



Eurol Brake Fluid DOT 4

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 17.02.2014 Revision date: 23.08.2023 Supersedes: 02.12.2022 Version: 8.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Eurol Brake Fluid DOT 4
UFI : 6PF8-S2X7-M80E-WAV0
Product code : E801400
Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Intended for general public
Main use category : Industrial use, professional use, Consumer use
Use of the substance/mixture : Brake fluid.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Eurol B.V.
Energiestraat 12
NL-7442 DA Nijverdal
The Netherlands
Tel: +31 548 615 165
reach@eurol.com - www.eurol.com

1.4. Emergency telephone number

Emergency number : For Transport Emergency Call +31 6 26 71 27 43 (24hr/day 7days/week)

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	+356 2545 6508	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals
United Kingdom	NHS 111/NHS 24/NHS Direct		111 0845 4647	or call a doctor

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Reproductive toxicity, Category 2 H361fd
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Suspected of damaging fertility or the unborn child.

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

CLP Signal word :

Warning

Hazard statements (CLP) :

H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.

Precautionary statements (CLP) :

P102 - Keep out of reach of children.

P201 - Obtain special instructions before use.

P280 - Wear protective gloves, protective clothing, eye protection, face protection.

P308+P313 - IF exposed or concerned: Get medical advice/attention.

P405 - Store locked up.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

EUH-statements :

EUH208 - Contains dihydro-3-(tetrapropenyl)furan-2,5-dione. May produce an allergic reaction.

Child-resistant fastening :

Not applicable

Tactile warning :

Applicable

2.3. Other hazards

Other hazards not contributing to the classification : Attacks some forms of plastics, rubber, and coatings.

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
2,2' -oxybisethanol; diethylene glycol (111-46-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	CAS-No.: 30989-05-0 EC-No.: 250-418-4 REACH-no: 01-2119462824-33	35 – 50	Repr. 2, H361fd
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0 REACH-no: 01-21195457107-38	10 – 25	Eye Dam. 1, H318

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,2'-oxybisethanol; diethylene glycol substance with national workplace exposure limit(s) (GB, IE)	CAS-No.: 111-46-6 EC-No.: 203-872-2 EC Index-No.: 603-140-00-6 REACH-no: 01-2119457857-21	5 – 10	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight)
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether substance with national workplace exposure limit(s) (GB, IE, MT); substance with a Community workplace exposure limit	CAS-No.: 111-77-3 EC-No.: 203-906-6 EC Index-No.: 603-107-00-6 REACH-no: 01-2119475100-52	1 – 3	Repr. 1B, H360D
dihydro-3-(tetrapropenyl)furan-2,5-dione	CAS-No.: 26544-38-7 EC-No.: 247-781-6 REACH-no: 01-2119979080-37	< 0,1	Eye Irrit. 2, H319 Skin Sens. 1A, H317 Aquatic Chronic 4, H413

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol	CAS-No.: 143-22-6 EC-No.: 205-592-6 EC Index-No.: 603-183-00-0 REACH-no: 01-21195457107-38	(20 ≤ C < 30) Eye Irrit. 2, H319 (30 ≤ C < 100) Eye Dam. 1, H318
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether	CAS-No.: 111-77-3 EC-No.: 203-906-6 EC Index-No.: 603-107-00-6 REACH-no: 01-2119475100-52	(3 ≤ C ≤ 100) Repr. 1B, H360D

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after 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.
Symptoms/effects after skin contact	: Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis. High pressure injection of product into the skin may lead to local necrosis if the product is not surgically removed.
Symptoms/effects after eye contact	: Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.
Symptoms/effects after ingestion	: Bad taste. Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhoea.
Symptoms/effects upon intravenous administration	: Unknown.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Combustion generates: CO, CO₂.
Explosion hazard : Not expected to be a fire/explosion hazard under normal conditions of use.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

- Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection.
Firefighting instructions : Use water spray or fog for cooling exposed containers.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information : Prevent fire fighting water from entering the environment. Sweep up and remove to a suitable, clearly marked container for disposal in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Spill area may be slippery. Prevent soil and water pollution. Prevent entry to sewers and public waters.

