

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 07.12.2007

Revision: 07.12.2007

1 Identification of substance:

Product details:**Trade name:** Perchloroethylene**Application of the substance / the preparation** Solvents**Supplier/Manufacturer:**

Penpet Petrochemical Trading GmbH

Merkur-Park

Sieker Landstrasse 126

22143 Hamburg

Germany

Tel: +49 40 675 799 0

Fax: +49 40 675 799 99 / 88

Email competent person: angelika.torges@kft.de**Information department:** See supplier/manufacturer**Emergency information:** National Poisons Information Centre Tel.: +44 (0)870 6006266

2 Hazards identification

Hazard description:

Carc. Cat. 3

Xn Harmful

N Dangerous for the environment

Information pertaining to particular dangers for man and environment:

Mainly adsorped via respiratory tract and skin.

R 40 Limited evidence of a carcinogenic effect.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification system:

The classification was made according to the latest editions of the EU-lists, and expanded using company data and specialized literature.

3 Composition/information on ingredients

Chemical characterization:**CAS No. Description:**

127-18-4 tetrachloroethylene

Identification number(s):**EINECS Number:** 204-825-9**EU Number:** 602-028-00-4

4 First aid measures

General information:

First aid personnel should pay attention to their own safety.

Immediately remove any clothing soiled by the product.

After inhalation:

Remove victim from contaminated area. If breathing is difficult, give oxygen. If breathing stops, provide artificial respiration. Call a doctor.

After skin contact:

Clean with water and soap. If possible, also wash with polyethylene glycol 400.

Skin care with cream

If skin irritation continues, consult a doctor.

After extensive or prolonged contact:

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- Seek medical treatment.
 - **After eye contact:**
Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult a doctor or better an eye specialist.
 - **After swallowing:**
Rinse mouth with water.
Drink slowly 1 glass of water.
Do not induce vomiting.
If vomiting occurs spontaneously:
Hold the head of the casualty low with the body in a prone position in order to avoid aspiration.
Call a doctor immediately.
 - **Information for doctor:**
 - **The following symptoms may occur:**
Local irritation symptoms
Disturbance of central nervous system
Dizziness
Nausea
Liver and renal malfunctions
 - **Treatment:**
Symptomatic treatment
(decontamination, vital functions)
In cases of irritation to the lungs, initial treatment with Dexametason metered aerosol.
-

5 Fire fighting measures

- **Suitable extinguishing agents:**
The product is not combustible and does not support the combustion.
Use fire fighting measures that suit the environment.
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
Dangerous decomposition product see chapter 10: stability and reactivity
 - **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
 - **Additional information:**
Heating leads to pressure increase entailing danger of bursting and explosion. Immediately cool neighbouring packages and containers with sprayed water and, if possible, remove them out of the danger zone
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.
-

6 Accidental release measures

- **Person-related safety precautions:**



Wear protective equipment. Keep unprotected persons away.

- Ensure adequate ventilation
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to penetrate the ground/soil.
In case of seepage into the ground inform responsible authorities.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
Send for recovery or disposal in suitable receptacles.

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Dispose contaminated material as waste according to item 13.

7 Handling and storage

- **Handling**

- **Information for safe handling:**

Ensure good ventilation/exhaustion at the workplace.
 Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
 Keep receptacles tightly sealed.
 Keep away from heat and direct sunlight.
 Use solvent-proof equipment.
 Restrict the quantity stored at the work place.
 Keep the working area dry and clean.
 Avoid inhalation of vapours.
 Avoid contact with eyes and skin.

- **Information about protection against explosions and fires:** No special measures required.

- **Storage**

- **Requirements to be met by storerooms and receptacles:**

Store container tightly sealed at a cool and dry place with sufficient ventilation.
 Provide solvent resistant, sealed floor.
 Prevent any seepage into the ground.
 Suitable material:
 Stainless steel
 Polytetrafluoroethylen
 Aluminium
 Galvanized steel
 Viton

- **Information about storage in one common storage facility:**

Store away from foodstuffs.
 Store away from feed.

- **Further information about storage conditions:**

Keep receptacle tightly sealed.
 Protect from heat and direct sunlight.
 Protect from exposure to the light.

- **Storage class** 12 Non combustible liquids

8 Exposure controls and personal protection

- **Additional information about design of technical systems:** Keep away from open flames.

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

127-18-4 tetrachloroethylene

WEL (Great Britain) Short-term value: 689 mg/m³, 100 ppm
 Long-term value: 345 mg/m³, 50 ppm

- **Additional information:** The lists that were valid during the creation 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
 Store protective clothing separately.
 Do not inhale gases / fumes / aerosols.
 Avoid contact with the eyes and skin.
 Do not eat or drink while working.
 Use skin protection cream for skin protection.
 Avoid alcohol consumption while working with the product.
 Be sure to clean skin thoroughly after work and before breaks.

