

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene ≥99,5 %, for synthesis

article number: **4737**  
Version: **6.0 en**  
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Version: (5)

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

### 1.1 Product identifier

Identification of the substance	<b>Tetrachloroethylene</b> ≥99,5 %, for synthesis
Article number	4737
Index No (GB CLP)	602-028-00-4
EC number	204-825-9
CAS number	127-18-4
Alternative name(s)	Perchloroethylene

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

Relevant identified uses:	Laboratory chemical Laboratory and analytical use
Uses advised against:	Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). Food, drink and animal feeding-stuffs.

### 1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:**+49 (0) 721 - 56 06 0

**Telefax:** +49 (0) 721 - 56 06 149

**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

**e-mail (competent person):** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Tetrachloroethylene  $\geq 99,5$  %, for synthesis

article number: 4737

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	2	Eye Irrit. 2	H319
3.4S	Skin sensitisation	1	Skin Sens. 1	H317
3.6	Carcinogenicity	2	Carc. 2	H351
3.8D	Specific target organ toxicity - single exposure (narcotic effects, drowsiness)	3	STOT SE 3	H336
4.1C	Hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

### 2.2 Label elements

#### Labelling

#### Signal word

Warning

#### Pictograms

GHS07, GHS08,  
GHS09



#### Hazard statements

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H411	Toxic to aquatic life with long lasting effects

#### Precautionary statements

##### Precautionary statements - prevention

P260	Do not breathe mist/vapours/spray
P273	Avoid release to the environment

##### Precautionary statements - response

P308+P313	IF exposed or concerned: Get medical advice/attention
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For professional users only

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene $\geq 99,5$ %, for synthesis

article number: 4737

### 2.3 Other hazards

#### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### Endocrine disrupting properties

The substance has an endocrine disrupting potential.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Name of substance	Tetrachloroethylene
Molecular formula	$C_2Cl_4$
Molar mass	165,8 g/mol
CAS No	127-18-4
EC No	204-825-9
Index No (GB CLP)	602-028-00-4

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off contaminated clothing.

#### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

Rinse skin with water/shower. After contact with skin, wash immediately with plenty of water. In case of skin reactions, consult a physician. In case of skin irritation, consult a physician.

#### Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

#### Following ingestion

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

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

Vomiting, Gastrointestinal complaints, Allergic reactions, Irritation, Cough, Dyspnoea, Headache, Vertigo, Dizziness, Drowsiness, Narcosis

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

none

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



**Tetrachloroethylene ≥99,5 %, for synthesis**

article number: **4737**

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!  
water spray, dry extinguishing powder, BC-powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

Non-combustible.

#### Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen chloride (HCl), Hydrogen halides (HX)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains.

#### Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene ≥99,5 %, for synthesis

article number: 4737

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Use extractor hood (laboratory). Avoid exposure.

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed. Store in a dry place. May cause decomposition by long-term light influence.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Protect against external exposure, such as

direct light irradiation, UV-radiation/sunlight, humidity

#### Consideration of other advice:

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

#### 7.3 Specific end use(s)

No information available.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### National limit values

##### Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
EU	tetrachloroethylene	127-18-4	IOELV	20	138	40	275			H	2017/164/EU
GB	tetrachloroethylene	127-18-4	WEL	20	138	40	275				EH40/2005

##### Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur

H Absorbed through the skin

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

#### 8.2 Exposure controls

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene $\geq 99,5$ %, for synthesis

article number: 4737

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggles with side protection.

#### Skin protection



##### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 °C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

##### • type of material

FKM: fluoro-elastomer

##### • material thickness

0,7mm

##### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

##### • Splash protection - Protective gloves

• type of material: NBR (Nitrile rubber)

• material thickness: >0,3 mm

• breakthrough times of the glove material: >240 minutes (permeation: level 5)

##### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

#### Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 °C, colour code: Brown).