6.1.1. For non-emergency personnel

- Protective equipment : When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required. Use protective clothing.
Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : No specific measures are necessary.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Large quantities: Contain large spillage with sand or earth.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

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Precautions for safe handling	: Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep container tightly closed and in well ventilated place.
Storage conditions	: Store locked up. Store in a well-ventilated place. Keep cool.
Incompatible products	: Reacts vigorously with strong oxidizers and acids.
Maximum storage period	: 2 year
Storage temperature	: ≤ 40 °C
Information on mixed storage	: Keep away from : Oxidizing materials. Strong acids.
Storage area	: Store at ambient temperature.
Special rules on packaging	: Keep container tightly closed and dry.

7.3. Specific end use(s)

Brake fluid.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

2,2'-oxybisethanol; diethylene glycol (111-46-6)	
Ireland - Occupational Exposure Limits	
Local name	Diethylene glycol [2,2'-Oxydiethanol]
OEL (8 hours ref) (mg/m ³)	100 mg/m ³
OEL (8 hours ref) (ppm)	23 ppm
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	2,2'-Oxydiethanol
WEL TWA (mg/m ³)	101 mg/m ³
WEL TWA (ppm)	23 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-(2-Methoxyethoxy)ethanol
IOELV TWA (mg/m ³)	50,1 mg/m ³
IOELV TWA (ppm)	10 ppm
IOELV STEL (mg/m ³)	10 mg/m ³
Notes	Skin
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Ireland - Occupational Exposure Limits	
Local name	2-(2-Methoxyethoxy)ethanol
OEL (8 hours ref) (mg/m ³)	50,1 mg/m ³
OEL (8 hours ref) (ppm)	10 ppm

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2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	
Remark	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Malta - Occupational Exposure Limits	
Local name	2-(2-Methoxyethoxy)ethanol
OEL TWA (mg/m ³)	50,1 mg/m ³
OEL TWA (ppm)	10 ppm
Remark	Skin # Ġilda
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
United Kingdom - Occupational Exposure Limits	
Local name	2-(2-Methoxyethoxy) ethanol
WEL TWA (mg/m ³)	50,1 mg/m ³
WEL TWA (ppm)	10 ppm
Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. In case of splash hazard: safety glasses. Eye protection should only be necessary where liquid could be splashed or sprayed.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

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Hand protection:

Protective gloves

Other skin protection

Materials for protective clothing:

PVC gloves. Nitrile rubber. Butyl-rubber protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Wear respiratory protection

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Consumer exposure controls:

PVC gloves. Nitrile-rubber protective gloves. Butylrubber protective gloves.

Other information:

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 eating, drinking or smoking and when leaving work. Do not eat, drink or smoke during use. Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Yellow.
Appearance	: Oily. Liquid.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: ≤ -50 °C ASTM D 97
Freezing point	: Not available
Boiling point	: > 260 °C
Flammability (solid, gas)	: Non flammable.
Lower explosive limit (LEL)	: 0,6 vol %
Upper explosive limit (UEL)	: 7 vol %
Flash point	: > 120 °C ASTM D 93
Auto-ignition temperature	: > 300 °C
Decomposition temperature	: > 300 °C
pH	: 7 – 10,5
Viscosity, kinematic	: 10 – 20 mm ² /s at 40 °C, ASTM D 445
Solubility	: Completely miscible with water.
Log Kow	: Not available
Log Pow	: < 2
Vapour Pressure 20°C	: $< 0,2$ hPa
Vapour pressure at 50°C	: Not available
Density	: 1,03 – 1,06 kg/l ASTM D 4052
Relative density	: Not available
Relative vapour density at 20°C	: > 1 (air=1)
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Explosion limits : 0,6 – 7 vol %

9.2.2. Other safety characteristics

Relative evaporation rate (butylacetate=1) : $< 0,1$

VOC content : $< 1,15$ %

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Other properties : Gas/vapour heavier than air at 20°C

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

Moisture. Overheating.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids.

