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

1.1. Product identifier

Product form : Mixture

Trade name/designation : Bremsflüssigkeit DOT4

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

1.2.1. Relevant identified uses

Main use category : Professional use

Use of the substance/mixture : brake fluids

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Supplier
Eurolub GmbH
Freisinger Str. 25 - 27
85386 Eching - GERMANY
T. +49 (0) 8165 / 95 91 - 0
F. +49 (0) 8165 / 95 91 - 20
Mail: info@eurolub.com

1.4. Emergency telephone number

Emergency number : +49 (0) 8165 / 95 91 - 0
during the office: Mo.-Th. 8-16h; Fr. 8-14h

Country	Official advisory body	Address	Emergency number
Ireland	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	+353 1 809 21 66 (public, 8am - 10pm, 7/7) +353 01 809 2566 (Professionals, 24/7)
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre, Wolfson Unit	Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle	0844 892 0111 (UK only, 24/7, healthcare professionals only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

2.2. Label elements

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

Extra phrases : EUH208 - Contains Dihydro-3-(tetrapropenyl)furan-2,5-dione, 2,2'-[[(5-methyl-1H-benzotriazol-1-yl)methyl]imino]bisethanol, Ethanol, 2,2'-[[(4-methyl-1H-benzotriazol-1-yl)methyl]imino]bis. May produce an allergic reaction.
EUH210 - Safety data sheet available on request.

2.3. Other hazards

Other hazards : Results of PBT and vPvB assessment : Not applicable.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethanol, 2-butoxy-, manufacture of, by-products from	(CAS-No.) 161907-77-3 (EC-No.) 310-287-7 (REACH-no) 01-2119475115-41-XXXX	10 - <20	Eye Dam. 1, H318
2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL	(CAS-No.) 111-46-6 (EC-No.) 203-872-2 (EC Index) 603-140-00-6 (REACH-no) 01-2119457857-21-XXXX	1 - 20	Acute Tox. 4 (Oral), H302
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether	(CAS-No.) 111-77-3 (EC-No.) 203-906-6 (EC Index) 603-107-00-6 (REACH-no) 01-2119475100-52-XXXX	< 3	Repr. 2, H361d
Dihydro-3-(tetrapropenyl)furan-2,5-dione	(CAS-No.) 26544-38-7 (EC-No.) 247-781-6 (REACH-no) 01-2119979080-37-XXXX	< 0,1	Eye Irrit. 2, H319 Skin Sens. 1A, H317 Aquatic Chronic 4, H413

Specific concentration limits:

Substance name	Product identifier	Specific concentration limits
Ethanol, 2-butoxy-, manufacture of, by-products from	(CAS-No.) 161907-77-3 (EC-No.) 310-287-7 (REACH-no) 01-2119475115-41-XXXX	(20 =<C < 30) Eye Irrit. 2, H319 (30 =<C < 100) Eye Dam. 1, H318

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

Additional advice : First aider: Pay attention to self-protection. Concerning personal protective equipment to use, see section 8. Never give anything by mouth to an unconscious person. In case of doubt or persistent symptoms, consult always a physician. Show this safety data sheet to the doctor in attendance. Treat symptomatically.

Inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. In case of doubt or persistent symptoms, consult always a physician.

Skin contact : Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water. In case of doubt or persistent symptoms, consult always a physician.

Eyes contact : Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of doubt or persistent symptoms, consult always a physician.

Ingestion : Rinse mouth thoroughly with water. Do NOT induce vomiting. Obtain medical attention.

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

Inhalation	: Health injuries are not known or expected under normal use.
Skin contact	: May cause an allergic skin reaction. The following symptoms may occur: Redness.
Eyes contact	: May cause eye irritation. The following symptoms may occur: Redness.
Ingestion	: The following symptoms may occur: Abdominal pain, nausea. Vomiting. Dizziness. Drowsiness. Mental confusion. Unconsciousness.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: carbon dioxide (CO2), powder, alcohol-resistant foam, water spray.
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Specific hazards	: Not flammable. Heating causes rise in pressure with risk of bursting.
Hazardous decomposition products in case of fire	: Aldehydes. ketones. Organic acids. Carbon oxides (CO, CO2).

5.3. Advice for firefighters

Firefighting instructions	: Evacuate area. Use water spray or fog for cooling exposed containers. Contain the extinguishing fluids by bunding. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus.
Other information	: Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel	: Evacuate unnecessary personnel. Keep upwind. Provide adequate ventilation. Wear recommended personal protective equipment. Concerning personal protective equipment to use, see section 8. Do not breathe vapours. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

For emergency responders	: Ensure procedures and training for emergency decontamination and disposal are in place. Concerning personal protective equipment to use, see section 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Stop leak if safe to do so. Dam up the liquid spill. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Recover large spills by pumping (use an explosion proof or hand pump). Place in a suitable container for disposal in accordance with the waste regulations (see Section 13). This material and its container must be disposed of in a safe way, and as per local legislation.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Take any precaution to avoid mixing with Incompatible materials, Refer to Section 10 on Incompatible Materials. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Avoid release to the environment.

