

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

1.1. Product identifier

Product form	: Substance
Trade name	: Tetrachloroethylene Neat
Chemical name	: tetrachloroethylene
IUPAC name	: Tetrachloroethylene
EC Index-No.	: 602-028-00-4
EC-No.	: 204-825-9
CAS-No.	: 127-18-4
Product code	: CM30446
Formula	: C2Cl4
Synonyms	: 1,1,2,2-tetrachloroethene / 1,1,2,2-tetrachloroethylene / A13-01860 / 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 / perclosolv / percossolve / perk / perklone / perluxe / persec / R1110 / spectranal / TCE / tetlen / tetracap / tetrachlorethylene / tetrachloroethene / Tetrachloroethylene / tetraguer / tetraleno / tetralex / travavec / tetroguer / tetropil
BIG No	: 10041

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

Relevant identified uses

Main use category	: Professional use
Use of the substance/mixture	: Reference material
Function or use category	: Laboratory chemicals

1.3. Details of the supplier of the safety data sheet

Spectracer UK Ltd.

20 Seymour Mews,
London,
W1H 6BQ,
United Kingdom.

Tel: +44 (0) 207 193 9114

Fax: +44 (0) 203 432 4686

Email: contact@spectracer.com

Web: www.spectracer.com

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	112 +356 2545 6508	
United Kingdom	National Poisons Information Service (NHS Direct)	http://www.npis.org	111 (England & Wales only) or 112 (EU) or 08454 24 24 24 (Scotland)	

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation Not classified

Carcinogenicity, Category 2 H351

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

Category 2

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

Adverse physicochemical, human health and environmental effects

Suspected of causing cancer. Toxic to aquatic life with long lasting effects.

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)

: P201 - Obtain special instructions before use.

P273 - Avoid release to the environment.

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

P308+P313 - IF exposed or concerned: Get medical advice/attention.

P391 - Collect spillage.

Listed on CLP Annex VI

: EC Index-No.: 602-028-00-4

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	CAS-No.: 127-18-4 EC-No.: 204-825-9 EC Index-No.: 602-028-00-4	≥ 95	Skin Corr./Irrit. Not classified Carc. 2, H351 Aquatic Chronic 2, H411

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact

: Wash skin with plenty of water.

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First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.
First-aid measures for first aider	: First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.
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For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area.

For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling	: Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Store locked up.
Packaging materials	: Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Tetrachloroethylene Neat (127-18-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Tetrachloroethylene
IOEL TWA	138 mg/m ³
	20 ppm
IOEL STEL	275 mg/m ³
	40 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
EU - Biological Limit Value (BLV)	
Local name	Tetrachloroethylene
BLV	0,4 mg/l Parameter: tetrachloroethylene - Medium: blood - Sampling time: prior to the last shift of a work-week 3 ppm Parameter: tetrachloroethylene - Medium: end-exhaled air - Sampling time: prior to the last shift of a work-week 0,435 mg/m ³ Parameter: tetrachloroethylene - Medium: end-exhaled air - Sampling time: prior to the last shift of a work-week
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Austria - Occupational Exposure Limits	
Local name	Tetrachlorethen (Perchlorethylen)
MAK (OEL TWA)	138 mg/m ³
	20 ppm
MAK (OEL STEL)	275 mg/m ³ (4x 15(Miw) min)
	40 ppm (4x 15(Miw) min)
Remark	H. Fortpflanzungsgefährdend: d. Krebserzeugend: III B

