

MATERIAL SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

Printing date 18.02.2008

Revision: 18.02.2008

1 Identification of substance

- **Product details**
- **Trade name** PENTOSIN RACING BRAKE FLUID
- **Article number:** 1203106
- **Application of the substance / the preparation** Automotive Brake Fluid
- **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
 g.lukaschek@pentosin.com
- **Emergency information:** +49 / (0) 4103 / 91 34-0

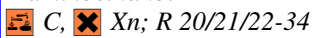
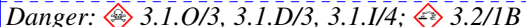

2 Hazards identification

- **Hazard designation:** void
- **Information pertaining to particular dangers for man and environment**
 The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **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**

3 Composition/information on ingredients

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

· **Dangerous components:**

CAS: 141-43-5	2-aminoethanol	< 5%
EINECS: 205-483-3	 C, Xn; R 20/21/22-34	
Danger:  3.1.O/3, 3.1.D/3, 3.1.I/4;  3.2/1B		

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

4 First aid measures

- **General information** Instantly remove any clothing soiled by the product.
- **After inhaling** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Call a doctor immediately.

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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:** Ensure adequate ventilation
- **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).
- **Additional information:** No dangerous materials are released.

7 Handling and storage

- **Handling**
- **Information for safe handling:** Ensure good ventilation/suction at the workplace.
- **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)

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:**

141-43-5 2-aminoethanol (< 5%)

WEL	Short-term value: 7.6 mg/m ³ , 3 ppm
	Long-term value: 2.5 mg/m ³ , 1 ppm
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- **Personal protective equipment**
- **General protective and hygienic measures** Use skin protection cream for preventive skin protection.
- **Breathing equipment:** Use breathing protection with high concentrations.
- **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

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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 trough 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:	Yellow
Smell:	Characteristic

· Change in condition

Melting point/Melting range:	<-50°C
Boiling point/Boiling range:	>300°C (SAE J1703)

· **Flash point:** >140°C (ISO 2592)

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

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

· **Density at 20°C** 1.078 g/cm³ (ISO 12185)

· Solubility in / Miscibility with

Water:	Not miscible or difficult to mix Fully miscible
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· **pH-value:** Slightly alkaline

· **Viscosity:**
kinematic at 20°C: 20 mm²/s (ISO 3104)

10 Stability and reactivity

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

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.

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

12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:** The product is 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 13	brake fluids

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

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 is not subject to identification regulations under EC Directives and the Ordinance on Hazardous Materials (GefStoffV).
- **Special designation of certain preparations:**
Safety data sheet available for professional user on request.
- **National regulations:** All components are listed in EC-Inventory EINECS / ELINCS
- **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**
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

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34 Causes burns.

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· **Department issuing data specification sheet:** Safety / Health / Environment

· **Contact:** Dr.G.Lukaschek

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

· * **Data compared to the previous version altered.**

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