Hygiene measures : Keep good industrial hygiene. 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 when using this product. Keep away from food, drink and animal feedingstuffs. Remove contaminated clothes. Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry, cool and well-ventilated place. Do not store near or with any of the incompatible materials listed in section 10. Bund storage facilities to prevent soil and water pollution in the event of spillage.

Incompatible materials : Keep away from strong acids, strong bases and oxidizing agents.

Special rules on packaging : Keep in properly labelled containers.

Packaging materials : Keep only in the original container.

7.3. Specific end use(s)

brake fluids.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL (111-46-6)		
Austria	MAK (mg/m³)	44 mg/m³
Austria	MAK (ppm)	10 ppm
Austria	MAK Short time value (mg/m³)	176 mg/m³
Austria	MAK Short time value (ppm)	40 ppm
Bulgaria	OEL TWA (mg/m³)	10 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	101 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	23 ppm
Denmark	Grænseværdie (langvarig) (mg/m³)	11 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	2,5 ppm
Estonia	OEL TWA (mg/m³)	45 mg/m³
Estonia	OEL TWA (ppm)	10 ppm
Estonia	OEL STEL (mg/m³)	90 mg/m³
Estonia	OEL STEL (ppm)	20 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	44 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)

2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL (111-46-6)		
Germany	TRGS 900 Occupational exposure limit value (ppm)	10 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Ireland	OEL (8 hours ref) (mg/m³)	100 mg/m³
Ireland	OEL (8 hours ref) (ppm)	23 ppm
Ireland	OEL (15 min ref) (mg/m3)	300 mg/m³ (calculated)
Ireland	OEL (15 min ref) (ppm)	69 ppm (calculated)
Latvia	OEL TWA (mg/m³)	10 mg/m³
Lithuania	IPRV (mg/m³)	45 mg/m³
Lithuania	IPRV (ppm)	10 ppm
Lithuania	TPRV (mg/m³)	90 mg/m³
Lithuania	TPRV (ppm)	20 ppm
Poland	NDS (mg/m³)	10 mg/m³ (inhalable fraction)
Romania	OEL TWA (mg/m³)	500 mg/m³
Romania	OEL TWA (ppm)	115 ppm
Romania	OEL STEL (mg/m³)	800 mg/m³
Romania	OEL STEL (ppm)	184 ppm
Slovakia	NPHV (priemerná) (mg/m³)	44 mg/m³
Slovakia	NPHV (priemerná) (ppm)	10 ppm
Slovakia	NPHV (Hraničná) (mg/m³)	90 mg/m³
Slovenia	OEL TWA (mg/m³)	44 mg/m³
Slovenia	OEL TWA (ppm)	10 ppm
Slovenia	OEL STEL (mg/m³)	176 mg/m³
Slovenia	OEL STEL (ppm)	40 ppm
Sweden	nivågränsvärde (NVG) (mg/m³)	45 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	10 ppm
Sweden	kortidsvärde (KTV) (mg/m³)	90 mg/m³
Sweden	kortidsvärde (KTV) (ppm)	20 ppm
United Kingdom	WEL TWA (mg/m³)	101 mg/m³
United Kingdom	WEL TWA (ppm)	23 ppm
United Kingdom	WEL STEL (mg/m³)	303 mg/m³ (calculated)
United Kingdom	WEL STEL (ppm)	69 ppm (calculated)
Switzerland	MAK (mg/m³)	44 mg/m³
Switzerland	MAK (ppm)	10 ppm
Switzerland	KZGW (mg/m³)	176 mg/m³
Switzerland	KZGW (ppm)	40 ppm
Australia	TWA (mg/m³)	100 mg/m³
Australia	TWA (ppm)	23 ppm

