Tetrachloroethylene v.p.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 3/17/2023 Version: 1.1

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	Tetrachloroethylene v.p.
EC Index-No.	:	602-028-00-4
EC-No.	:	204-825-9
CAS-No.	:	127-18-4
REACH registration No.	:	01-2119475329-28
Product code	:	CL00.2020
Type of product	:	Commercial product is usually stabilized
Formula	:	C2Cl4
Synonyms	:	1,1,2,2-tetrachloroethene / 1,1,2,2-tetrachloroethylene / AI3-01860 / ankilostin / antisal 1 / antisol / antisol 1 / carbonbichloride / carbondichloride / cecolene 2 / dee-solv / didakene / dowper / ENT 1860 / ethene, tetrachloro- / ethylene tetrachloride / ethyleneperchloride / fedal-un / freon 1110 / nema / PCE (=perchloroethylene) / PER / perawin / perc / perchlor / perchloroethylene / perchloroethylene golden CS / perclene / perclene D / percosolv / percosolve / perk / perklone / perluxe / persec / spectranal / TCE / tetlen / tetracap / tetrachlorethylene / tetrachloroethylene / tetraguer / tetraleno / tetralex / tetravec / tetroguer / tetropil
BIG No	:	10041

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	:	Laboratory chemical

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Chem-Lab nv
Industriezone 'De arend 2'
Zedelgem – Belgium
Belgium
T +32 50 288320
info@chem-lab.be - https://www.chem-lab.be

1.4. Emergency telephone number

Emergency number	:	+32 50 28 83 20

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Carcinogenicity, Category 2	H351
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS08 GHS09

Signal word (CLP) : Warning

Hazard statements (CLP) : H351 - Suspected of causing cancer.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P281 - Use personal protective equipment as required.
P273 - Avoid release to the environment.
P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Tetrachloroethylene v.p.	CAS-No.: 127-18-4 EC-No.: 204-825-9 EC Index-No.: 602-028-00-4 REACH-no: 01-2119475329-28	100	Carc. 2, H351 Aquatic Chronic 2, H411

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

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Rinse with water. Soap may be used. Do not apply (chemical) neutralizing agents without medical advice. Take victim to a doctor if irritation persists.

First-aid measures after eye contact : Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice.

First-aid measures after ingestion : Rinse mouth with water. Do not induce vomiting. Do not apply (chemical) neutralizing agents without medical advice. Call Poison Information Centre (www.big.be/antigif.html). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

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

Symptoms/effects after inhalation : Central nervous system depression. Dizziness. Feeling of weakness. Headache. Nausea. Narcosis. Drunkenness. EXPOSURE TO HIGH CONCENTRATIONS: Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Coordination disorders. Disturbances of consciousness. Disturbances of heart rate. Possible laryngeal spasm/oedema. Risk of lung oedema. Respiratory difficulties. Decreased renal function.

Symptoms/effects after skin contact : ON CONTINUOUS EXPOSURE/CONTACT: Blisters.

Symptoms/effects after eye contact : EXPOSURE TO HIGH CONCENTRATIONS: Visual disturbances.

Symptoms/effects after ingestion : Risk of aspiration pneumonia. Vomiting. Nausea. AFTER INGESTION OF HIGH QUANTITIES: Central nervous system depression. Symptoms similar to those listed under inhalation.

Chronic symptoms : Red skin. Dry skin. Skin rash/inflammation. Enlargement/affection of the liver. Affection of the renal tissue. Possible bladder tumours.

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 : Adapt extinguishing media to the environment for surrounding fires.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD: Non combustible.

Explosion hazard : INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".

Hazardous decomposition products in case of fire : On heating/burning: release of toxic and corrosive gases/vapours (phosgene, chlorine, hydrogen chloride, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: consider evacuation.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.

Protection during firefighting : Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves (EN 374). Protective clothing (EN 14605 or EN 13034). Large spills/in enclosed spaces: self-contained breathing apparatus (EN 136 + EN 137).

Emergency procedures : Keep upwind. Mark the danger area. Seal off low-lying areas. Close doors and windows of adjacent premises. No naked flames. Keep containers closed. Wash contaminated clothes. Large spills/in confined spaces: consider evacuation. In case of reactivity hazard: consider evacuation.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation.

Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: kieselguhr, powdered limestone or dry sand/earth. Scoop absorbed substance into closing containers. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.

Hygiene measures : Observe strict hygiene.

7.2. Conditions for safe storage, including any incompatibilities

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. (strong) bases. metals. metallic salts. amines.

Storage area : Store in a cool area. Store in a dry area. Store in a dark area. Keep container in a well-ventilated place. Keep locked up. Provide for a tub to collect spills. Unauthorized persons are not admitted. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. dry. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: steel. stainless steel. glass. MATERIAL TO AVOID: aluminium. iron. zinc. copper. plastics.

