



1 Identification of substance

Product details

Trade name **Pentosin DOT4 LV**

Article number ---

Application of the substance / the preparation *Automotive Brake Fluid*

Manufacturer/Supplier:

Deutsche Pentosin-Werke GmbH

Industriestraße 39-43

D-22880 Wedel

Germany

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Informing department: *Department QM-UM-Safety*

Emergency information: *++49 4103 9134-0*

2 Composition/Data on components:

Chemical nature *Blend based on: glycol ether, inhibitors, glycoetherborate*

Hazardous ingredients *2-(2-(2-butoxyethoxy)ethoxy)ethanol*

Content (W/W): < 10%

CAS Number: 143-22-6

EG-Number: 205-592-6

Hazard symbol(s): Xi

R-phrases(s): 36

2-/2-methoxyethoxy)ethanol

Content (W/W): < 5%

CAS Number: 111-77-3

EG-Number: 203-906-6

INDEX-Number: 603-107-00-6

Hazard symbol(s): Xn

R-phrases(s): 63

Aliphatic amine

Content (W/W): < 2%

Hazard symbol(s): Xi

R-phrases(s): 36

The wording of the hazard symbols and R-phrases is specified in chapter 16 if dangerous ingredients are mentioned.

3 Hazard identification:

No particular hazards known.



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4 First aid measures

General advice:	Remove contaminated clothing.
If inhaled:	If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.
On skin contact:	Wash thoroughly with soap and water.
On contact with eyes:	Wash affected eyes for at least 15 minutes under running water with eyelids held open.
On ingestion:	Rinse mouth and then drink plenty of water.
Note to physician:	Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5 Fire-fighting measures

Suitable extinguishing media:	Water ,spray, dry extinguishing media, foam, carbon dioxide
Specific hazards:	harmful vapours Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.
Special protective equipment:	Wear a self-contained breathing apparatus.
Further information:	The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6 Accidental release measures

Personal precautions:	Use personal protective clothing.
Environmental precautions:	Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.
Methods for cleaning up or taking up:	<u>For large amounts:</u> Pump off product. <u>For residues:</u> Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7 Handling and storage

Handling	Ensure thorough ventilation of stores and work areas. Prevent contact with air/oxygen (formation of peroxide). <u>Protection against fire and explosion:</u> Take precautionary measures against static discharges.
Storage	<u>Further information on storage conditions:</u> Keep container tightly closed and dry; store in a cool place.



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8 Exposure controls/personal protection

Personal protective equipment

Hand protection: Chemical resistant protective gloves (EN374)
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according EN 374):
fluoroelastomer (FKM) – 0,7 mm coating thickness
Polyethylene-Laminate (PE laminate) – ca. 0,1 mm coating thickness
Suitable materials short-Term contact and/or splashes (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN 374)
nitrile rubber (NBR) – 0,4 mm coating thickness
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection: Safety glasses with side-shields (frame goggles) (EN 166)

General safety and hygiene measures:

Do not inhale gases/vapours/aerosols. Handle in accordance with good industrial hygiene and safety practice.

9 Physical and chemical properties

Form	Liquid.	
Colour	yellow	
Odour	product specific	
Solidification temperature	< -50°C	(DIN/ISO 3016)
Boiling point	> 265 °C	(ASTM D 1120)
Flash point	> 130°C	(DIN/EN 22719; ISO 2719)
Ignition temperature	> 200°C	(DIN 51794)
Vapour pressure	< 1 mbar (20°C) < 1 mbar (50°C)	
Density	approx. 1,06 g/cm ³ (20°C)	
Solubility in water	soluble	
Solubility (qualitative) solvent(s)	polar solvents soluble	

10 Stability and reactivity

Hazardous reactions: No hazardous reactions if stored and handled as prescribed/indicated.

Hazardous decomposition products: No hazardous decomposition if stored and handled as prescribed/indicated.



11 Toxicological information

LD50/oral/rat: > 2.000 mg/Kg

Primary skin irritation/rabbit: non-irritant

Primary irritations of the mucous membrane/rabbit: non-irritant

Additional information: Females of childbearing age should not come into contact with the product.
The product has not been tested. The statement has been derived from the properties of the individual components.

12 Ecological information

Ecotoxicity Toxicity to fish:
Leuciscus idus/LC50 (96 h): > 100 mg/l

Microorganisms/Effect on activated sludge:
Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

Persistence and degradability Elimination information
Test method: OECD 302B; ISO 9888; 88/302/EEC, part C:
Method of analysis: DOC reduction
Degree of elimination: > 70%
Evaluation: Readily eliminated from water.

Additional information Other ecotoxicological advice:
Do not release untreated into natural waters.
The product has been not tested. The statement has been derived from the properties of the individual components.

13 Disposal considerations

Must be dumped or incinerated in accordance with local regulations.
The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

Contaminated packaging:
Uncontaminated packs can be re-used.
Packs that cannot be cleaned should be disposed of the same manner as the contents.



14 Transport information

Not classified as hazardous under transport regulations (ADR, RID, ADNR, IMDG/GGVSee, ICAO/IATA).

15 regulatory information

Regulations of the European union (Labelling) / National legislation/Regulations

Directive 1999/45/EEC ('Preparation Directive'):

Not subject to labelling

Other regulations

The data should be considered when making any assessment under the UK Control of Substances Hazardous to Health Regulation (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

16 Other information

Full text of hazard symbols and R-phrases if mentioned as hazardous components in chapter 2:

- Xi** *Irritant*
- Xn** *Harmful*
- 36** *Irritating to eyes*
- 63** *Possible risk of harm to the unborn Child*

Prepared by

Department QM-UM-Safety Mr. I. Kutzbach

Vertical lines in the left hand margin indicated an amendment from the previous version.

The information contained herein is based on the present state of our knowledge and does not therefore guarantee certain properties. Recipients of our product must take responsibility for observing existing laws and regulations.