

Safety Data Sheet

Material Safety Data Sheet according to 91/155 EEC

Printing date 11/04/2008

Revision: 11/04/2008





1 Identification of substance

- **Product details**
- **Trade name** PENTOFROST ++
- **Article number:** 8112106
- **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:**
 Safety / Health / Environment
 msds-info@pentosin.com
- **Emergency information:** +49 4103 9134-0

2 Composition/information on ingredients

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

· **Dangerous components:**

107-21-1	ethane-1,2-diol	 Xn; R 22 Danger:  3.1.0/3	< 75%
149-57-5	2-ethylhexanoic acid	 Xn; R 63 Warning:  3.7/2	< 5%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

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.

- **GHS label elements**



Warning

3.1/4 - Harmful if swallowed.

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- **Prevention:**
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
- **Response:**
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Rinse mouth.
- **Disposal:**
Dispose of contents/container in accordance with local/regional/national/international regulations.

4 First aid measures

- **General information** No special measures required.
- **After inhaling** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** The product is generally no skin irritant.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Seek immediate medical advice.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
- **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:** 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).
- **Additional information:** No dangerous materials are released.

7 Handling and storage

- **Handling**
 - **Information for safe handling:** No special measures required.
 - **Information about protection against explosions and fires:** No special measures required.
- **Storage**
 - **Requirements to be met by storerooms and containers:** No special requirements.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:** Keep container tightly sealed.
 - **Storage class** 10 (VCI Germany)

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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%)

TLV	Short-term value: C 100 mg/m ³
H	

149-57-5 2-ethylhexanoic acid (< 5%)

TLV	5* mg/m ³
	*as inhalable fraction and vapor

· **Personal protective equipment**

· **General protective and hygienic measures** Use skin protection cream for preventive skin protection.

· **Breathing equipment:** Not necessary if room is well ventilated.

· **Protection of hands:**

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

· **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:	Violet
Smell:	Characteristic

· **Change in condition**

Melting point/Melting range: Not determined

Boiling point/Boiling range: Not determined

· **Flash point:** Not applicable

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

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

· **Density at 20°C (68°F)** 1.1 g/cm³

· **Solubility in / Miscibility with Water:** Fully miscible

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- **Solvent content:**
Organic solvents: 0.0 %

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:**

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

Oral	LD50	5840 mg/kg (rat)
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Dermal	LD50	9530 mg/kg (rbt)
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- **Primary irritant effect:**

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

- **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

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
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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)
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16 01 14	antifreeze fluids containing dangerous substances
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- **Uncleaned packagings:**

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

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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:**
- **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 feedingstuffs.
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:**
- **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.

- **Department issuing data specification sheet:** Safety / Health / Environment
- **Contact:** Dr.G.Lukaschek
- **Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
LD50: Lethal dose, 50 percent
- *** Data compared to the previous version altered.**