es) (ADN) : 3 (6.1)
Danger labels (ADN) : 3, 6.1



RID

Transport hazard class(es) (RID) : 3 (6.1)
Danger labels (RID) : 3, 6.1



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14.4. Packing group



Packing group (ADR)	: I
Packing group (IMDG)	: I
Packing group (IATA)	: I
Packing group (ADN)	: I
Packing group (RID)	: I

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: Yes (IMDG only)
Other information	: No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: FT2
Special provisions (ADR)	: 61, 274
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P001
Mixed packing provisions (ADR)	: MP7, MP17
Portable tank and bulk container instructions (ADR)	: T14
Portable tank and bulk container special provisions (ADR)	: TP2, TP27
Tank code (ADR)	: L10CH
Tank special provisions (ADR)	: TU14, TU15, TE21
Vehicle for tank carriage	: FL
Transport category (ADR)	: 1
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S2, S22
Hazard identification number (Kemler No.)	: 336
Orange plates	:  
Tunnel restriction code (ADR)	: C/E
EAC code	: •3WE
APP code	: A(fl)

Transport by sea

Special provisions (IMDG)	: 61, 274
Packing instructions (IMDG)	: P001
Tank instructions (IMDG)	: T14
Tank special provisions (IMDG)	: TP2, TP13, TP27
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: B
Stowage and handling (IMDG)	: SW2
Flash point (IMDG)	: below 23°C c.c.
Properties and observations (IMDG)	: Pesticides frequently contain petroleum or coal tar distillates, or other flammable liquids. Miscibility with water depends upon the composition. Toxic if swallowed, by skin contact or by inhalation.

Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: 361

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CAO max net quantity (IATA) : 30L
Special provisions (IATA) : A4
ERG code (IATA) : 3P

Inland waterway transport

Classification code (ADN) : FT2
Special provisions (ADN) : 61, 274, 802
Limited quantities (ADN) : 0
Excepted quantities (ADN) : E0
Equipment required (ADN) : PP, EP, EX, TOX, A
Ventilation (ADN) : VE01, VE02
Number of blue cones/lights (ADN) : 2

Rail transport

Classification code (RID) : FT2
Special provisions (RID) : 61, 274
Limited quantities (RID) : 0
Excepted quantities (RID) : E0
Packing instructions (RID) : P001
Mixed packing provisions (RID) : MP7, MP17
Portable tank and bulk container instructions (RID) : T14
Portable tank and bulk container special provisions (RID) : TP2, TP27
Tank codes for RID tanks (RID) : L10CH
Special provisions for RID tanks (RID) : TU14, TU15, TU38, TE21, TE22
Transport category (RID) : 1
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28
Hazard identification number (RID) : 336

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

20. Organostannic compounds	Trimethylchlorotin
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POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals): Trimethyltin chloride (1066-45-1)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

VOC Directive (2004/42)

VOC content : No additional information available

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Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Water hazard class (WGK) : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed
SZW-lijst van mutagene stoffen : None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

Switzerland

Storage class (LK) : LK 3 - Flammable liquids

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor

Other information : Prepared by safety and environmental affairs.

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Full text of H- and EUH-statements:	
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Carc. 2	Carcinogenicity, Category 2
EUH019	May form explosive peroxides.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

SDS EU (REACH Annex II) - Custom v22 Test

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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