

1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** trichloroethylene
- **Manufacturer/Supplier:**
 Petrochem Middle East FZE
 PO Box 17028,
 Jebel Ali Free Zone
 Dubai, UAE
 Ph +971 4 8839222; Fax +971 4 8834133
- **Further information obtainable from:** Product safety department.
- **Information in case of Emergency** Product safety department.

2 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description**
79-01-6 trichloroethylene
- **Identification number(s)**
- **EINECS Number:** 201-167-4
- **Index number:** 602-027-00-9

3 Hazards identification

- **Hazard description:**



Carc. Cat. 2, Muta. Cat. 3
T Toxic

- **Information concerning particular hazards for human and environment:**
- R 45 May cause cancer.
- R 36/38 Irritating to eyes and skin.
- R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R 67 Vapours may cause drowsiness and dizziness.

4 First aid measures

- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

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- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** Open and handle receptacle with care.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

79-01-6 trichloroethylene

PEL (USA)	Short-term value: C 200; 300* ppm Long-term value: 100 ppm *5-min peak in any 2 hrs
REL (USA)	Short-term value: C 2** ppm Long-term value: 25* ppm *(10-hr TWA) **(60-min as a waste anesthetic gas)
TLV (USA)	Short-term value: 135 mg/m ³ , 25 ppm Long-term value: 54 mg/m ³ , 10 ppm (BEI)
WEL (Great Britain)	Short-term value: 820 mg/m ³ , 150 ppm Long-term value: 550 mg/m ³ , 100 ppm Carc; Sk

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· General Information

Form:	Fluid
Colour:	Colourless
Odour:	Like chlorine

· Change in condition

Melting point/Melting range:	-86.4°C
Boiling point/Boiling range:	87°C

· **Flash point:** Not applicable.

· **Ignition temperature:** 410°C

· **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits:

Lower:	7.9 Vol %
Upper:	90 Vol %

· **Vapour pressure at 20°C:** 77 hPa

· **Density at 20°C:** 1.4642 g/cm³

· **Solubility in / Miscibility with water at 20°C:** 1 g/l

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· Acute toxicity:

· LD/LC50 values relevant for classification:

Oral	LD50	2402 mg/kg (mouse)
Dermal	LD50	8450 mg/kg (mouse)

· Primary irritant effect:

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.

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· **Sensitization:** No sensitizing effects known.

12 Ecological information

- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **General notes:**
 Water hazard class 3 (German Regulation) (Assessment by list): extremely hazardous for water
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 Danger to drinking water if even extremely small quantities leak into the ground.
 Harmful to aquatic organisms

13 Disposal considerations

- **Product:**
- **Recommendation**
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **Land transport ADR/RID (cross-border)**



- **ADR/RID class:** 6.1 Toxic substances.
- **Danger code (Kemler):** 60
- **UN-Number:** 1710
- **Packaging group:** III
- **Hazard label:** 6.1
- **Description of goods:** 1710 TRICHLOROETHYLENE

· **Maritime transport IMDG:**



- **IMDG Class:** 6.1
- **UN Number:** 1710
- **Label:** 6.1
- **Packaging group:** III
- **EMS Number:** F-A,S-A
- **Marine pollutant:** No
- **Proper shipping name:** TRICHLOROETHYLENE

· **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 6.1
- **UN/ID Number:** 1710

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- **Label** 6.1
- **Packaging group:** III
- **Proper shipping name:** TRICHLOROETHYLENE

15 Regulatory information

- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

- **Code letter and hazard designation of product:**



Carc. Cat. 2, Muta. Cat. 3
T Toxic

- **Risk phrases:**

45 May cause cancer.
36/38 Irritating to eyes and skin.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
67 Vapours may cause drowsiness and dizziness.

- **Safety phrases:**

53 Avoid exposure - obtain special instructions before use.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
61 Avoid release to the environment. Refer to special instructions/safety data sheets.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department

- **Contact:**

Mr. Menon

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent