

# MATERIAL SAFETY DATA SHEET

according to 91/155 EEC

Printing date 07.02.2007

Reviewed on 07.02.2007


## 1 Identification of substance

- **Product details**
- **Trade name** PENTOSIN LONG-TIME ANTIFREEZE
- **Article number:** 1301107
- **Application of the substance / the preparation** Functional Fluid/Automotive Antifreeze
- **Manufacturer/Supplier:**  
 Deutsche Pentosin-Werke GmbH  
 Industriestraße 39-43  
 D-22880 Wedel  
 Germany  
 Phone ++49 4103 9134-0  
 Fax ++49 4103 9134-71
- **Informing department:** Department QM-UM-Safety
- **Emergency information:** +49 / (0)4103 / 91 34-0

## 2 Composition/Data on components:

- **Chemical characterization**
- **Description:** Mixture consisting of the following components.

### · Dangerous components:

CAS: 107-21-1	ethane-1,2-diol	 Xn; R 22	75-100%
EINECS: 203-473-3			

- **Additional information**  
 For the wording of the listed risk phrases refer to section 16.  
 5 % non harmful ingredients

## 3 Hazards identification

### · Hazard designation:



Xn Harmful

- **Information pertaining to particular dangers for man and environment**  
 The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.  
 R 22 Harmful if swallowed.
- **Classification system**  
 The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

## 4 First aid measures

- **General information**  
 Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhaling** Supply fresh air; consult doctor in case of symptoms.

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- **After skin contact** The product is generally no skin irritant.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Instantly call for doctor.

## 5 Fire fighting measures

- **Suitable extinguishing agents**  
Use fire fighting measures that suit the environment.  
Water haze  
Alcohol based foam  
BC powder
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **Protective equipment:** Wear self-contained breathing apparatus.

## 6 Accidental release measures

- **Person-related safety precautions:** Not required.
- **Measures for environmental protection:**  
Dilute with much water.  
Do not allow to enter drainage system, surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.

## 7 Handling and storage

- **Handling**
- **Information for safe handling:** Ensure good ventilation/suction at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and containers:** Un-suitable material for container: aluminium.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Storage class** 10 (VCI Germany)

## 8 Exposure controls and personal protection

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

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

### 107-21-1 ethane-1,2-diol (75-100%)

WEL Short-term value: 104\*\* mg/m<sup>3</sup>, 40\*\* ppm  
Long-term value: 10\* 52\*\* mg/m<sup>3</sup>, 20\*\* ppm  
Sk \*particulate \*\*vapour

### 1330-43-4 disodium tetraborate, anhydrous (< 5%)

WEL Long-term value: 1 mg/m<sup>3</sup>

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- **Personal protective equipment**
- **General protective and hygienic measures**  
Keep away from foodstuffs, beverages and fodder.  
Wash hands during breaks and at the end of the work.
- **Breathing equipment:** Not necessary if room is well ventilated.
- **Protection of hands:**  
Protective gloves and protective skin cream.  
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
- **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:** Protective goggles recommended during refilling.

## 9 Physical and chemical properties:

### · General Information

**Form:** Fluid  
**Colour:** Blue  
**Smell:** Sweetish

### · Change in condition

**Melting point/Melting range:** -12.4°C  
**Boiling point/Boiling range:** 197°C (ASTM D1120 ie während de)

· **Flash point:** 120°C (ISO 2592 ie während de)

· **Ignition temperature:** 410°C (DIN 51794 ie während de)

· **Self-inflammability:** Product is not self-igniting.

· **Danger of explosion:** Product is not explosive.

### · Critical values for explosion:

**Lower:** 3.2 Vol %  
**Upper:** 53 Vol %

· **Steam pressure at 20°C:** 0.08 hPa

· **Density at 20°C** 1.11 g/cm<sup>3</sup> (ISO 12185 ie während de)

### · Solubility in / Miscibility with

**Water at 20°C:** 1.000 g/l

· **pH-value:** Slightly alkaline

### · Viscosity:

**kinematic at 20°C:** 20 mm<sup>2</sup>/s (ISO 3104 ie während de)

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## 10 Stability and reactivity

- **Conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of composition:** None

## 11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

Oral	LD50	5840 mg/kg (rat)
Dermal	LD50	9530 mg/kg (rbt)

**107-21-1 ethane-1,2-diol**

Oral	LD50	5840 mg/kg (rat)
Dermal	LD50	9530 mg/kg (rbt)

· **Primary irritant effect:**

- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effect known.

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:  
Harmful

## 12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:** The product is easily biodegradable.
- **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

## 13 Disposal considerations

· **Product:**

· **European waste catalogue**

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01 00	end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)
16 01 14	antifreeze fluids containing dangerous substances

· **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

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## 14 Transport information

- **Maritime transport IMDG/GGVSea:**
- **Marine pollutant:** No
- **Transport/Additional information:** No dangerous goods in accordance with the above orders

## 15 Regulatory information

- **Designation according to EC guidelines:**  
*The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)*
  - **Code letter and hazard designation of product:**  
*Xn Harmful*
  - **Hazard-determining components of labelling:**  
*ethane-1,2-diol*
  - **Risk phrases:**  
*22 Harmful if swallowed.*
  - **Safety phrases:**  
*2 Keep out of the reach of children.*  
*13 Keep away from food, drink and animal feeding stuffs.*  
*23 Do not breathe gas/fumes/vapour/spray.*  
*36 Wear suitable protective clothing.*  
*46 If swallowed, seek medical advice immediately and show this container or label.*  
*52 Not recommended for interior use on large surface areas.*
  - **National regulations:**
  - **Technical instructions (air):**
- | Class | Share in % |
|-------|------------|
| III   | 95.0       |
- **Water hazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*

## 16 Other information:

*These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Relevant R-phrases**  
*22 Harmful if swallowed.*
- **Department issuing data specification sheet:** *QM-UM-Safety*
- **Contact:** *Dr.G.Lukaschek*
- **\* Data compared to the previous version altered.**