



TETRABUTYLPHOSPHONIUM CHLORIDE, 50% in toluene

Safety Data Sheet OMPH064.2

Date of issue: 06/02/2019 Version: 1.0

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

1.1. Product identifier

Product form	: Mixture
Physical state	: Liquid
Product name	: TETRABUTYLPHOSPHONIUM CHLORIDE, 50% in toluene
Product code	: OMPH064.2
Formula	: C16H36ClP
Synonyms	: PHOSPHONIUM, TETRABUTYL-, CHLORIDE (1:1)
Chemical family	: PHOSPHORUS COMPOUND

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

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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 4	H302
Acute toxicity (dermal), Category 3	H311
Skin corrosion/irritation, Category 1B	H314
Serious eye damage/eye irritation, Category 1	H318
Reproductive toxicity, Category 2	H361
Specific target organ toxicity — Single exposure, Category 3, Narcosis	H336
Specific target organ toxicity — Repeated exposure, Category 2	H373
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

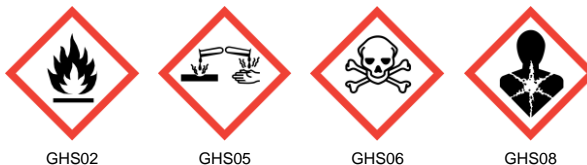
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2.2. Label elements

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

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazardous ingredients :

Tetrabutylphosphonium chloride; Toluene

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.
H302 - Harmful if swallowed.
H311 - Toxic in contact with skin.
H314 - Causes severe skin burns and eye damage.
H336 - May cause drowsiness or dizziness.
H361 - Suspected of damaging fertility or the unborn child.
H373 - May cause damage to organs through prolonged or repeated exposure.

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/physician

2.3. Other hazards

No additional information available

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]
Tetrabutylphosphonium chloride	(CAS-No.) 2304-30-5 (EC-No.) 218-964-8	49 - 51	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Dermal), H310 Skin Corr. 1B, H314 Eye Dam. 1, H318
Toluene	(CAS-No.) 108-88-3 (EC-No.) 203-625-9 (EC Index-No.) 601-021-00-3 (REACH-no) 01-2119471310-51-0127	49 - 51	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation:vapour), H332 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304

Full text of H-statements: see section 16

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).
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 immediate 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. Get immediate medical advice/attention.

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

Symptoms/effects	: Causes severe skin burns and eye damage. May cause damage to organs through prolonged or repeated exposure. Suspected of damaging fertility or the unborn child.
Symptoms/effects after inhalation	: May be harmful if inhaled. May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact	: Toxic in contact with skin. Causes (severe) skin burns. Causes alkali burns. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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	: Water spray. Alcohol-resistant 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	: Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.
Protection during firefighting	: Avoid all eye and skin contact and do not breathe vapour and mist. 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	: 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.

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".
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6.2. Environmental precautions

Avoid release to the environment. 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. Use only non-sparking tools.

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	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Precautions for safe handling	: 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. 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 equipment.
Storage conditions	: Keep container tightly closed. Store locked up. Keep in a cool place.

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Incompatible materials : Oxidizing agent.
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

