

SECTION 1: Identification of the substance / mixture and of the company / undertaking**1.1 Product identifiers**

Product name 1,1,2,2-Tetrachloro-1,2-difluoroethane
Product number 10900-0697-100ME2
REACH No. A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

Identified uses specific analytics

1.3 Details of the supplier of the safety data sheet

Company NEOCHEMA GmbH
Uwe-Zeidler-Ring 10
55294 Bodenheim, Germany
Telephone +49 6135 933199 0
Fax +49 6135 933199 19
E-Mail info@neochema.com

1.4 Emergency telephone number

Emergency Phone +49 6135 933199 0

This number is only reachable during office hours (Mo - Fr, 08:00 AM - 4:00 PM CET).

SECTION 2: Hazards identification**2.1 Classification according to Regulation (EC) No 1272/2008**

Flam. liq. (category 2), H225
Acute tox. (oral, category 3), H301
Acute tox. (dermal, category 3), H311
Acute tox. (inhalation, category 3), H331
STOT SE (category 1), H370
For the full text of the H-Statements mentioned in this Section, see Section 2.2.

2.2 Labelling according Regulation (EC) No 1272/2008**Pictogram**

Signal word **Danger**

Hazard statements

H225 Highly flammable liquid and vapour.
H370 Causes damage to org
H301 + H311 + H331 Toxic if swallowed, in contact with skin or inhaled

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P280 Wear protective gloves / protective clothing / eye protection / face pro
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER / doctor.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308 + P311 If exposed or concerned: Call a POISON CENTER / doctor.
P370 + P378 In case of fire: Use carbondioxid, sand or extinguishing powder to extinguis

Supplemental Hazard Statements (EU)

None

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

This product is a mixture.

3.2 Mixtures

Ingredient: Methanol; CAS-No.: 67-56-1; EG-No.: 200-659-6; REACH-No.: 01-2119433307-44-XXXX; Classification: H225, H301, H311, H331, H370; Flam. Liq 2; Acute Tox. 3; Acute Tox. 3; Acute Tox. 3; STOT SE 1; Concentration: $\geq 90 - \leq 100$ %

For the full text of the H-Statements mentioned in this Section, see Section 16.

Substances listed on the 'Candidate List of Substances of Very High Concern (SVHC) for authorisation' of the European Chemical Agency (ECHA), are not intentional ingredient of this product. It is not to be expected that those substances are in quantity of $\geq 0,1$ % in this product.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution. Consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.tt 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing or collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid exposure. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Storage class (TRGS 510): Flammable liquids.

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredient: Methanol; CAS-No.: 67-56-1; TWA: 200 ppm, 260 mg/m³; AGW: 100 ppm, 130 mg/m³

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

splash contact

material: butyl-rubber

minimum layer thickness: 0,7 mm

break through time: > 5 min

Body Protection

Impervious clothing, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

These information refer to the main component and are literature values.

- a) **Physical state** liquid
- b) **Color** colorless

c) Odor	characteristic
d) Melting point/freezing point	-97,8 °C
e) Initial boiling point and boiling range	64,7 °C at 1013 hPa
f) Flammability	No Data available
g) Upper/lower flammability or explosive limits	upper: 44 %(V) ; lower: 5,5 %(V)
h) Flash point	9,7 °C - closed crucible
i) Autoignition temperature	455 °C at 1013 hPa
j) Decomposition temperature	distillable without decomposition at normal pressure
k) pH	No Data available
l) Viscosity	kinematic: 0,54 - 0,59 mm ² /s at 20 °C ; dynamic: > 0,544 - > 0,59 mPa.s at 25°C
m) Water solubility	1 000 g/l at 20 °C löslich - completely miscible at 20 °C
n) Partition coefficient: n-octanol/water	log Pow: -0,77 - Bioaccumulation is not expected
o) Vapor pressure	169,27 hPa at 25 °C
p) Density Relative density	0,79 g/cm ³ bi 20 °C
q) Relative vapor density	1,11
r) Particle characteristics	No Data available

9.2 Other safety information

No data available.

SECTION 10: Stability and reactivity

Theses information refer to the main component.

10.1 Reactivity

No Data available

10.2 Chemical stability

No Data available

10.3 Possibility of hazardous reactions

Risk of explosion with: oxidizing agents, perchloric acid, perchlorates, salts of halogenated oxygen acids, chromium (VI) oxide, halogen oxides, nitrogen oxides, non-metal oxides, chromosulphuric acid, chlorates, hydrides, zinc diethyl, halogens, powdered magnesium, hydrogen peroxide, nitric acid, sulphuric acid, permanganic acid, sodium hypochlorite; exothermic reaction with: acid halides, acid anhydrides, reducing agents, acids, bromine, chlorine, chloroform, magnesium, carbon tetrachloride; risk of ignition or formation of flammable gases or vapors with: fluorine, phosphorus oxides, Raney nickel; development of dangerous gases or vapors with: alkaline earth metals, alkali metals

10.4 Conditions to avoid

No Data available

10.5 Incompatible materials

various plastics, magnesium, zinc alloys

10.6 Hazardous decomposition products

In case of fire: see Chapter 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

No data available for the product.

Acute toxicity

Ingredient: Methanol; CAS-No.: 67-56-1; LD(50) (oral, ATE): 100 mg/kg; (literature); LD(50) (dermal, ATE): 300 mg/kg; (literature); LD(50) (inhalation, ATE): 3 mg/L; (literature);

ATE-Mix (oral): 100 mg/kg

ATE-Mix (dermal): 300 mg/kg

ATE-Mix (inhalation): 3 mg/L

Skin corrosion / irritation

The mixture is not classified.

Serious eye damage / eye irritation

The mixture is not classified.

Respiratory or skin sensitisation

The mixture is not classified.

Germ cell mutagenicity

The mixture is not classified.

Carcinogenicity

The mixture is not classified.

Reproductive toxicity

The mixture is not classified.

Specific target organ toxicity - single exposure

The mixture is not classified.

Specific target organ toxicity - repeated exposure

The mixture causes damage to organs. The classification results from specific concentration limits.

Aspiration hazard

The mixture is not classified.

SECTION 12: Ecological information**12.1 Toxicity**

The mixture is not classified.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**14.1 UN number**

ADR/RID: 1230

IMDG: 1230

IATA: 1230

14.2 UN proper shipping name

ADR/RID: Methanol

IMDG: Methanol

IATA: Methanol

14.3 Transport hazard classes

ADR/RID: 3 (6.1)

IMDG: 3 (6.1)

IATA: 3 (6.1)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

Tunnel restriction code (D/E)

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

SECTION 16: Other information

Further information

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Full text of H-Statements referred to under section 3:

H225 - Highly flammable liquid and vapour.

H301 - Toxic if swallowed.

H311 - Toxic in contact with skin.

H331 - Toxic if inhaled.

H370 - Causes damage to organs.