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

Tetrachloroethylene v.p. (127-18-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	138 mg/m³
IOEL TWA [ppm]	20 ppm
IOEL STEL	275 mg/m³
IOEL STEL [ppm]	40 ppm
Belgium - Occupational Exposure Limits	
OEL TWA	138 mg/m³
OEL TWA [ppm]	20 ppm
OEL STEL	275 mg/m³

Tetrachloroethylene v.p. (127-18-4)	
OEL STEL [ppm]	40 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	138 mg/m³
VME (OEL TWA) [ppm]	20 ppm
VLE (OEL C/STEL)	275 mg/m³
VLE (OEL C/STEL) [ppm]	40 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	138 mg/m³
TGG-8u (OEL TWA) [ppm]	20 ppm
TGG-15min (OEL STEL)	275 mg/m³
TGG-15min (OEL STEL) [ppm]	40 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	138 mg/m³
WEL TWA (OEL TWA) [2]	20 ppm
WEL STEL (OEL STEL)	275 mg/m³
WEL STEL (OEL STEL) [ppm]	40 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	25 ppm
ACGIH OEL STEL [ppm]	100 ppm

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

Tetrachloroethylene v.p. (127-18-4)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	275 mg/m³
Long-term - systemic effects, dermal	39.4 mg/kg bw/day
Long-term - systemic effects, inhalation	138 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	1.38 mg/m³
Long-term - systemic effects,oral	1.3 mg/kg bw/day
Long-term - systemic effects, inhalation	0.25 mg/m³
Long-term - systemic effects, dermal	0.167 mg/kg bw/day
PNEC (Water)	
PNEC aqua (freshwater)	0.051 mg/l
PNEC aqua (marine water)	0.005 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0.903 mg/kg dwt

Tetrachloroethylene v.p. (127-18-4)	
PNEC sediment (marine water)	0.09 mg/kg dwt
PNEC (Soil)	
PNEC soil	0.01 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	11.2 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses (EN 166)

8.2.2.2. Skin protection

Skin and body protection:
Protective clothing (EN 14605 or EN 13034)

Hand protection:
Protective gloves against chemicals (EN 374)

Other skin protection

Materials for protective clothing:
Good resistance: Polyvinylalcohol (PVA). FPM. Viton. ethyl vinyl alcohol laminate. Less resistance: Butyl rubber. Poor resistance: neoprene (chloroprene rubber). Polyvinylchloride (PVC). Polyethylene

8.2.2.3. Respiratory protection

Respiratory protection:
Full face mask with filter type A at conc. in air > exposure limit

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
Colour	:	Colourless.
Appearance	:	Liquid.
Molecular mass	:	165.83 g/mol
Odour	:	Sweet odour. Ether-like odour.
Odour threshold	:	Not available

Melting point	:	-22 °C (1013 hPa)
Freezing point	:	Not available
Boiling point	:	121 °C (1013 hPa)
Flammability	:	Not available
Explosive limits	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not quantifiable
Auto-ignition temperature	:	> 650 °C (1013 hPa, T1)
Decomposition temperature	:	> 150 °C
pH	:	No data available in the literature
Viscosity, kinematic	:	No data available in the literature
Viscosity, dynamic	:	0.844 mPa.s (25 °C)
Solubility	:	Insoluble in water. Substance sinks in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in chloroform. Soluble in tetrachloromethane. Soluble in hexane. Soluble in oils/fats. Water: 0.015 g/100ml (25 °C) Ethanol: miscible Ether: miscible Acetone: > 10 g/100ml
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Partition coefficient n-octanol/water (Log Pow)	:	2.53 (Experimental value, Equivalent or similar to OECD 107, 23 °C)
Vapour pressure	:	25 hPa (25 °C)
Vapour pressure at 50°C	:	83 hPa (Antoine equation)
Saturation concentration	:	127 g/m³
Density	:	1610 kg/m³ (25 °C)
Relative density	:	1.61 (25 °C)
Relative vapour density at 20°C	:	5.8
Relative density of saturated gas/air mixture	:	1.1
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Critical temperature	:	347 °C

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1)	:	2
Relative evaporation rate (ether=1)	:	8
VOC content	:	100 %
Other properties	:	Gas/vapour heavier than air at 20°C,Clear,Volatile

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with (some) acids/bases. Violent to explosive reaction with (strong) oxidizers. Violent to explosive reaction with (some) metal powders. This reaction is accelerated on exposure to water (moisture).