Toluene (108-88-3)		
EU	IOELV TWA (mg/m ³)	192 mg/m ³
EU	IOELV TWA (ppm)	50 ppm
EU	IOELV STEL (mg/m ³)	384 mg/m ³
EU	IOELV STEL (ppm)	100 ppm
Austria	MAK (mg/m ³)	190 mg/m ³
Austria	MAK (ppm)	50 ppm
Austria	MAK Short time value (mg/m ³)	380 mg/m ³
Austria	MAK Short time value (ppm)	100 ppm
Belgium	Limit value (mg/m ³)	77 mg/m ³
Belgium	Limit value (ppm)	20 ppm
Belgium	Short time value (mg/m ³)	384 mg/m ³
Belgium	Short time value (ppm)	100 ppm
Bulgaria	OEL TWA (mg/m ³)	192 mg/m ³
Bulgaria	OEL TWA (ppm)	50 ppm
Bulgaria	OEL STEL (mg/m ³)	384 mg/m ³
Bulgaria	OEL STEL (ppm)	100 ppm
Cyprus	OEL TWA (mg/m ³)	192 mg/m ³
Cyprus	OEL TWA (ppm)	50 ppm
Cyprus	OEL STEL (mg/m ³)	384 mg/m ³
Cyprus	OEL STEL (ppm)	100 ppm
France	VLE (mg/m ³)	384 mg/m ³ (restrictive limit)
France	VLE (ppm)	100 ppm (restrictive limit)
France	VME (mg/m ³)	76.8 mg/m ³ (restrictive limit)
France	VME (ppm)	20 ppm (restrictive limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	190 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	50 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 903 Biological limit value	600 µg/l (Medium: whole blood - Time: end of shift - Parameter: Toluene) 1.5 mg/l (Medium: urine - Time: end of several shifts - Parameter: o-Cresol (after hydrolysis))
Gibraltar	Eight hours mg/m ³	192 mg/m ³
Gibraltar	Eight hours ppm	50 ppm
Gibraltar	Short-term mg/m ³	384 mg/m ³
Gibraltar	Short-term ppm	100 ppm
Greece	OEL TWA (mg/m ³)	192 mg/m ³
Greece	OEL TWA (ppm)	50 ppm
Greece	OEL STEL (mg/m ³)	384 mg/m ³
Greece	OEL STEL (ppm)	100 ppm
Italy - Portugal - USA ACGIH	ACGIH TWA (ppm)	20 ppm
Italy	OEL TWA (mg/m ³)	192 mg/m ³
Italy	OEL TWA (ppm)	50 ppm
Latvia	OEL TWA (mg/m ³)	50 mg/m ³
Latvia	OEL TWA (ppm)	14 ppm
USA IDLH	US IDLH (ppm)	500 ppm
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	375 mg/m ³
USA NIOSH	NIOSH REL (TWA) (ppm)	100 ppm
USA NIOSH	NIOSH REL (STEL) (mg/m ³)	560 mg/m ³

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USA NIOSH	NIOSH REL (STEL) (ppm)	150 ppm
USA OSHA	OSHA PEL (TWA) (ppm)	200 ppm
USA OSHA	OSHA PEL (Ceiling) (ppm)	300 ppm
Spain	VLA-ED (mg/m ³)	192 mg/m ³ (indicative limit value; manufacturing, commercialization, and use restrictions under REACH)
Spain	VLA-ED (ppm)	50 ppm (indicative limit value; manufacturing, commercialization, and use restrictions under REACH)
Spain	VLA-EC (mg/m ³)	384 mg/m ³
Spain	VLA-EC (ppm)	100 ppm
Switzerland	KZGW (mg/m ³)	760 mg/m ³
Switzerland	KZGW (ppm)	200 ppm
Switzerland	MAK (mg/m ³)	190 mg/m ³
Switzerland	MAK (ppm)	50 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	150 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	384 mg/m ³
United Kingdom	WEL TWA (mg/m ³)	191 mg/m ³
United Kingdom	WEL TWA (ppm)	50 ppm
United Kingdom	WEL STEL (mg/m ³)	384 mg/m ³
United Kingdom	WEL STEL (ppm)	100 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	200 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	94 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	25 ppm
Finland	HTP-arvo (8h) (mg/m ³)	81 mg/m ³
Finland	HTP-arvo (8h) (ppm)	25 ppm
Finland	HTP-arvo (15 min)	380 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	100 ppm
Hungary	AK-érték	190 mg/m ³
Hungary	CK-érték	380 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	192 mg/m ³
Ireland	OEL (8 hours ref) (ppm)	50 ppm
Ireland	OEL (15 min ref) (mg/m ³)	384 mg/m ³
Ireland	OEL (15 min ref) (ppm)	100 ppm
Lithuania	IPRV (mg/m ³)	192 mg/m ³
Lithuania	IPRV (ppm)	50 ppm
Lithuania	TPRV (mg/m ³)	384 mg/m ³
Lithuania	TPRV (ppm)	100 ppm
Malta	OEL TWA (mg/m ³)	192 mg/m ³
Malta	OEL TWA (ppm)	50 ppm
Malta	OEL STEL (mg/m ³)	384 mg/m ³
Malta	OEL STEL (ppm)	100 ppm
Norway	Grenseverdier (AN) (mg/m ³)	94 mg/m ³
Norway	Grenseverdier (AN) (ppm)	25 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	94 mg/m ³
Norway	Grenseverdier (Korttidsverdi) (ppm)	25 ppm
Poland	NDS (mg/m ³)	100 mg/m ³
Poland	NDSch (mg/m ³)	200 mg/m ³
Romania	OEL TWA (mg/m ³)	192 mg/m ³
Romania	OEL TWA (ppm)	50 ppm
Romania	OEL STEL (mg/m ³)	384 mg/m ³
Romania	OEL STEL (ppm)	100 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	192 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	50 ppm

