



SAFETY DATA SHEET

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Revised edition no : 2

Date : 14 / 12 / 2009

Supersedes : 21 / 9 / 2009


Eurol Brakefluid DOT 4

E801400

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Type of product	: Brake fluid.
Identification of the product	: Oily liquid.
Trade name	: Eurol Brakefluid DOT 4
Use	: Professional use. Consumers.
Intended use	: Brake fluid. See product bulletin for detailed information.
Producer	: Eurol B.V. Energiestraat 12 7442 DA Nijverdal NETHERLANDS tel: +(31) (0)548 615165 ; fax: +(31) (0) 548 610195 e-mail: r.hilgers@eurol.com (Ruud Hilgers)
Responsible for placing on the market	: Eurol B.V. Energiestraat 12 7442 DA Nijverdal NETHERLANDS tel: +(31) (0)548 615165 ; fax: +(31) (0) 548 610195 e-mail: r.hilgers@eurol.com (Ruud Hilgers)
Emergency phone nr	: Emergency telephone number: Int. + 31.30.2748888. (Dutch National Poison Information Centre) Only for physicians and medical specialists in case of an accidental poisoning. See address above. (Monday to Friday: 8:00 - 17:00)

2 HAZARDS IDENTIFICATION

Classification system	: The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
Hazard classification	: This preparation is classified as dangerous according to Directive 1999/45/EC as amended and adapted.
Symbol(s)	: Xi : Irritant 
Risk Phrases	: R41 : Risk of serious damage to eyes.
Other hazards	
Human health hazards	: Prolonged or repeated contact may cause skin to become dry or cracked.
Physical/chemical hazards	: None.
Environmental hazards	: None.
Primary route of exposure	: Skin and eyes contact.
Effects and symptoms	
- Inhalation	: At normal ambient temperatures this product will be unlikely to present an inhalation hazard because of its low volatility. May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.
- Skin contact	: None under normal conditions. Repeated or prolonged skin contact may cause irritation.
- Eye contact	: Risk of serious damage to eyes.

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2 HAZARDS IDENTIFICATION (continued)

- Ingestion : Not expected to present a significant ingestion hazard under anticipated conditions of normal use.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Preparation : Preparation.
Chemical characterization : Polyalkylene glycol ethers / glycols
Components : This product is hazardous.
Composition : Substances presenting a health or environmental hazard within the meaning of Directive 67/548/EEC / Substances for which there are Community workplace exposure limits :

Substance name	Conc. (wt%)	CAS No	EC No	Annex No	Classification
2-[2-(2-butoxyethoxy)ethoxy]ethanol	Between 50 and 75 %	143-22-6	205-592-6	603-183-00-0	----- Xi; R41

Other information : Occupational Exposure Limit(s), if available, are listed in section 8.

Text of R-Phrases : See Heading 16.

4 FIRST AID MEASURES

- **General information** : Seek medical attention if ill effect develops.
- **Inhalation** : Allow the victim to rest.
Assure fresh air breathing.
- **Skin contact** : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
Seek medical attention if ill effect or irritation develops.
- **Eye contact** : Check for and remove contact lenses. Obtain medical attention if pain, blinking or redness persist.
Continue to rinse eye with clean water for 20-30 minutes, retracting eyelids often.
- **Ingestion** : Rinse mouth. Do not induce vomiting.
If vomiting occurs spontaneously, keep head below the hips to prevent aspiration.

5 FIRE-FIGHTING MEASURES

Specific hazards : When exposed to heat, may decompose liberating hazardous gases.
Hazardous combustion products : CO, CO₂, NO_x.
Under fire conditions, hazardous fumes will be present.
- **Suitable extinguishing media** : Water spray.
Dry powder.
Carbon dioxide.
Foam.
Surrounding fires : Use water spray or fog for cooling exposed containers.
Special procedures : Exercise caution when fighting any chemical fire.
Avoid (reject) fire-fighting water to enter environment.
Special protective equipment for fire fighters : Do not enter fire area without proper protective equipment, including respiratory protection.

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6 ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Avoid contact with skin and eyes.
Equip cleanup crew with proper protection.
Spill area may be slippery.
- Environmental precautions** : Stop the flow of material, if possible without risk. Dike spilled material, where this is possible. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.
- Clean up methods** : Dike the product for recovery.
Take up large spills with pump or vacuum. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- on soil** : Clean up any spills as soon as possible, using an absorbent material to collect it.
Use suitable disposal containers.
- Contaminated product, soil, water** : Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations.

7 HANDLING AND STORAGE

- General** : This product is not hazardous.
- Precautions in handling and storage** : Avoid contact with skin and eyes.
Handle in accordance with good industrial hygiene and safety procedures.
- Storage** : Label should not be removed from containers until they have been cleaned.
Store in tightly closed, properly ventilated containers away from heat, sparks, open flame.
- Storage - away from** : Strong oxidizing agents.
Acids.
- Handling** : Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.
Wash clothing before re-using.
Where contact with eyes or skin is likely, wear suitable protection.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

- Industrial hygiene** : Do not put the product-soaked rags into the pockets of working clothes.
Do not use cloths stained with the product to dry hands.
Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work.
Wash clothing before re-using.
When using, do not eat, drink or smoke.
- Respiratory protection** : Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.
Where excessive vapour, mist, or dust may result, use approved respiratory protection equipment.
Respiratory protective equipment must be checked to ensure it fits correctly each time it is worn.
Provided an air-filtering/air-purifying respirator is suitable, a filter for particulates can be used for mist or fume. Use filter type P or comparable standard.
A combination filter for particles and organic gases and vapours (boiling point > 65°C) may be required if vapour or abnormal odour is also present due to high product temperature. Use filter type AP or comparable standard.
- Hand protection** : In case of repeated or prolonged contact wear gloves.
The gloves should be replaced immediately in case of damage or signs of wear. It is recommended to use preventative skin protection (skin cream).
The protection glove should be tested for its specific suitability (e.g. mechanical

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8 EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

strength, product compatibility, anti-static properties).

Material	Thickness (mm)	Breakthrough time (min)	Level	according
Nitril.	.4	480	6	EN 374

- **Eye protection** : Safety glasses with side shields. Equipment should conform to EN 166. Eye protection should only be necessary where liquid could be splashed or sprayed.
- **Skin protection** : No special clothing/skin protection equipment is recommended under normal conditions of use.
Avoid repeated or prolonged skin contact.
If repeated skin contact or contamination of clothing is likely, protective clothing should be worn.
- Environmental Exposure Controls** : See Heading 6. See Heading 12.

9 PHYSICAL AND CHEMICAL PROPERTIES

- Physical state at 20 °C** : Liquid.
- Colour** : Colourless to light yellow.
- Odour** : Characteristic.
- pH value** : 7.5 - 10
- Freezing point [°C]** : -70
- Boiling point [°C]** : 235
- Decomposition point [°C]** : 360
- Density (kg/l) @ 20 °C** : 1.04 and 1.07
- Vapour pressure [kPa @20°C]** : 0.1
- Relative density, gas (air=1)** : > 1
- Viscosity at 40°C [mm²/s]** : 7
- Solubility in water** : Miscible.
- Flash point [°C]** : 100
- Auto-ignition temperature [°C]** : > 300
- Evaporation rate (BuAc=1)** : 0.1
- Other data** : Hygroscopic.

10 STABILITY AND REACTIVITY

- Stability and reactivity** : Do not use in brake systems where mineral oil is prescribed.
On contact with this fluid, industrial coatings and paints may soften and may loosen. when they get in contact with this fluid.
- Hazardous decomposition products** : On exposure to high temperature, may decompose, releasing toxic/flammable vapours.
CO, CO₂, NO_x.
- Hazardous reactions** : None under normal conditions.
- Hazardous polymerization** : Will not occur.
- Materials to avoid** : Acids.
Strong oxidizers.
- Conditions to avoid** : Open flame. Overheating.

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11 TOXICOLOGICAL INFORMATION

Basis for Assessment	: Toxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the toxicology of similar products.
Toxicokinetics, metabolism and distribution	: No data available.
Acute effects (acute toxicity, irritation and corrosivity)	
- Acute toxicity	: No data available.
- Irritation	: Direct contact with the eyes is likely slightly irritating.
- Corrosivity	: No data available.
Sensitisation	: Unknown.
CMR effects	
- Carcinogenicity	: Unknown.
- Mutagenicity	: Unknown.
- Reproductive and Developmental Toxicity	: Unknown.
Repeated dose toxicity	: Repeated dermal contact with material can lead to defatting of the skin.

12 ECOLOGICAL INFORMATION

Basis for Assessment	: Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.
Ecological effects information	: No specific risk for the environment.
Ecotoxicity	: No data available.
Bioaccumulative potential	: This product is not expected to bioaccumulate through food chains in the environment.
Persistence - degradability	: Product is biodegradable.
Mobility	: Spillages may penetrate the soil causing ground water contamination. Completely miscible with water.
Results of PBT assessment	: Unknown.
Other Adverse Effects	: Unknown.

13 DISPOSAL CONSIDERATIONS

General	: Avoid release to the environment. Dispose of this material and its container at hazardous or special waste collection point. Dispose in a safe manner in accordance with local/national regulations.
Industrial waste number	: 16 01 13 - Brake fluids. (Hazardous waste pursuant to Directive 91/689/EEC on hazardous waste)
Special precautions	: Containers which are not properly emptied must be disposed pursuant to Directive 91/689/EEC. When not empty dispose of this container at hazardous or special waste collection point.

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14 TRANSPORT INFORMATION

General information : Not classified as hazardous for transport (ADR/RID, ADNR, IMDG, ICAO/IATA)

15 REGULATORY INFORMATION

EC Classification : This preparation is classified as dangerous according to Directive 1999/45/EC as amended and adapted.

Symbol(s) : Xi : Irritant

R Phrase(s) : R41 : Risk of serious damage to eyes.

S Phrase(s) : S2 : Keep out of the reach of children.
S25 : Avoid contact with eyes.
S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S39 : Wear eye/face protection.
S46 : If swallowed seek medical advice immediately and show this container or label.
S56 : Dispose of this material and its container to hazardous or special waste collection point.

• **National provisions**

Germany : WGK (Water-endangerment class) : 2

16 OTHER INFORMATION

Recommended uses and restrictions : Specifications and technical informations on the product may be obtained by your dealer.

Sources of key data used : EUROPEAN COMMUNITIES : Directives 67/548/EEC and 1999/45/EC, Regulation (EC) No 1907/2006.

List of relevant R phrases (heading 3) : R41 : Risk of serious damage to eyes.

Revision : Revision - See : *
14 / 12 / 2009

Prepared by : Ruud Hilgers

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The contents and format of this SDS are in accordance with REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

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