10.2. Chemical stability

Decomposes slowly on exposure to light.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Unstabilised product decomposes on exposure to light, on exposure to air and on exposure to water (moisture): release of toxic and corrosive gases/vapours, phosgene, hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Tetrachloroethylene v.p. (127-18-4)	
LD50 oral rat	3835 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	> 10000 mg/kg bodyweight (24 h, Rabbit, Experimental value, Dermal)

Skin corrosion/irritation : Not classified
pH: No data available in the literature
Serious eye damage/irritation : Not classified
pH: No data available in the literature
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Suspected of causing cancer.
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Tetrachloroethylene v.p. (127-18-4)	
Viscosity, kinematic	No data available in the literature

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg),Non-toxic in contact with skin (LD50 skin> 5000 mg/kg),Caution! Substance is absorbed through the skin

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Dangerous for the environment.
Ecology - air : Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water : Toxic to crustacea. Toxic to crustacea with long lasting effects. Toxic to fishes. Groundwater pollutant. Not harmful to activated sludge. Toxic to algae. Slightly harmful to bacteria. No significant hydrolysis.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.
Not rapidly degradable

Tetrachloroethylene v.p. (127-18-4)	
LC50 - Fish [1]	5 mg/l (96 h, Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value, Locomotor effect)
EC50 - Crustacea [1]	8.5 mg/l (ASTM, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	3.64 mg/l (Chlamydomonas reinhardtii, Fresh water, Experimental value, Growth rate)

12.2. Persistence and degradability

Tetrachloroethylene v.p. (127-18-4)	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.06 g O_2/g substance
ThOD	0.39 g O_2/g substance
BOD (% of ThOD)	0.15

12.3. Bioaccumulative potential

Tetrachloroethylene v.p. (127-18-4)	
BCF - Fish [1]	49 (21 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	2.53 (Experimental value, Equivalent or similar to OECD 107, 23 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Tetrachloroethylene v.p. (127-18-4)	
Surface tension	32.1 mN/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.15 (log Koc, Experimental value)
Ecology - soil	Low potential for adsorption in soil.

12.5. Results of PBT and vPvB assessment

Tetrachloroethylene v.p. (127-18-4)
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

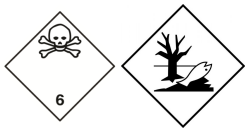
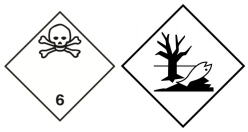
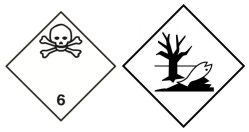
Product/Packaging disposal recommendations : Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.

Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

European List of Waste (LoW) code : 15 01 10* - packaging containing residues of or contaminated by dangerous substances
07 01 03* - organic halogenated solvents, washing liquids and mother liquors

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1897	UN 1897	UN 1897	UN 1897	UN 1897
14.2. UN proper shipping name				
tetrachloroethylene	tetrachloroethylene	tetrachloroethylene	tetrachloroethylene	tetrachloroethylene
Transport document description				
UN 1897 tetrachloroethylene, 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 1897 tetrachloroethylene, 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1897 tetrachloroethylene, 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 1897 tetrachloroethylene, 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 1897 tetrachloroethylene, 6.1, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
6.1	6.1	6.1	6.1	6.1
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

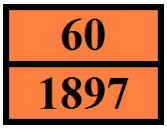
14.6. Special precautions for user

Overland transport

Transport regulations (ADR) : Subject to the provisions

Classification code (ADR) : T1

Hazard identification number (Kemler No.) : 60

Orange plates : 

Tunnel restriction code (ADR) : E
EAC code : 2Z

Transport by sea
Transport regulations (IMDG) : Subject to the provisions
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-A

Air transport
Transport regulations (IATA) : Subject to the provisions

Inland waterway transport
Classification code (ADN) : T1
Carriage permitted (ADN) : T

Rail transport
Transport regulations (RID) : Subject to the provisions
Classification code (RID) : T1

14.7. Maritime transport in bulk according to IMO instruments

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)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

VOC Directive (2004/42)

VOC content : 100 %

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 12	Occupational diseases caused by the halogenated aliphatic hydrocarbons listed below: dichloromethane; trichloromethane; tribromomethane; triiodomethane; tetrabromomethane; chloroethane; 1,1-dichloroethane; 1,2-dichloroethane; 1,2-dibromoethane; 1,1,1-trichloroethane; 2-bromopropane; 1,2-dichloropropane; trichlorethylene; tetrachlorethylene; dichloroacetylene; trichlorofluoromethane; 1,1,2,2-tetrachloro-1,2-difluoroethane; 1,1,1-trichloro-2,2,2-trifluoroethane; 1,1-dichloro-2,2,2-trifluoroethane; 1,2-dichloro-1,1-difluoroethane; 1,1-dichloro-1-fluoroethane
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

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV; ID No. 287).

Storage class (LGK, TRGS 510) : LGK 6.1D - Non-combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects.

Joint storage table :

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for : LGK 1, LGK 2A, LGK 4.1A, LGK 5.1A, LGK 5.1C, LGK 5.2, LGK 6.2, LGK 7.

Joint storage with restrictions permitted for : LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1B.

Joint storage permitted for : LGK 2B, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13.

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category : Z(1) - non biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/ reprotoxicity/bioacumulative potential/ toxicity or persistence)

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : The substance is not listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : tetrachloroethylene is listed

Denmark

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

Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Carc. 2	Carcinogenicity, Category 2
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.

Safety Data Sheet (SDS), EU

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.