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Toluene (108-88-3)		
Slovakia	NPHV (Hraničná) (mg/m ³)	384 mg/m ³
Sweden	nivågränsvärde (NVG) (mg/m ³)	192 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	50 ppm
Sweden	kortidsvärde (KTV) (mg/m ³)	384 mg/m ³
Sweden	kortidsvärde (KTV) (ppm)	100 ppm
Canada (Quebec)	VEMP (mg/m ³)	188 mg/m ³
Canada (Quebec)	VEMP (ppm)	50 ppm
Australia	TWA (mg/m ³)	191 mg/m ³
Australia	TWA (ppm)	50 ppm
Australia	STEL (mg/m ³)	574 mg/m ³
Australia	STEL (ppm)	150 ppm
Portugal	OEL TWA (mg/m ³)	192 mg/m ³ (indicative limit value)
Portugal	OEL TWA (ppm)	50 ppm (indicative limit value)
Portugal	OEL STEL (mg/m ³)	384 mg/m ³ (indicative limit value)
Portugal	OEL STEL (ppm)	100 ppm (indicative limit value)
Portugal	OEL chemical category (PT)	A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure indicative limit value

8.2. Exposure controls

Appropriate engineering controls:

Provide local exhaust or general room ventilation.

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.

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles. Contact lenses should not be worn

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified combination organic vapor/acid gas (yellow cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear liquid.
Molecular mass	: 294.89 g/mol
Colour	: Colorless to Amber.
Odour	: No data available
Odour threshold	: No data available
Refractive index	: 1.5
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: < 10 °C
Freezing point	: No data available
Boiling point	: 110 °C initial (toluene)
Flash point	: 4 °C
Auto-ignition temperature	: 535 °C (toluene)
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available

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Relative vapour density at 20 °C	: No data available
Relative density	: 0.91
% Volatiles	: > 50 %
Solubility	: Slightly. Soluble in water.
Log Pow	: No data available
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	: 1.27 - 7 vol % (toluene)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

Heat. Sparks. Open flame.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Carbon dioxide. Phosphorus oxides. Tributylphosphine oxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed. Toxic in contact with skin.

TETRABUTYLPHOSPHONIUM CHLORIDE, 50% in toluene (2304-30-5)	
ATE CLP (oral)	1796.078 mg/kg bodyweight
ATE CLP (dermal)	237.255 mg/kg bodyweight
Tetrabutylphosphonium chloride (2304-30-5)	
LD50 oral rat	916 mg/kg
LD50 oral rabbit	325 mg/kg
LD50 dermal rabbit	121 mg/kg
LD50 intravenous mouse	32 mg/kg
LC50 inhalation rat (mg/l)	> 3 mg/m ³ (Exposure time: 1 h)
ATE CLP (oral)	916 mg/kg bodyweight
ATE CLP (dermal)	121 mg/kg bodyweight
Toluene (108-88-3)	
LD50 oral rat	2600 mg/kg
LD50 dermal rabbit	12000 mg/kg
LC50 inhalation rat (mg/l)	12.5 mg/l/4h
ATE CLP (oral)	2600 mg/kg bodyweight
ATE CLP (dermal)	12000 mg/kg bodyweight
ATE CLP (vapours)	12.5 mg/l/4h
ATE CLP (dust,mist)	12.5 mg/l/4h

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified negative Ames test for mutagenicity reported.