10.6. Hazardous decomposition products

CO, CO₂.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

2,2' -oxybisethanol; diethylene glycol (111-46-6)	
LD50 oral rat	19600 mg/kg bodyweight
LD50 dermal rabbit	11890 mg/kg
LC50 Inhalation - Rat	> 4,6 mg/l air
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	
LD50 dermal rabbit	9404 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 6696 - 13212
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (143-22-6)	
LD50 dermal rabbit	3540 mg/kg bodyweight Animal: rabbit, Animal sex: male, 95% CL: 1050 - 11800
tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral))
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Remarks on results: other:

Skin corrosion/irritation : Not classified
pH: 7 – 10,5

2,2' -oxybisethanol; diethylene glycol (111-46-6)	
pH	5 – 8

Serious eye damage/irritation : Not classified
pH: 7 – 10,5

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2,2' -oxybisethanol; diethylene glycol (111-46-6)	
pH	5 – 8
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
2,2' -oxybisethanol; diethylene glycol (111-46-6)	
NOAEL (chronic, oral, animal/male, 2 years)	1210 mg/kg bodyweight Animal: rat, Animal sex: male
NOAEL (chronic, oral, animal/female, 2 years)	1160 mg/kg bodyweight Animal: rat, Animal sex: female
Reproductive toxicity	: Suspected of damaging fertility. Suspected of damaging the unborn child.
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
2,2' -oxybisethanol; diethylene glycol (111-46-6)	
LOAEL (oral, rat, 90 days)	40000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)	
NOAEL (oral, rat, 90 days)	50 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other:
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	
LOAEL (oral, rat, 90 days)	1800 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	900 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Remarks on results: other:
NOAEC (inhalation, rat, vapour, 90 days)	> 1,06 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (143-22-6)	
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
NOAEL (oral, rat, 90 days)	≥ 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
Aspiration hazard	: Not classified
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Viscosity, kinematic	10 – 20 mm ² /s at 40 °C, ASTM D 445
2,2' -oxybisethanol; diethylene glycol (111-46-6)	
Viscosity, kinematic	33 mm ² /s
dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)	
Viscosity, kinematic	0,428 mm ² /s
2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (143-22-6)	
Viscosity, kinematic	9,2 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)' Remarks on result: 'other:'

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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Other information : 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, Likely route of exposure: ingestion, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

2,2'-oxybisethanol; diethylene glycol (111-46-6)

LC50 fish 1	75200 mg/l Test organisms (species): Pimephales promelas
LC50 fish 2	75200 mg/l
EC50 Daphnia 1	> 3200 mg/l EC50 48h - Daphnia magna [mg/l]
EC50 Daphnia 2	> 10000 mg/l
EC50 72h - Algae [1]	1054 mg/l Scenedesmus subspicatus
EC50 96h - Algae [1]	6500 – 13000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [2]	9362 mg/l Test organisms (species): other:
NOEC (chronic)	≥ 1000 mg/l Test organisms (species): Americamysis bahia (previous name: Mysidopsis bahia) Duration: '23 d'

dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)

LC50 fish 1	> 100 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 96h - Algae [1]	110 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [2]	160 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)

LC50 fish 1	5741 mg/l Test organisms (species): Pimephales promelas
EC50 Daphnia 1	1192 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	> 1000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (143-22-6)

LC50 fish 1	75200 mg/l Pimephales promelas
EC50 Daphnia 1	> 500 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	780 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (143-22-6)	
EC50 72h - Algae [2]	840 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	> 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic algae	> 100 mg/l Pseudokirchneriella subcapitata

tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
LC50 fish 1	> 222,2 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 fish 2	> 1010 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 Daphnia 1	> 211,2 mg/l Test organisms (species): Daphnia magna
EC50 Daphnia 2	> 960 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 224,4 mg/l Test organisms (species): other:
EC50 72h - Algae [2]	> 1020 mg/l Test organisms (species): other:

12.2. Persistence and degradability

Eurol Brake Fluid DOT 4	
Persistence and degradability	Not readily biodegradable.