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Tetrachloroethylene Neat (127-18-4)	
Regulatory reference	BGBl. II Nr. 156/2021
Austria - Biological limit values	
Local name	Tetrachlorethen (Perchlorethylen)
BLV	40 mg/l Parameter: Trichloressigsäure - Untersuchungsmaterial: Harn - Probenahmezeitpunkt: Bei Per-Exposition
Remark	Eignung: Blut: Leberfunktionsprüfung: SGOT bis 50 U/l für Männer; bis 35 U/l für Frauen. SGPT bis 50 U/l für Männer; bis 35 U/l für Frauen. GGT bis 66 U/l für Männer; bis 39 U/l für Frauen. Eignung mit vorzeitiger Folgeuntersuchung: Bei Überschreiten von mindestens zwei der Grenzwerte im Blut; Bei Überschreitung des Grenzwertes für Trichloressigsäure im Harn; nur bei Per-Exposition. Der Zeitabstand zwischen den Untersuchungen beträgt bei Eignung: ein Jahr; bei Eignung mit vorzeitiger Folgeuntersuchung: drei Monate.
Regulatory reference	Verordnung über die Gesundheitsüberwachung am Arbeitsplatz 2017 (VGÜ 2017)
Belgium - Occupational Exposure Limits	
Local name	Perchloroéthylène (Tétrachloréthylène) # Perchlooretheen (Tetrachloorethyleen)
OEL TWA	138 mg/m ³ 20 ppm
OEL STEL	275 mg/m ³ 40 ppm
Remark	D: la mention "D" signifie que la résorption de l'agent, via la peau, les muqueuses ou les yeux, constitue une partie importante de l'exposition totale. Cette résorption peut se faire tant par contact direct que par présence de l'agent dans l'air. # D: de vermelding "D" betekent dat de opname van het agens via de huid, de slijmvliezen of de ogen een belangrijk deel van de totale blootstelling vormt. Deze opname kan het gevolg zijn van zowel direct contact als zijn aanwezigheid in de lucht.
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023
Bulgaria - Occupational Exposure Limits	
Local name	Тетрахлоретилен
OEL TWA	138 mg/m ³ 20 ppm
OEL STEL	275 mg/m ³ 40 ppm
Remark	Кожа (възможна е значителна резорбция чрез кожата); • (Химични агенти, за които са определени гранични стойности във въздуха на работната среда за Европейската общност)
Regulatory reference	Наредба № 13 от 30.12.2003 г. за защита на работещите от рискове, свързани с експозиция на химични агенти при работа (изм. и доп. ДВ. бр. 28 от 2024 г., в сила от 05.04.2024 г.)
Croatia - Occupational Exposure Limits	
Local name	Tetrakloroetilen
GVI (OEL TWA)	138 mg/m ³ 20 ppm
KGVI (OEL STEL)	275 mg/m ³ 40 ppm

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Tetrachloroethylene Neat (127-18-4)	
Remark	Direktiva: 2017/164/EU. Napomena: Koža (razvrstana kao tvar koja nadražuje kožu (H315))
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 148/2023)
Croatia - Biological limit values	
Local name	Tetrakloroetilen (perkloroetilen)
BLV	2,4 µmol/l Karakteristični pokazatelj: tetrakloroetilen - Biološki uzorak: krv - Vrijeme uzorkovanja: Prije posljednje smjene u radnom tjednu 0,4 mg/l Karakteristični pokazatelj: tetrakloroetilen - Biološki uzorak: krv - Vrijeme uzorkovanja: Prije posljednje smjene u radnom tjednu 0,435 mg/m ³ Karakteristični pokazatelj: tetrakloroetilen - Biološki uzorak: krajnje izdahnuti zrak - Vrijeme uzorkovanja: Prije posljednje smjene u radnom tjednu 3 ppm Karakteristični pokazatelj: tetrakloroetilen - Biološki uzorak: krajnje izdahnuti zrak - Vrijeme uzorkovanja: Prije posljednje smjene u radnom tjednu
Regulatory reference	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 91/2018)
Cyprus - Occupational Exposure Limits	
Local name	Τετραχλωροαιθυλένιο
OEL TWA	138 mg/m ³ 20 ppm
OEL STEL	275 mg/m ³ 40 ppm
Remark	δέρμα
Regulatory reference	Κανονισμοί του 2019 (Κ.Δ.Π. 16/2019)
Czech Republic - Occupational Exposure Limits	
Local name	Tetrachlorethen (Perchlorethylen; Tetrachlorethylen)
PEL (OEL TWA)	138 mg/m ³ 20 ppm
NPK-P (OEL C)	275 mg/m ³ 40 ppm
Remark	D - při expozici se významně uplatňuje pronikání faktoru kůží.
Regulatory reference	Nařízení vlády č. 361/2007 Sb. (Předpis 330/2023 Sb.)
Denmark - Occupational Exposure Limits	
Local name	Tetrachlorethen (Perchlorethylen; Tetrachlorethylen)
OEL TWA	70 mg/m ³ 10 ppm
OEL STEL	275 mg/m ³ 40 ppm
Remark	E (betyder, at stoffet har en EF-grænseværdi); H (betyder, at stoffet kan optages gennem huden); K (betyder, at stoffet anses for at kunne være kræftfremkaldende)
Regulatory reference	BEK nr 291 af 19/03/2024
Finland - Occupational Exposure Limits	
Local name	Tetrakloorietyleeni