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Carcinogenicity : Not classified
This product contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

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IARC group : 3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : May cause drowsiness or dizziness.
STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard : Not classified
Potential adverse human health effects and symptoms : Signs of toxicity include staggered gait, loss of righting reflex and decrease in spontaneous activity and reactivity.
Symptoms/effects after inhalation : May be harmful if inhaled. May cause drowsiness or dizziness. May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact : Toxic in contact with skin. Causes (severe) skin burns. Causes alkali burns. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/effects after eye contact : Causes serious eye damage.
Symptoms/effects after ingestion : Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity : Not classified
Chronic aquatic toxicity : Not classified

Toluene (108-88-3)

LC50 fish 1	15.22 - 19.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	5.46 - 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Toluene (108-88-3)

Log Pow : 2.65

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

14.1. UN number

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

14.1. UN number

UN-No. (ADR) : 1992
UN-No. (IMDG) : 1992
UN-No. (IATA) : 1992

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UN-No. (ADN) : 1992

UN-No. (RID) : 1992

14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, TOXIC, N.O.S.

Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, TOXIC, N.O.S.

Proper Shipping Name (IATA) : Flammable liquid, toxic, n.o.s.

Proper Shipping Name (ADN) : FLAMMABLE LIQUID, TOXIC, N.O.S.

Proper Shipping Name (RID) : FLAMMABLE LIQUID, TOXIC, N.O.S.

Transport document description (ADR) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (TETRABUTYLPHOSPHONIUM CHLORIDE, 50% in toluene), 3 (6.1), II, (D/E)

Transport document description (IMDG) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (TETRABUTYLPHOSPHONIUM CHLORIDE, 50% in toluene), 3 (6.1), II

Transport document description (IATA) : UN 1992 Flammable liquid, toxic, n.o.s. (TETRABUTYLPHOSPHONIUM CHLORIDE, 50% in toluene), 3 (6.1), II

Transport document description (ADN) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (TETRABUTYLPHOSPHONIUM CHLORIDE, 50% in toluene), 3 (6.1), II

Transport document description (RID) : UN 1992 FLAMMABLE LIQUID, TOXIC, N.O.S. (TETRABUTYLPHOSPHONIUM CHLORIDE, 50% in toluene), 3 (6.1), II

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)

Hazard 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)

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Danger labels (RID) : 3, 6.1



14.4. Packing group

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

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No
Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

Classification code (ADR) : FT1
Special provisions (ADR) : 274
Limited quantities (ADR) : 11
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP2
Tank code (ADR) : L4BH
Tank special provisions (ADR) : TU15
Vehicle for tank carriage : FL
Transport category (ADR) : 2
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) : D/E
EAC code : •3WE
APP code : A(fl)

- Transport by sea

Special provisions (IMDG) : 274
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP2, TP13
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D
Stowage category (IMDG) : B
Stowage and handling (IMDG) : SW2
Properties and observations (IMDG) : Flammable toxic liquid which is not specified by name in this class or, on account of its characteristics, in some other class. Toxic if swallowed, by skin contact or by inhalation.

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- Air transport

PCA Excepted quantities (IATA)	: E2
PCA Limited quantities (IATA)	: Y341
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 352
PCA max net quantity (IATA)	: 1L
CAO packing instructions (IATA)	: 364
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3HP

- Inland waterway transport

Classification code (ADN)	: FT1
Special provisions (ADN)	: 274, 802
Limited quantities (ADN)	: 1 L
Excepted quantities (ADN)	: E2
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, EX, TOX, A
Ventilation (ADN)	: VE01, VE02
Number of blue cones/lights (ADN)	: 2

- Rail transport

Classification code (RID)	: FT1
Special provisions (RID)	: 274
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T7
Portable tank and bulk container special provisions (RID)	: TP2
Tank codes for RID tanks (RID)	: L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28
Colis express (express parcels) (RID)	: CE7
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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

Contains no REACH Annex XIV substances

% Volatiles : > 50 %

15.1.2. National regulations

Germany

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12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : Toluene is listed
SZW-lijst van mutagene stoffen : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : Toluene is listed

Denmark

Class for fire hazard : Class I-1
Store unit : 1 liter
Classification remarks : F <Flam. Liq. 2>; 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

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.

Full text of H- and EUH-statements:

Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Repr. 2	Reproductive toxicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.

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H373	May cause damage to organs through prolonged or repeated exposure.
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SDS EU (REACH Annex II) - Custom

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