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- **Breathing equipment:**

In case of unintentional release of the substance, exceeding the occupational exposure limit value:



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Short term filter device:

Filter A

- **Protection of hands:**

Chemical resistant gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

After use of gloves apply skin-cleaning agents and skin cosmetics.

- **Material of gloves:**

Fluorocarbon rubber (FKM)

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.

- **As protection from splashes gloves made of the following materials are suitable:** Nitrile rubber, NBR

- **Not suitable are gloves made of the following materials:**

Polychloropren rubber (CR)

Butyl rubber, BR

Natural rubber, NR

PVC gloves

- **Eye protection:** Goggles recommended during refilling.

- **Body protection:**

Solvent resistant protective clothing

According to hazard:

Boots

Apron

Use protective suit.

9 Physical and chemical properties:

- **General Information**

Form:	Fluid
Colour:	Colourless
Odour:	Ether-like

- **Change in condition:**

Melting point/Melting range: -23.5°C

Boiling point/Boiling range: 121.1°C

- **Flash point:** not applicable

- **Ignition temperature:** > 650°C

- **Decomposition temperature:** > 150°C

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

- **Vapour pressure at 20°C:** 19 hPa

- **Density at 20°C:** 1.6063 g/cm³

- **Solubility in / Miscibility with Water at 20°C:** 0.4 g/l

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- **Segregation coefficient (n-octanol/water):** 2.53 log POW

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
Concentrated bases
Alkali metals
Alkaline-earth metals
- **Dangerous reactions:** Violent reaction up to explosion with all under "Materials to be avoided" mentioned products.
- **Dangerous products of decomposition:**
Hydrogen chloride (HCl)
Phosgen
Chlorine
- **Additional information:**
moisture sensitive
Sensitive to light

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
Oral LD₅₀ 8850 mg/kg (rat)
Inhalative LC₅₀ 4000 ppm (rat)
- **Primary irritant effect:**
- **on the skin:**
Prolonged exposition to the undiluted product may irritate the skin.
Defatting effect on the skin.
- **on the eye:** Light irritation possible
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):** Ames-test: no mutagenic effects
- **Additional toxicological information:** Risk of skin adsorption.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
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12 Ecological information

- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** Slight bioaccumulation possible.
- **Ecotoxicological effects:**
- **Aquatic toxicity:**

EC ₅₀ /24h	3.2 mg/l (daphnia magna) (EC testing C.2 Directive 84/449/EC)
EC ₅₀ /96h	504 mg/l (selenastrum capricornutum)
LC ₅₀ /96h (dynamic)	4.99 mg/l (Onchorhynchus mykiss) (EC testing C. 1 Directive 84/449/EEC)
NOEC/96h	816 mg/l (Selenastrum capricornutum)
- **Remark:** Toxic for fish
- **General notes:**
Water danger 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.
Also poisonous for fish and plankton in water bodies.

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Toxic for aquatic organisms

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13 Disposal considerations

- **Product:**
- **Recommendation:**



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal according to instructions of local authorities.

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

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



- **ADR/RID class:** 6.1 (T1) Toxic substances.
- **Danger code (Kemler):** 60
- **UN-Number:** 1897
- **Packaging group:** III
- **Label:** 6.1
- **Description of goods:** 1897 TETRACHLOROETHYLENE

- **Maritime transport IMDG:**



- **IMDG Class:** 6.1
- **UN Number:** 1897
- **Label:** 6.1
- **Packaging group:** III
- **EMS Number:** F-A,S-A
- **Marine pollutant:** Yes (P)
- **Proper shipping name:** TETRACHLOROETHYLENE

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



- **ICAO/IATA Class:** 6.1
- **UN/ID Number:** 1897
- **Label:** 6.1
- **Packaging group:** III
- **Proper shipping name:** TETRACHLOROETHYLENE

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- **Remarks:** Packing Instructions:
 For Limited Quantities: Y605 (Max Net Qty/Pkg: 2 l)
 Passenger and Cargo Aircraft: 605 (Max Net Qty/Pkg: 60 l)
 Cargo Aircraft only: 612(Max Net Qty/Pkg: 220 l)

15 Regulations

- **Markings according to EC guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials "EC-labelling"

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



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 Xn Harmful
 N Dangerous for the environment

- **Risk phrases:**

40 Limited evidence of a carcinogenic effect.
 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Safety phrases:**

23 Do not breathe fumes/aerosol.
 36/37 Wear suitable protective clothing and gloves.
 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

- **National regulations**

- **Information about limitation of use:** Restrictions on juvenile employment must be observed.
- **Water hazard class:** Water danger class 3 (Assessment by list): extremely hazardous for water.

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:**

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- **Contact:** Angelika Torges

- **Sources:** ESIS (European existing Substances Information System)