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Tetrachloroethylene Neat (127-18-4)	
HTP (OEL TWA)	70 mg/m ³
	10 ppm
HTP (OEL STEL)	140 mg/m ³
	20 ppm
Remark	Iho
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
Finland - Biological limit values	
Local name	Tetrakloorieteeni
BLV	1,2 µmol/l Parametri: Veren tetrakloorieteeni - Näytteenottoajankohta: Työpäivän jälkeinen aamu
Regulatory reference	HTP-ARVOT 2020 (Sosiaali- ja terveysministeriö)
France - Occupational Exposure Limits	
Local name	Perchloroéthylène (Tétrachloroéthylène)
VME (OEL TWA)	138 mg/m ³
	20 ppm
VLE (OEL C/STEL)	275 mg/m ³ (Perchloroéthylène; France; Short time value; VRC: Valeur réglementaire contraignante)
	40 ppm (Perchloroéthylène; France; Short time value; VRC: Valeur réglementaire contraignante)
Remark	Valeurs règlementaires contraignantes. Risque de pénétration percutanée, Cancérogène de catégorie 2
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 6443, 2022; Outil65; Décret n° 2019-1487; Décret n° 2020-1546; Décret n° 2021-434; Décret n° 2021-1849)
Germany - Occupational Exposure Limits (TRGS 900)	
Local name	Tetrachlorethylen (Per)
AGW (OEL TWA)	69 mg/m ³
	10 ppm
Peak exposure limitation factor	2(II)
Remark	EU - Europäische Union (Von der EU wurde ein Luftgrenzwert festgelegt: Abweichungen bei Wert und Spitzenbegrenzung sind möglich); DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); H - hautresorptiv; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden
Regulatory reference	TRGS900
Germany - Biological limit values (TRGS 903)	
Local name	Tetrachlorethylen (Tetrachlorethen)
Biological limit value	200 µg/l Parameter: Tetrachlorethylen (Tetrachlorethen) - Untersuchungsmaterial: B = Vollblut - Probenahmezeitpunkt: e) nach Expositionsende: Stunden (16 h) - Festlegung/Begründung: 11/2018 DFG
Regulatory reference	TRGS 903
Gibraltar - Occupational Exposure Limits	
Local name	Tetrachloroethylene
OEL TWA	138 mg/m ³

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Tetrachloroethylene Neat (127-18-4)	
	20 ppm
OEL STEL	275 mg/m ³
	40 ppm
Regulatory reference	Factories (Control of Chemical Agents at Work) Regulations 2003 (LN. 2018/181)
Greece - Occupational Exposure Limits	
Local name	Τετραχλωροαιθυλένιο (Υπερχλωροαιθυλένιο)
OEL TWA	138 mg/m ³
	20 ppm
OEL STEL	275 mg/m ³
	40 ppm
Remark	Η ένδειξη «δέρμα» στις οριακές τιμές επαγγελματικής έκθεσης επισημαίνει το ενδεχόμενο σημαντικής διείσδυσης μέσω του δέρματος.
Regulatory reference	Π.Δ. 82/2018 - Προστασία της υγείας των εργαζομένων που εκτίθενται σε ορισμένους χημικούς παράγοντες κατά τη διάρκεια της εργασίας τους
Hungary - Occupational Exposure Limits	
Local name	TETRAKLÓRETILÉN
AK (OEL TWA)	138 mg/m ³
CK (OEL STEL)	275 mg/m ³
Remark	b (Bőrön át is felszívódik); EU4 (2017/164 EU irányelvben közölt érték); R+T (Azok az anyagok, amelyek RÖVID és TARTÓS expozíciója is egészségkárosodást okoz)
Regulatory reference	5/2020. (II. 6.) ITM rendelet - A kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
Ireland - Occupational Exposure Limits	
Local name	Tetrachloroethylene [Perchloroethylene]
OEL TWA	138 mg/m ³
	20 ppm
OEL STEL	275 mg/m ³
	40 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible)
Regulatory reference	Chemical Agents Code of Practice 2024
Ireland - Biological limit values	
Local name	Tetrachloroethylene
BMGV	0,4 mg/l Parameter: tetrachloroethylene - Medium: blood - Sampling time: Prior to the last shift of a working week 3 ppm Parameter: TCE - Medium: end-exhaled air - Sampling time: Prior to the last shift of a working week 0,435 mg/m ³ Parameter: TCE - Medium: end-exhaled air - Sampling time: Prior to the last shift of a working week
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)

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Tetrachloroethylene Neat (127-18-4)	
Italy - Occupational Exposure Limits	
Local name	Tetracloroetilene
OEL TWA	138 mg/m ³
	20 ppm
OEL STEL	275 mg/m ³
	40 ppm
Remark	Cute
Regulatory reference	Allegato XXXVIII del Decreto Legislativo 4 settembre 2024, n. 135
Latvia - Occupational Exposure Limits	
Local name	Tetrahlortilēns (perhlortilēns)
OEL TWA	70 mg/m ³
	10 ppm
OEL STEL	140 mg/m ³
	20 ppm
Remark	Āda
Regulatory reference	Ministru kabineta 2007. gada 15. maija noteikumiem Nr. 325 (Grozījumi Ministru kabineta 2024. gada 26. martā noteikumiem Nr. 191).
Lithuania - Occupational Exposure Limits	
Local name	Tetrachloretilenas (1,1,2,2-tetrachloretenas, perchloretilenas)
IPRV (OEL TWA)	70 mg/m ³
	10 ppm
TPRV (OEL STEL)	170 mg/m ³
	25 ppm
Remark	K (kancerogeninis poveikis); O (medžiaga į organizmą gali prasiskverbti pro nepažeistą odą)
Regulatory reference	LIETUVOS HIGIENOS NORMA HN 23:2011 (Nr. V-695/A1-272, 2018-06-12)
Luxembourg - Occupational Exposure Limits	
Local name	Tétrachloréthylène
OEL TWA	138 mg/m ³
	20 ppm
OEL STEL	275 mg/m ³
	40 ppm
Remark	Peau
Regulatory reference	Mémorial A N° 226 de 2021 concernant la protection de la sécurité et de la santé des salariés contre les risques liés à des agents chimiques sur le lieu de travail
Malta - Occupational Exposure Limits	
Local name	Tetrachloroethylene
OEL TWA	138 mg/m ³
	20 ppm
OEL STEL	275 mg/m ³

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Tetrachloroethylene Neat (127-18-4)	
	40 ppm
Remark	Skin # Ġilda
Regulatory reference	S.L. 424.24 - Chemical Agents at Work Regulations (L.N. 356 of 2021) # L.S. 424.24 - Regolamenti dwar Aġenti Kimiċi fuq il-Post tax-Xogħol (A.L. 356 tal-2021)
Netherlands - Occupational Exposure Limits	
Local name	Tetrachloorethyleen (PER)
TGG-8u (OEL TWA)	138 mg/m ³ 20 ppm
TGG-15min (OEL STEL)	275 mg/m ³ 40 ppm
Remark	H (Huidopname) Stoffen die relatief gemakkelijk door de huid kunnen worden opgenomen, hetgeen een substantiële bijdrage kan betekenen aan de totale inwendige blootstelling, hebben in de lijst een H-aanduiding. Bij deze stoffen moeten naast maatregelen tegen inademing ook adequate maatregelen ter voorkoming van huidcontact worden genomen.
Regulatory reference	Arbeidsomstandighedenregeling 2024
Poland - Occupational Exposure Limits	
Local name	Tetrachloroeten
NDS (OEL TWA)	85 mg/m ³
NDSch (OEL STEL)	170 mg/m ³
Remark	Skóra (Oznakowanie substancji notacją „skóra” oznacza, że wchłanianie substancji przez skórę może być tak samo istotne jak przy narażeniu drogą oddechową).
Regulatory reference	Dz. U. 2024 poz. 1017 wraz z późn. zm.
Portugal - Indicative Occupational Exposure Limit (IOEL)	
Local name	Tetracloroetileno
IOEL TWA	138 mg/m ³ 20 ppm
IOEL STEL	275 mg/m ³ 40 ppm
Remark	Cutânea.
Regulatory reference	Decreto-Lei n.º 1/2021 de 6 de janeiro
Portugal - Occupational Exposure Limits	
Local name	Tetracloroetileno (Percloroetileno)
OEL TWA	25 ppm
OEL STEL	100 ppm
Remark	A3 (Agente carcinogénico confirmado nos animais de laboratório com relevância desconhecida no Homem); IBE (Índice biológico de exposição)
Regulatory reference	Norma Portuguesa NP 1796:2014
Portugal - Biological Exposure Indices	
Local name	Tetracloroetileno

