

Safety data sheet

acc. to Safe Work Australia - Code of Practice



1,1,2,2-Tetrachloroethane D2 99,6 Atom%D

article number: **CP96**
Version: **GHS 2.0 en**
Replaces version of: 2020-09-07
Version: (GHS 1)

date of compilation: 2020-09-07
Revision: 2022-01-25

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

1.1 Product identifier

Identification of the substance **1,1,2,2-Tetrachloroethane D2 99,6 Atom%D**
Article number CP96
CAS number 33685-54-0

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 squirting or spraying. Do not use for products which come into contact with food-stuffs. Do not use for private purposes (household).

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
Website: www.carlroth.de

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

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

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 Westmead, NSW	131126	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Category	Hazard class and category	Hazard statement
3.1D	Acute toxicity (dermal)	1	Acute Tox. 1	H310
3.1I	Acute toxicity (inhal.)	2	Acute Tox. 2	H330

For full text of abbreviations: see SECTION 16

2.2 Label elements

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Labelling

Signal word

Danger

Pictograms

GHS06



Hazard statements

H310+H330 Fatal in contact with skin or if inhaled

Precautionary statements

Precautionary statements - prevention

P260 Do not breathe dust/fume/gas/mist/vapours/spray
P262 Do not get in eyes, on skin, or on clothing
P280 Wear protective gloves/protective clothing

Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of soap and water
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P310 Immediately call a POISON CENTER or doctor/physician

Precautionary statements - storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed

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.

SECTION 3: Composition/information on ingredients

3.1 Substances

Name of substance	1,1,2,2-Tetrachloroethane D2
Molecular formula	C ₂ Cl ₄ D ₂
Molar mass	169.9 g _{mol}
CAS No	33685-54-0

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

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Take off immediately all contaminated clothing. Self-protection of the first aider.

Following inhalation

Call a physician immediately. If breathing is irregular or stopped, administer artificial respiration.

Following skin contact

After contact with skin, wash immediately with plenty of water.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed

Nausea, Vomiting, Dyspnoea, Cough, Irritation, Dizziness, Vertigo, Unconsciousness

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible.

Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO₂), Hydrogen halides (HX)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

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.

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6.2 Environmental precautions

Keep away from drains, surface and ground water.

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.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use extractor hood (laboratory). Handle and open container with care. Clear contaminated areas thoroughly.

Advice on general occupational hygiene

Thorough skin-cleansing after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Protect against external exposure, such as

heat, humidity, UV-radiation/sunlight, contact with air/oxygen

Consideration of other advice:

Store locked up.

Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

7.3 Specific end use(s)

No information available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



• hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. 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

NBR (Nitrile rubber)

• material thickness

0,4 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• 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).

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Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	colourless
Odour	mild sweet
Melting point/freezing point	-42.5 °C
Boiling point or initial boiling point and boiling range	146 °C
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	not determined

Solubility(ies)

Water solubility 2.9 g/l at 20 °C

Partition coefficient

Partition coefficient n-octanol/water (log value): 2.39 (exp.)

Vapour pressure 6.6 hPa at 20 °C

Density and/or relative density

Density 1.595 g/cm³ at 20 °C

Relative vapour density information on this property is not available

Particle characteristics not relevant (liquid)

Other safety parameters

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.

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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

Dangerous/dangerous reactions with: strong oxidiser, Alkali (lye), Alkali metals, Alkaline earth metal, Metals

10.4 Conditions to avoid

UV-radiation/sunlight. Protect from moisture. Keep away from heat. Contact with air/oxygen.

10.5 Incompatible materials

aluminium, iron, copper, zinc

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

Fatal in contact with skin. Fatal if inhaled.

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

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

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.

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Symptoms related to the physical, chemical and toxicological characteristics

- **If swallowed**

poisoning effect on central nervous system can cause convulsions, laboured breathing and loss of consciousness

- **If in eyes**

corneal opacity

- **If inhaled**

cough, pain, choking, and breathing difficulties, vertigo, dizziness, unconsciousness

- **If on skin**

Prolonged or repeated skin contact may cause removal of natural fat from the skin resulting in dermatitis (skin inflammation)

- **Other information**

none

11.2 Endocrine disrupting properties

Not listed.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Biodegradation

Data are not available.

12.2 Process of degradability

Theoretical Carbon Dioxide: 0.5182 mg/mg

12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	2.39 (Exp.)
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12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties

Not listed.

12.7 Other adverse effects

Data are not available.

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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.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

H6.1 Poisonous (Acute)

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.

SECTION 14: Transport information

14.1 UN number

UN RTDG	UN 1702
IMDG-Code	UN 1702
ICAO-TI	UN 1702

14.2 UN proper shipping name

UN RTDG	1,1,2,2-TETRACHLOROETHANE
IMDG-Code	1,1,2,2-TETRACHLOROETHANE
ICAO-TI	1,1,2,2-Tetrachloroethane

14.3 Transport hazard class(es)

UN RTDG	6.1
IMDG-Code	6.1
ICAO-TI	6.1

14.4 Packing group

UN RTDG	II
IMDG-Code	II
ICAO-TI	II

14.5 Environmental hazards

hazardous to the aquatic environment

14.6 Special precautions for user

There is no additional information.

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

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport information National regulations Additional information (UN RTDG)

UN number	1702
Class	6.1
Environmental hazards	Yes Hazardous to the aquatic environment
Packing group	II
Danger label(s)	6.1 Fish and tree



Special provisions (SP)	- UN RTDG
Excepted quantities (EQ)	E4 UN RTDG
Limited quantities (LQ)	100 ml UN RTDG

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name	1,1,2,2-TETRACHLOROETHANE
Particulars in the shipper's declaration	UN1702, 1,1,2,2-TETRACHLOROETHANE, 6.1, II, 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)	E4
Limited quantities (LQ)	100 mL
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	1,1,2,2-Tetrachloroethane
Particulars in the shipper's declaration	UN1702, 1,1,2,2-Tetrachloroethane, 6.1, II
Environmental hazards	YES (hazardous to the aquatic environment)
Danger label(s)	6.1

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Excepted quantities (EQ)	E4
Limited quantities (LQ)	1 L

SECTION 15: Regulatory information

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

There is no additional information.

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
EU	ECSI	substance is listed
NZ	NZIoC	substance is listed
TW	TCSI	substance is listed

Legend

ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
NZIoC	New Zealand Inventory of Chemicals
TCSI	Taiwan Chemical Substance Inventory

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)

Alignment to regulation: Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").

Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1	Classification acc. to GHS: This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC. This substance does not meet the criteria for classification.	Classification acc. to GHS	yes
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.2	Labelling GHS: not required	Labelling	yes
2.2	Signal word: not required	Signal word: Danger	yes
2.2		Pictograms	yes
2.2		Pictograms: change in the listing (table)	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.2		Hazard statements	yes
2.2		Hazard statements: change in the listing (table)	yes
2.2		Precautionary statements	yes
2.2		Precautionary statements - prevention	yes
2.2		Precautionary statements - prevention: change in the listing (table)	yes
2.2		Precautionary statements - response	yes
2.2		Precautionary statements - response: change in the listing (table)	yes
2.2		Precautionary statements - storage	yes
2.2		Precautionary statements - storage: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
DGR	Dangerous Goods Regulations (see IATA/DGR)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
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
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative

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Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. 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
H310	Fatal in contact with skin.
H330	Fatal if inhaled.

Disclaimer

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