#### Environmental exposure controls

Keep away from drains, surface and ground water.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene $\geq 99,5$ %, for synthesis

article number: 4737

### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	like ether
Melting point/freezing point	-22 °C at 101,3 kPa (ECHA)
Boiling point or initial boiling point and boiling range	121,4 °C at 101,3 kPa (ECHA)
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	>650 °C at 1 atm (ECHA)
Decomposition temperature	>140 °C
pH (value)	not determined
Kinematic viscosity	not determined
Dynamic viscosity	0,844 mPa s at 25 °C
<u>Solubility(ies)</u>	
Water solubility	0,15 g/l at 25 °C (ECHA)
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	2,53 (pH value: ~7, 23 °C) (ECHA)
Vapour pressure	2,5 kPa at 25 °C
<u>Density and/or relative density</u>	
Density	1,61 g/cm <sup>3</sup> at 25 °C (ECHA)
Relative vapour density	5,73 (air = 1)
Particle characteristics	not relevant (liquid)
<u>Other safety parameters</u>	
Oxidising properties	none

#### 9.2 Other information

Information with regard to physical hazard classes:	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics:	There is no additional information.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



**Tetrachloroethylene ≥99,5 %, for synthesis**

article number: **4737**

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material is not reactive under normal ambient conditions.

### 10.2 Chemical stability

Moisture-sensitive. May cause decomposition by long-term light influence.

### 10.3 Possibility of hazardous reactions

**Danger of explosion:** Alkali metals, Aluminium, Nitrogen oxides (NO<sub>x</sub>), Oxygen+Alkali hydroxide (caustic alkali),

**Exothermic reaction with:** Alkaline earth metal, Metal powder, Oxidisers, Strong alkali, Strong acid

### 10.4 Conditions to avoid

Humidity. Direct light irradiation. UV-radiation/sunlight. Keep away from heat. Decomposition takes place from temperatures above: >140 °C.

### 10.5 Incompatible materials

different plastics

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Classification acc. to GHS**

#### Acute toxicity

Shall not be classified as acutely toxic.

GHS of the United Nations, annex 4. May be harmful if swallowed.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	3.835 mg/kg	rat		ECHA

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/eye irritation

Causes serious eye irritation.

#### Respiratory or skin sensitisation

May cause an allergic skin reaction.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Suspected of causing cancer.

#### Reproductive toxicity

Shall not be classified as a reproductive toxicant.



# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene ≥99,5 %, for synthesis

article number: 4737

### Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

vomiting, nausea, gastrointestinal complaints

#### • If in eyes

Causes serious eye irritation

#### • If inhaled

headache, vertigo, cough, Dyspnoea, dizziness, fatigue, narcosis

#### • If on skin

Prolonged or repeated contact with skin or mucous membrane result in irritation symptoms such as redness, blistering, dermatitis, etc, has degreasing effect on the skin, causes skin irritation, risk of absorption via the skin, May produce an allergic reaction, pruritis, localised redness

#### • Other information

Other adverse effects: Liver and kidney damage

### 11.2 Endocrine disrupting properties

This substance is known as an "endocrine disruptor".

### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
LC50	5 mg/l	fish	ECHA	96 h
EC50	8,5 mg/l	aquatic invertebrates	ECHA	48 h
ErC50	3,64 mg/l	algae	ECHA	72 h

### 12.2 Persistence and degradability

Theoretical Oxygen Demand: 0,193 mg/mg  
Theoretical Carbon Dioxide: 0,5308 mg/mg

### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene $\geq 99,5$ %, for synthesis

article number: 4737

n-octanol/water (log KOW)	2,53 (pH value: ~7, 23 °C) (ECHA)
BCF	49 (ECHA)

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

This substance is known as an "endocrine disruptor".

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

#### Properties of waste which render it hazardous

**HP 4** irritant - skin irritation and eye damage  
**HP 7** carcinogenic  
**HP 13** sensitising  
**HP 14** ecotoxic

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene ≥99,5 %, for synthesis

article number: 4737

### SECTION 14: Transport information

#### 14.1 UN number or ID number

ADRRID	UN 1897
IMDG-Code	UN 1897
ICAO-TI	UN 1897

#### 14.2 UN proper shipping name

ADRRID	TETRACHLOROETHYLENE
IMDG-Code	TETRACHLOROETHYLENE
ICAO-TI	Tetrachloroethylene

#### 14.3 Transport hazard class(es)

ADRRID	6.1
IMDG-Code	6.1
ICAO-TI	6.1

#### 14.4 Packing group

ADRRID	III
IMDG-Code	III
ICAO-TI	III

#### 14.5 Environmental hazards

hazardous to the aquatic environment

#### 14.6 Special precautions for user


Provisions for dangerous goods (ADR) should be complied within the premises.