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Tetrachloroethylene Neat (127-18-4)	
BEI	3 ppm Parâmetro: Tetracloroetileno - Meio: fração final do ar exalado - Momento da amostragem: Antes do turno 0,5 mg/l Parâmetro: Tetracloroetileno - Meio: sangue - Momento da amostragem: Antes do turno
Regulatory reference	Norma Portuguesa NP 1796:2014
Romania - Occupational Exposure Limits	
Local name	Tetracloroetilenă
OEL TWA	138 mg/m ³ 20 ppm
OEL STEL	275 mg/m ³ 40 ppm
Remark	P - posibilitatea unei penetrări cutanate importante
Regulatory reference	Hotărârea Guvernului nr. 1.218/2006 (Hotărârea nr. 179/2024)
Slovakia - Occupational Exposure Limits	
Local name	Tetrachlóretylén (tetrachlóretén, perchlóretylén)
NPHV (OEL TWA)	138 mg/m ³ 20 ppm
NPHV (OEL STEL)	275 mg/m ³ 40 ppm
Remark	K – znamená, že faktor môže byť ľahko absorbovaný kožou
Regulatory reference	Nariadenie vlády č. 355/2006 Z. z. (122/2024 Z. z.)
Slovenia - Occupational Exposure Limits	
Local name	tetrakloroetilen (perkloroetilen)
OEL TWA	138 mg/m ³ 20 ppm
OEL STEL	1380 mg/m ³ 200 ppm
Remark	K (Lastnost lažjega prehajanja snovi v organizem skozi kožo), Y (Snovi, pri katerih ni nevarnosti za zarodek ob upoštevanju mejnih vrednosti in bat vrednosti), BAT (Biološka mejna vrednost), EU
Regulatory reference	Uradni list RS, št. 29/2024 z dne 4. 4. 2024 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu
Slovenia - Biological limit values	
Local name	tetrakloroetilen
BLV	0,2 mg/l Parameter: tetrakloroetilen - Biološki vzorec: kri - Čas vzorčenja: 16 ur po koncu izpostavljenosti
Regulatory reference	Uradni list RS, št. 29/24 z dne 4. 4. 2024 - Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu
Spain - Occupational Exposure Limits	
Local name	Percloroetileno (Tetracloroetileno)
VLA-ED (OEL TWA)	138 mg/m ³ 20 ppm

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Tetrachloroethylene Neat (127-18-4)	
VLA-EC (OEL STEL)	275 mg/m ³ 40 ppm
Remark	VLI (Agente químico para el que la U.E. estableció en su día un valor límite indicativo), vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante), VLB® (Agente químico que tiene Valor Límite Biológico), ae (Alterador endocrino. Hay una serie de sustancias utilizadas en la industria, la agricultura y los bienes de consumo de las que se sospecha que interfieren con los sistemas endocrinos de los seres humanos y de los animales y que son causantes de perjuicios para la salud como el cáncer, alteraciones del comportamiento y anomalías en la reproducción. Tales sustancias se denominan "alteradores endocrinos". [Aplicación de la estrategia comunitaria en materia de alteradores endocrinos-sustancias de las que se sospecha interfieren en los sistemas hormonales de seres humanos y animales-COM (1999) 706. Comisión de las Comunidades Europeas, COM (2001) 262 final, Bruselas 14.06.2001]. En el caso del ser humano, algunas vías posibles de exposición a alteradores endocrinos son la exposición directa en el lugar de trabajo o a través de productos de consumo como alimentos, ciertos plásticos, pinturas, detergentes y cosméticos, o indirecta a través del medio ambiente (aire, agua y suelo). [Estrategia comunitaria en materia de alteradores endocrinos (sustancias de las que se sospecha interfieren en los sistemas hormonales de seres humanos y animales). Comisión de las Comunidades Europeas, COM (1999) 706 final, Bruselas 17.12.1999]. Los valores límite asignados a estos agentes no se han establecido para prevenir los posibles efectos de alteración endocrina, lo cual justifica una vigilancia adecuada de la salud).
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT
Spain - Biological limit values	
Local name	Percloroetileno (Tetracloroetileno)
BLV	3 ppm Parámetro: Percloroetileno - Medio: Aire alveolar (fracción final del aire exhalado) - Momento de muestreo: Principio de la última jornada de la semana laboral 0,4 mg/l Parámetro: Percloroetileno - Medio: Sangre - Momento de muestreo: Principio de la última jornada de la semana laboral
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT
Sweden - Occupational Exposure Limits	
Local name	Tetrakloretylen (Perkloretylen)
NGV (OEL TWA)	70 mg/m ³ 10 ppm
KGV (OEL STEL)	170 mg/m ³ 25 ppm
Remark	C (Ämnet är cancerframkallande. Risk för cancer finns även vid annan exponering än via inandning. För vissa cancerframkallande ämnen som inte har gränsvärden gäller förbud eller tillståndskrav enligt föreskrifterna om kemiska arbetsmiljörisker); H (Ämnet kan lätt upptas genom huden. Det föreskrivna gränsvärdet bedöms ge tillräckligt skydd endast under förutsättning att huden är skyddad mot exponering för ämnet ifråga)
Regulatory reference	Hygieniska gränsvärden (AFS 2018:1)
United Kingdom - Occupational Exposure Limits	
Local name	Tetrachloroethylene
WEL TWA (OEL TWA)	138 mg/m ³ 20 ppm