2,2'-oxybisethanol; diethylene glycol (111-46-6)	
Biochemical oxygen demand (BOD)	0,02 g O ₂ /g substance
Chemical oxygen demand (COD)	1,51 g O ₂ /g substance
ThOD	1,51 g O ₂ /g substance
BOD (% of ThOD)	0,015

12.3. Bioaccumulative potential

Eurol Brake Fluid DOT 4	
Log Pow	< 2
Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.

2,2'-oxybisethanol; diethylene glycol (111-46-6)	
BCF fish 1	100
Bioconcentration factor (BCF REACH)	100
Log Pow	-1,98

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (143-22-6)	
Log Pow	0,51

12.4. Mobility in soil

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Ecology - soil	Spillages may penetrate the soil causing ground water contamination. This product floats on water and may affect the oxygen-balance in the water.

2,2'-oxybisethanol; diethylene glycol (111-46-6)	
Surface tension	0,0485 N/m

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2,2' -oxybisethanol; diethylene glycol (111-46-6)

Log Koc 0

12.5. Results of PBT and vPvB assessment

Component

2,2' -oxybisethanol; diethylene glycol (111-46-6) This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Do not discharge into drains or the environment.
Additional information : Hazardous waste.
Ecology - waste materials : Every mixture with foreign substances such as solvents, brake- and cooling liquids is forbidden. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly. When not empty dispose of this container at hazardous or special waste collection point.
European List of Waste (LoW) code : 16 01 13* - brake fluids

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No

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ADR	IMDG	IATA	ADN	RID
No supplementary information available				

14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(b)	Eurol Brake Fluid DOT 4 ; 2,2' -oxybisethanol; diethylene glycol ; dihydro-3-(tetrapropenyl)furan-2,5-dione ; 2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether ; 2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol ; tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate
3(c)	dihydro-3-(tetrapropenyl)furan-2,5-dione
54.	2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

VOC Directive (2004/42)

VOC content : < 1,15 %

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

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Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Supersedes	Modified	
	Revision date	Modified	
	Flammability (solid, gas)	Added	
2.1	Adverse physicochemical, human health and environmental effects	Added	
4.1	First-aid measures general	Modified	
4.1	First-aid measures after skin contact	Modified	
4.1	First-aid measures after inhalation	Modified	
4.1	First-aid measures after ingestion	Modified	
4.1	First-aid measures after eye contact	Modified	
5.1	Suitable extinguishing media	Modified	
5.2	Hazardous decomposition products in case of fire	Added	
5.3	Protection during firefighting	Modified	
6.1	Protective equipment	Modified	
6.1	Emergency procedures	Modified	
6.2	Environmental precautions	Modified	
6.3	Methods for cleaning up	Modified	
6.3	Other information	Modified	
7.1	Precautions for safe handling	Modified	
7.1	Hygiene measures	Modified	
7.2	Storage conditions	Modified	
8.2	Environmental exposure controls	Modified	
8.2	Respiratory protection	Modified	
8.2	Hand protection	Modified	
8.2	Eye protection	Modified	
8.2	Appropriate engineering controls	Modified	
8.2	Skin and body protection	Modified	
9.1	Upper explosive limit (UEL)	Added	
9.1	Lower explosive limit (LEL)	Added	

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Indication of changes			
Section	Changed item	Change	Comments
9.1	Melting point	Modified	
9.1	Density	Modified	
9.1	Viscosity, kinematic	Modified	
9.1	Flash point	Modified	
12.1	Ecology - general	Modified	
13.1	Product/Packaging disposal recommendations	Added	
15.2	Chemical safety assessment	Added	
16	Abbreviations and acronyms	Added	
16	Data sources	Added	
16	Other information	Added	

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration

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Abbreviations and acronyms:	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 4	Hazardous to the aquatic environment – Chronic Hazard, Category 4
EUH208	Contains dihydro-3-(tetrapropenyl)furan-2,5-dione. May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H360D	May damage the unborn child.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H413	May cause long lasting harmful effects to aquatic life.
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2
Skin Sens. 1A	Skin sensitisation, category 1A

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Repr. 2	H361fd	Expert judgement

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.