

Safety Data Sheet 1907/2006/EC - GB

Revision: 04.02.2009

Publication No.
XRB236B(EN)

1 Identification of the substance / preparation and of the company

Product: DOT 4

Registration number: not applicable

Use: Brake Fluid

Identified use: none

Method of operation: See product information.

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2 Hazards identification

Physico-chemical hazards: See chapter 10.

Human health dangers: Frequent persistent contact with the skin can cause skin irritation.
If swallowed or in the event of vomiting, risk of product entering the lungs.
See R-phrases.

Environmental hazards: See chapter 12.

Other hazards: No particular hazards known.

Hazard symbols:



Irritant

R-phrases: R 36: Irritating to eyes.

3 Composition / Information on ingredients

2-2'-Oxydiethanol	1 - < 5%
Xn, R22 CAS: 111-46-6, EINECS/ELINCS: 203-872-2, EU-INDEX: 603-140-00-6, ECBnr:	
2,2'-(Ethylendioxy)diethanole	1 - < 5%
CAS: 112-27-6, EINECS/ELINCS: 203-953-2, EU-INDEX: , ECBnr:	
2-(2-Butoxyethoxy)ethanol	1 - < 5%
Xi, R36 CAS: 112-34-5, EINECS/ELINCS: 203-961-6, EU-INDEX: 603-096-00-8, ECBnr:	
2-(2-(2-Butoxyethoxy)ethoxy)ethanol	20 - < 40%
Xi, R41 CAS: 143-22-6, EINECS/ELINCS: 205-592-6, EU-INDEX: 603-183-00-0, ECBnr:	

Comment on component parts: For the wording of the listed risk phrases refer to section 16.

4 First aid measures

General information: Change soaked clothing.

Inhalation: Ensure supply of fresh air.
In the event of symptoms seek for medical treatment.

Skin contact: When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact: In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

Ingestion: Supply with medical care.
Do not induce vomiting.
Rinse out mouth and give plenty of water to drink.

Advice to doctor: If swallowed or in the event of vomiting, risk of product entering the lungs.

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5 Fire-fighting measures

Suitable extinguishing media: Foam, dry powder, water spray jet, carbon dioxide.

Extinguishing media that must not be used:

Full water jet.

Special exposure hazards arising from the substance or preparation itself or combustion products:

Unknown risk of formation of toxic pyrolysis products.

Special protective equipment for firefighters:

Do not inhale explosion and/or combustion gases.

Use self-contained breathing apparatus.

Additional information:

Cool containers at risk with water spray jet.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

6 Accidental release measures

Personal precautions:

Keep away from all sources of ignition.

High risk of slipping due to leakage/spillage of product.

Environmental precautions:

Prevent spread over a wide area (e.g. by containment or oil barriers).

Do not discharge into the drains/surface waters/groundwater.

Methods for cleaning up:

Pick up with absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth).

Dispose of absorbed material in accordance within the regulations.

7 Handling and storage

Advice on safe handling:

Use only in well-ventilated areas.

Avoid spilling or spraying in enclosed areas.

Users are referred to the Specification SAE J1707 "Service Maintenance of Brake Fluids".

Advice on protection against fire and explosion:

Keep away from all sources of ignition.

Requirements for storage rooms and vessels:

Prevent penetration into the ground.

Keep only in original container.

Advice on storage compatibility:

Do not store together with oxidizing agents.

Further information on storage conditions:

Keep container tightly closed.

Keep container in a well-ventilated place.

Store in a dry place.

8 Exposure controls / personal protection

Additional advice on system design:

Ensure adequate ventilation on workstation.

Ingredients with occupational exposure limits to be monitored:

2-2'-Oxydiethanol, 23ppm*, 101mg/m ³ *	1 - < 5%
2-(2-Butoxyethoxy)ethanol, 10ppm*, 67,5mg/m ³ *, General remarks: EU	1 - < 5%

* WEL: Workplace exposure limit

Respiratory protection:

Breathing apparatus in the event of high concentrations.

Short term: filter apparatus, filter A.

Hand protection:

Butyl rubber, >120 min (EN 374).

Eye protection:

Safety glasses.

Skin protection:

not applicable

General protective measures:

Avoid contact with eyes and skin.

Do not inhale gases/vapours/aerosols.

Hygiene measures:

Do not eat, drink, smoke or take drugs at work.

Wash hands before breaks and after work.

Use barrier skin cream.