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Tetrachloroethylene Neat (127-18-4)	
WEL STEL (OEL STEL)	275 mg/m ³ 40 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Iceland - Occupational Exposure Limits	
Local name	Tetraklóretýlen
OEL TWA	70 mg/m ³ 10 ppm
Remark	H (efnið getur auðveldlega borist inn í líkamann gegnum húð)
Regulatory reference	Reglugerð um mengunarmörk og aðgerðir til að draga úr mengun á vinnustöðum (Nr. 1069/2018)
Norway - Occupational Exposure Limits	
Local name	Tetrakloreten (Perkloretylen; Tetrakloretylen)
Grenseverdi (OEL TWA)	40 mg/m ³ 6 ppm
Korttidsverdi (OEL STEL)	120 mg/m ³ 18 ppm
Remark	H: Kjemikalier som kan tas opp gjennom huden; K: Kjemikalier som skal betraktes som kreftfremkallende; R: Kjemikalier som skal betraktes som reproduksjonstoksiske; E: EU har en veiledende grenseverdi og/eller anmerkning for stoffet.
Regulatory reference	FOR-2024-04-05-581
North Macedonia - Occupational Exposure Limits	
Local name	тетрахлоретилен (перхлоретилен)
OEL TWA	345 mg/m ³ 50 ppm
KTV	4
Short time value [mg/m ³]	1380 mg/m ³
Short time value [ppm]	200 ppm
Remark	(KTV) краткотрајна вредност (КТВ) значи концентрација на опасни хемиски супстанции во воздухот на работното место внатре во зона на дишење, на која работникот без опасност по здравјето може да е изложен на покусо време. Изложеноста на краткотрајни вредности може да трае највеќе 15 минути и не смее да се повтори повеќе од четирипати во работната смена, при што меѓу две изложености на оваа концентрација мора да измине најмалку 60 минути. Краткотрајната вредност е изразена во mg/m ³ или во ml/m ³ (ppm) а е дадена како многукратни дозволени пречекорувања на граничната вредност; (K) својство на полесно пренесување на супстанците во организмот преку кожата; (BAT) биолошка гранична вредност – праг на биолошка гранична вредност, што значи предупредување на опасна хемиска супстанца и нејзини метаболити во ткивата, телесните течности или издишувањето на воздухот, без оглед на тоа, дали опасната хемиска супстанца е внесена во организмот со вдишување, голтање или преку кожата
Regulatory reference	Правилник за минималните барања за безбедност и здравје при работа на вработени од ризици поврзани со изложување на хемиски супстанции („Службен весник на Република Македонија“ бр.46/10)

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Tetrachloroethylene Neat (127-18-4)	
Switzerland - Occupational Exposure Limits	
Local name	Perchlorethylen (s. Tetrachlorethen)
MAK (OEL TWA)	345 mg/m ³ 345 mg/m ³ 345 mg/m ³ 50 ppm 50 ppm 50 ppm
KZGW (OEL STEL)	690 mg/m ³ 690 mg/m ³ 690 mg/m ³ 100 ppm 100 ppm 100 ppm
Notation	R, C2, R2, B / H, C2, R2, B
Remark	H B C2 R2 _D - ZNS, Auge - HSE, NIOSH
Regulatory reference	www.suva.ch, 01.01.2024
Switzerland - BAT	
Local name	Tétrachloroéth(yl)ène / Tetrachlorethen
BAT	0,4 mg/l (2.4 µmol/l; Paramètre biologique: Tétrachloroéthène; Substrat d'examen: Sang complet; Moment du prélèvement: Avant la reprise du travail.) / (2.4 µmol/l; Biologischer Parameter: Tetrachlorethen; Untersuchungsmaterial: Vollblut; Probennahmezeitpunkt: Vor nachfolgender Schicht.)
Regulatory reference	Ordonnance 832.30 (OPA), article 50 al. 3, www.suva.ch/valeurs-limites / Verordnung 832.30 (VUV), Art. 50 Abs. 3, www.suva.ch/grenzwerte
USA - ACGIH - Occupational Exposure Limits	
Local name	Tetrachloroethylene
ACGIH OEL TWA	25 ppm
ACGIH OEL STEL	100 ppm
Remark (ACGIH)	TLV® Basis: CNS impair. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans); BEI
Regulatory reference	ACGIH 2024
USA - ACGIH - Biological Exposure Indices	
Local name	Tetrachloroethylene
BEI	3 ppm Parameter: Tetrachloroethylene - Medium: exhaled air - Sampling time: Prior to shift 0,5 mg/l Parameter: Tetrachloroethylene - Medium: blood - Sampling time: Prior to shift
Regulatory reference	ACGIH 2024
DNEL and PNEC	
Tetrachloroethylene Neat (127-18-4)	
PNEC (Water)	
PNEC aqua (freshwater)	0,051 mg/l
PNEC aqua (marine water)	0,0051 mg/l
PNEC aqua (intermittent, freshwater)	0,0364 mg/l