#### 14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

#### 14.8 Information for each of the UN Model Regulations

##### Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) Additional information

Proper shipping name	TETRACHLOROETHYLENE
Particulars in the transport document	UN1897, TETRACHLOROETHYLENE, 6.1, III, (E), environmentally hazardous
Classification code	T1
Danger label(s)	6.1, "Fish and tree"
	
Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	802(ADN)
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene ≥99,5 %, for synthesis

article number: 4737

Transport category (TC)	2
Tunnel restriction code (TRC)	E
Hazard identification No	60
<b>Emergency Action Code</b>	2Z

### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

<b>Classification code</b>	T1
<b>Danger label(s)</b>	6.1, "Fish and tree"



<b>Environmental hazards</b>	Yes Hazardous to water
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<b>Special provisions (SP)</b>	802(ADN)
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<b>Excepted quantities (EQ)</b>	E1
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<b>Limited quantities (LQ)</b>	5 L
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<b>Transport category (TC)</b>	2
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<b>Hazard identification No</b>	60
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### International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name	TETRACHLOROETHYLENE
Particulars in the shipper's declaration	UN1897, TETRACHLOROETHYLENE, 6.1, III, MARINE POLLUTANT
Marine pollutant	yes (P) (hazardous to the aquatic environment)
Danger label(s)	6.1, "Fish and tree"



Special provisions (SP)	-
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-A
Stowage category	A
Segregation group	10 - Liquid halogenated hydrocarbons

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name	Tetrachloroethylene
Particulars in the shipper's declaration	UN1897, Tetrachloroethylene, 6.1, III
Environmental hazards	YES (hazardous to the aquatic environment)
Danger label(s)	6.1



# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene ≥99,5 %, for synthesis

article number: 4737

Excepted quantities (EQ)	E1
Limited quantities (LQ)	2 L

### SECTION 15: Regulatory information

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

##### Relevant provisions of the European Union (EU)

###### Seveso Directive

2012/18/EU (Seveso III)				
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements		Notes
E2	environmental hazards (hazardous to the aquatic environment, cat. 2)	200	500	57)

###### Notation

57) Hazardous to the Aquatic Environment in category Chronic 2

###### Deco-Paint Directive

VOC content	100 %
VOC content	1.610 g/l

###### Industrial Emissions Directive (IED)

VOC content	100 %
VOC content	1.610 g/l

###### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

###### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

Pollutant release and transfer registers (PRTR)			
Name of substance	CAS No	Remarks	Threshold for releases to air (kg/year)
Tetrachloroethylene	127-18-4		2 000

###### Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Tetrachloroethylene	tetrachloroethylene	127-18-4	c)	
Tetrachloroethylene	Organohalogen compounds and substances which may form such compounds in the aquatic environment		a)	

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene ≥99,5 %, for synthesis

article number: 4737

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Tetrachloroethylene	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	

### Legend

- a) Indicative list of the main pollutants  
c) Environmental Quality Standards for Priority Substances and certain other pollutants

### Regulation on the marketing and use of explosives precursors

not listed

### Regulation on drug precursors

not listed

### Regulation on substances that deplete the ozone layer (ODS)

not listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

### Regulation on persistent organic pollutants (POP)

not listed

### National regulations(GB)

### List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

### Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Tetrachloroethylene	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3

### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

### National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene ≥99,5 %, for synthesis

article number: 4737

Country	Inventory	Status
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

### Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NCI	National Chemical Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

## 15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
15.1	VOC content: 100 % 1.610 <sup>g/l</sup>	VOC content: 100 %	yes
15.1		VOC content: 1.610 <sup>g/l</sup>	yes
15.1		National inventories: change in the listing (table)	yes

### Abbreviations and acronyms

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene $\geq 99,5$ %, for synthesis

article number: 4737

Abbr.	Descriptions of used abbreviations
2017/164/EU	Commission Directive establishing a fourth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC, and amending Commission Directives 91/322/EEC, 2000/39/EC and 2009/161/EU
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
BCF	Bioconcentration factor
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	$\equiv$ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GB CLP	The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/720 (as amended)
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
index No	The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
IOELV	Indicative occupational exposure limit value
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
ppm	Parts per million



# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Tetrachloroethylene $\geq 99,5$ %, for synthesis

article number: **4737**

Abbr.	Descriptions of used abbreviations
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.