Delimitation and monitoring of the environmental exposition:

not determined

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9 Physical and chemical properties

Form:	liquid
Color:	clear colourless amber colour
Odor:	perceptible
pH-value:	7-11,5 (SAE J 1703)
pH-value [1%]:	not determined
Boiling point [°C]:	> 205 (SAE J 1703)
Flash point [°C]:	>90 (IP35)
Flammability [°C]:	not determined
Lower explosion limit:	not determined
Upper explosion limit:	not determined
Oxidizing properties:	no
Vapour pressure [kPa]:	< 2 mbar (20°C)
Density [g/ml]:	1,01 - 1,07 (DIN 51757)
Density at [°C]:	20
Bulk density [kg/m³]:	not applicable
Solubility in water:	partially miscible
Partition coefficient [n-octanol/water]:	< 2 (OECD 117)
Viscosity:	5 - 10 cSt (20°C) (ASTM D 445)
Relative vapour density determined in air:	not determined
Evaporation speed:	not determined
Melting point [°C]:	<-50 (SAE J 1703)
Autoignition temperature [°C]:	>300 (ASTM D 286)
Decomposition temperature:	not applicable

10 Stability and reactivity

Hazardous reactions:	Reactions with strong oxidizing agents. Glycol Ethers can form peroxide on storage – do not distil to dryness.
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Hazardous decomposition products:

No hazardous decomposition products known.

11 Toxicological information

Acute oral toxicity:	LD50: > 5000 mg/kgRat
Acute dermal toxicity:	LD50: > 2000 mg/kgRat
Acute inhalational toxicity:	not determined
Irritant effect on eye:	Irritant (rabbit).
Irritant effect on skin:	Non-irritant (rabbit).
Sensitization:	Non-sensitizing.
Subacute toxicity:	not determined
Chronic toxicity:	not determined
Mutagenicity:	not determined
Reproduction toxicity:	not determined
Carcinogenicity:	not determined
Experiences made in practice:	none
General remarks:	The toxicological data are those of the pure product.

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12 Ecological information

Fish toxicity:	LC50(96h): > 100 mg/l Oncorhynchus Mykiss
Daphnia toxicity:	not determinated
Behaviour in environment compartments:	not determinated
Behaviour in sewage plant:	not applicable
Bacteria toxicity:	not determinated
Biological degradability:	The product is readily biodegradable.
COD:	not determinated
BOD 5:	not determinated
AOX-advice:	No dangerous components.
2006/11/EC:	not applicable
General information:	Do not allow to enter soil, waterways or waste water.

13 Disposal considerations

Product:	Dispose of as hazardous waste. Disposal in an incineration plant in accordance with the regulations of the local authorities.
Contaminated packaging:	Uncontaminated packaging may be taken for recycling. Packaging that cannot be cleaned should be disposed of as for product.
Waste no. (recommended):	160113*

14 Transport information

Classification according to ADR:	NO DANGEROUS GOODS
- Classification Code:	
- Label:	
- ADR LQ	
- ADR 1.1.3.6 (8.6):	Transport category (tunnel restriction code): -
Classification according to IMDG:	NOT CLASSIFIED AS "DANGEROUS GOODS"
- EMS:	
- Label:	
- IMDG Limited Quantities:	
Classification according to IATA:	NOT CLASSIFIED AS "DANGEROUS GOODS"
- Label:	

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15 Regulatory information

Exposure scenario: not determinated
Chemical safety report: not determinated
Labelling: The product is classified and labelled in accordance within EC-directives.
Hazard symbols:



Irritant

R-phrases: R 36: Irritating to eyes.
S-phrases: S 2: Keep out of the reach of children.
 S 26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S 46: If swallowed, seek medical advice immediately and show this container or label.

Special labelling: not applicable

Authorisation, TITEL VII: not determinated

Restrictions, TITEL VIII: not determinated

EEC-REGULATIONS: 1967/548 (2008/58, 30. ATP/ 31. ATP); 1991/689 (2001/118); 1999/13; 2004/42; 648/2004; 1907/2006.

TRANSPORT-REGULATIONS: DOT-Classification, ADR (2009); IMDG-Code (34. Amdt.); IATA-DGR (2009).

NATIONAL REGULATIONS: EH40/2005 Workplace exposure limits with amendments October 2007.

16 Other informations

R-phrases (Chapter 03): R 41: Risk of serious damage to eyes.
 R 36: Irritating to eyes.
 R 22: Harmful if swallowed.

Observe employment restrictions for people:

yes

VOC (1999/13/CE): not determinated

Customs Tariff: not determinated

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