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Tetrachloroethylene Neat (127-18-4)	
PNEC (Sediment)	
PNEC sediment (freshwater)	0,903 mg/kg dwt
PNEC sediment (marine water)	0,0903 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,01 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	11,2 mg/l

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

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. Ethereal.
Odour threshold	: 2 – 71 ppm
Melting point	: Not applicable
Freezing point	: -22 °C (101,3 kPa)
Boiling point	: 121,4 °C (101,325 kPa)
Flammability	: Non flammable.

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Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: > 650 °C
Decomposition temperature	: > 150 °C
pH	: 6,8 – 8,4
Viscosity, kinematic	: 0,555 mm ² /s (20 °C)
Viscosity, dynamic	: 0,844 cP
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 Ethanol: Soluble Ether: Soluble Acetone: > 10 g/100ml
Partition coefficient n-octanol/water (Log Kow)	: Not available
Partition coefficient n-octanol/water (Log Pow)	: 2,53
Vapour pressure	: 2,5 kPa (25 °C)
Vapour pressure at 50°C	: 82 hPa
Saturation concentration	: 127 g/m ³
Density	: 1,61 g/cm ³ (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

Information with regard to physical hazard classes

Critical temperature : 347 °C

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,No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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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 Neat (127-18-4)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 3000 mg/kg
LC50 Inhalation - Rat	27,58 mg/l/4h
LC50 Inhalation - Rat [ppm]	3786 ppm/4h

Skin corrosion/irritation : Not classified.
pH: 6,8 – 8,4
Serious eye damage/irritation : Not classified
pH: 6,8 – 8,4
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Suspected of causing cancer.

Tetrachloroethylene Neat (127-18-4)	
IARC group	2A - Probably carcinogenic to humans
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

Tetrachloroethylene Neat (127-18-4)	
Viscosity, kinematic	0,555 mm ² /s (20 °C)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.
Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 842/2006).
Germany : TA-Luft Klasse 5.2.5/l.
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.

Tetrachloroethylene Neat (127-18-4)	
LC50 - Fish [1]	5 mg/l <i>Oncorhynchus mykiss</i> (Rainbow trout)
EC50 - Crustacea [1]	8,5 mg/l <i>Daphnia magna</i> (Water flea)
EC50 72h - Algae [1]	3,64 mg/l <i>Chlamydomonas reinhardtii</i>
Threshold limit - Algae [2]	3,64 mg/l <i>Chlamydomonas angulosa</i>

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12.2. Persistence and degradability

Tetrachloroethylene Neat (127-18-4)

Persistence and degradability	Not readily biodegradable in water. Low potential for adsorption in soil.
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 Neat (127-18-4)

Partition coefficient n-octanol/water (Log Pow)	2,53
Bioaccumulative potential	Low bioaccumulation potential (BCF < 500).

12.4. Mobility in soil

Tetrachloroethylene Neat (127-18-4)

Surface tension	0,0313 N/m (20 °C)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2,15

12.5. Results of PBT and vPvB assessment

Tetrachloroethylene Neat (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

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.

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

Tetrachloroethylene Neat

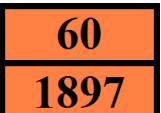

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ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
TETRACHLOROETHYLEN E	TETRACHLOROETHYLEN E	Tetrachloroethylene	TETRACHLOROETHYLEN E	TETRACHLOROETHYLEN E
Transport document description				
UN 1897 TETRACHLOROETHYLEN E, 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 1897 TETRACHLOROETHYLEN E, 6.1, III, MARINE POLLUTANT/ENVIRONME NTALLY HAZARDOUS	UN 1897 Tetrachloroethylene, 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 1897 TETRACHLOROETHYLEN E, 6.1, III, ENVIRONMENTALLY HAZARDOUS	UN 1897 TETRACHLOROETHYLEN E, 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 EmS-No. (Fire): F-A EmS-No. (Spillage): S-A	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
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: L4BH
Tank special provisions (ADR)	: TU15, TE19
Vehicle for tank carriage	: AT
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13, CV28
Special provisions for carriage - Operation (ADR)	: S9
Hazard identification number (Kemler No.)	: 60
Orange plates	:  
Tunnel restriction code (ADR)	: E
EAC code	: 2Z

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Transport by sea

Transport regulations (IMDG)	: Subject to the provisions
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW2
Segregation (IMDG)	: SGG10
Properties and observations (IMDG)	: Colourless liquid with an ethereal odour. When involved in a fire, evolves extremely toxic fumes (phosgene). Toxic if swallowed, by skin contact or by inhalation.

Air transport

Transport regulations (IATA)	: Subject to the provisions
PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y642
PCA limited quantity max net quantity (IATA)	: 2L
PCA packing instructions (IATA)	: 655
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 663
CAO max net quantity (IATA)	: 220L
ERG code (IATA)	: 6L

Inland waterway transport

Classification code (ADN)	: T1
Special provisions (ADN)	: 802
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EP, TOX, A
Ventilation (ADN)	: VE02
Number of blue cones/lights (ADN)	: 0

Rail transport

Transport regulations (RID)	: Subject to the provisions
Classification code (RID)	: T1
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: L4BH
Special provisions for RID tanks (RID)	: TU15
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW28, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 60

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	Tetrachloroethylene Neat	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Tetrachloroethylene Neat	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

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 (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Not listed on the COUNCIL REGULATION (EC) of dual-use items.

VOC Directive (2004/42)

Organic solvent : Yes
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)

National regulations

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313
Listed on the Canadian DSL (Domestic Substances List)

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

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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
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Germany

VOC ordinance (ChemVOCFarbV) : VOC content : 100 %

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

WGK remark : Classification in compliance with Verwaltungsvorschriftwassergefährdender Stoffe (VwVwS) of 27 July 2005.

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

Air Quality Control (TA Luft)					
Category	Class	Applicable on	Local name	Max. mass flow	Max. mass concentration
4.2.1		Tetrachloroethylene Neat	Tetrachlorethen		
5.2.5	Class I	Tetrachloroethylene Neat	Tetrachlorethylen	100 g/h	20 mg/m ³

Netherlands

ABM category : A(2) - toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment

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

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

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Poland

Polish National Regulations

- : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
- Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
- The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
- Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
- Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
- Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
- The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
- Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
- Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
- ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified
4.1	First-aid measures for first aider	Added
4.2	Symptoms/effects after skin contact	Added
4.2	Symptoms/effects after inhalation	Added
4.2	Symptoms/effects after ingestion	Added
4.2	Symptoms/effects after eye contact	Added
5.1	Unsuitable extinguishing media	Added
5.2	Explosion hazard	Added
5.2	Fire hazard	Added
5.3	Firefighting instructions	Added
6.1	Emergency procedures	Added
6.1	Protective equipment	Added
6.1	General measures	Added
6.3	For containment	Modified
7.1	Additional hazards when processed	Added

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Indication of changes		
Section	Changed item	Comments
7.2	Technical measures	Added
7.2	Packaging materials	Added
7.2	Storage conditions	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Remark	Modified
8	BMGV	Modified
8	BLV	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Removed
8	BLV	Removed
8	Local name	Removed
8	Regulatory reference	Removed
8	BLV	Removed
8	Local name	Removed
8	Remark	Modified
8	Regulatory reference	Modified
8	Local name	Modified
8	Regulatory reference	Modified
8	Remark	Modified
8	Notation	Modified
8	Regulatory reference	Modified
8	Critical toxicity	Removed
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Remark	Removed
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Regulatory reference	Modified
8	Remark	Modified

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Indication of changes		
Section	Changed item	Comments
8	Regulatory reference	Modified
8	Regulatory reference	Removed
8	OEL STEL	Removed
8	OEL STEL	Removed
8	OEL TWA	Removed
8	OEL TWA	Removed
8	Local name	Removed
8	Regulatory reference	Modified
8	Regulatory reference	Modified
13.1	Product/Packaging disposal recommendations	Added
13.1	Sewage disposal recommendations	Added
13.1	Additional information	Added
13.1	Regional waste regulation	Added
16	Abbreviations and acronyms	Modified

Abbreviations and acronyms:	
ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

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Abbreviations and acronyms:	
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Full text of H- and EUH-statements:	
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Carc. 2	Carcinogenicity, Category 2
Skin Corr./Irrit. Not classified	Skin corrosion/irritation Not classified
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.

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.