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)		
EU	IOELV TWA (mg/m³)	50,1 mg/m³
EU	IOELV TWA (ppm)	10 ppm
EU	Notes	Possibility of significant uptake through the skin
Austria	MAK (mg/m³)	50,1 mg/m³
Austria	MAK (ppm)	10 ppm
Belgium	Limit value (mg/m³)	50,1 mg/m³
Belgium	Limit value (ppm)	10 ppm
Bulgaria	OEL TWA (mg/m³)	50,1 mg/m³
Bulgaria	OEL TWA (ppm)	10 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m³)	50,1 mg/m³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	10 ppm
Cyprus	OEL TWA (mg/m³)	50,1 mg/m³
Cyprus	OEL TWA (ppm)	10 ppm
Czech Republic	Expoziční limity (PEL) (mg/m³)	50 mg/m³
Denmark	Grænseværdie (langvarig) (mg/m³)	50 mg/m³
Denmark	Grænseværdie (langvarig) (ppm)	10 ppm
Finland	HTP-arvo (8h) (mg/m³)	50 mg/m³
Finland	HTP-arvo (8h) (ppm)	10 ppm
France	VME (mg/m³)	50,1 mg/m³ (indicative limit)
France	VME (ppm)	10 ppm (indicative limit)
Germany	TRGS 900 Occupational exposure limit value (mg/m³)	50 mg/m³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	10 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Gibraltar	8h mg/m3	50,1 mg/m³
Gibraltar	8h ppm	10 ppm
Greece	OEL TWA (mg/m³)	50,1 mg/m³
Greece	OEL TWA (ppm)	10 ppm
Hungary	AK-érték	50,1 mg/m³
Ireland	OEL (8 hours ref) (mg/m³)	50,1 mg/m³
Ireland	OEL (8 hours ref) (ppm)	10 ppm
Ireland	OEL (15 min ref) (mg/m3)	150,3 mg/m³ (calculated)
Ireland	OEL (15 min ref) (ppm)	30 ppm (calculated)
Italy	OEL TWA (mg/m³)	50,1 mg/m³
Italy	OEL TWA (ppm)	10 ppm
Latvia	OEL TWA (mg/m³)	50,1 mg/m³
Latvia	OEL TWA (ppm)	10 ppm
Lithuania	IPRV (mg/m³)	50,1 mg/m³
Lithuania	IPRV (ppm)	10 ppm

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)		
Luxembourg	OEL TWA (mg/m³)	50,1 mg/m³
Luxembourg	OEL TWA (ppm)	10 ppm
Malta	OEL TWA (mg/m³)	50,1 mg/m³
Malta	OEL TWA (ppm)	10 ppm
Netherlands	Grenswaarde TGG 8H (mg/m³)	45 mg/m³
Poland	NDS (mg/m³)	50 mg/m³
Portugal	OEL TWA (mg/m³)	50,1 mg/m³ (indicative limit value)
Portugal	OEL TWA (ppm)	10 ppm (indicative limit value)
Romania	OEL TWA (mg/m³)	50,1 mg/m³
Romania	OEL TWA (ppm)	10 ppm
Slovakia	NPHV (priemerná) (mg/m³)	50,1 mg/m³
Slovakia	NPHV (priemerná) (ppm)	10 ppm
Slovenia	OEL TWA (mg/m³)	50,1 mg/m³
Slovenia	OEL TWA (ppm)	10 ppm
Spain	VLA-ED (mg/m³)	50,1 mg/m³ (indicative limit value)
Spain	VLA-ED (ppm)	10 ppm (indicative limit value)
Sweden	nivågränsvärde (NVG) (mg/m³)	50 mg/m³
Sweden	nivågränsvärde (NVG) (ppm)	10 ppm
United Kingdom	WEL TWA (mg/m³)	50,1 mg/m³
United Kingdom	WEL TWA (ppm)	10 ppm
United Kingdom	WEL STEL (mg/m³)	150,3 mg/m³ (calculated)
United Kingdom	WEL STEL (ppm)	30 ppm (calculated)
Norway	Grenseverdier (AN) (mg/m³)	50 mg/m³
Norway	Grenseverdier (AN) (ppm)	10 ppm
Norway	Grenseverdier (Korttidsverdi) (mg/m3)	75 mg/m³ (value calculated)
Norway	Grenseverdier (Korttidsverdi) (ppm)	15 ppm (value calculated)

Additional information : Personal air monitoring :. Room air monitoring. Recommended monitoring procedures

8.2. Exposure controls

Engineering measure(s) : Provide adequate ventilation. Organisational measures to prevent /limit releases, dispersion and exposure. Safe handling: see section 7 . Emergency safety showers should be available in the immediate vicinity of any potential exposure. Provide eye shower and label its location conspicuously. Handle substance within a closed system. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hand protection	:	In case of repeated or prolonged contact wear gloves. Wear chemically resistant gloves (tested to EN374) . Suitable material: Nitrile rubber. Thickness of the glove material: >0,3 mm. Breakthrough time : >8h. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
Eye protection	:	If there is a risk of liquid being splashed : Use suitable eye protection. (EN166): Goggles
Body protection	:	Wear suitable protective clothing.
Respiratory protection	:	In case of insufficient ventilation, wear suitable respiratory equipment. Half-face mask (EN 140). Full face mask (EN 136). Filter type: A (EN141). The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. (EN 137)
Thermal hazard protection	:	Not required for normal conditions of use. Use dedicated equipment.
Environmental exposure controls	:	Avoid release to the environment. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	clear. liquid.
Colour	:	Colourless. amber.
Odour	:	Faint. mild.
Odour threshold	:	Not determined
pH	:	7 - <11,5
Relative evaporation rate (butylacetate=1)	:	No data available
Melting / freezing point	:	< -50 °C
Freezing point	:	No data available
Initial boiling point and boiling range	:	> 230 °C (1013hPa)
Flash point	:	> 100 °C
Auto-ignition temperature	:	> 300 °C
Decomposition temperature	:	> 300 °C
Flammability (solid, gas)	:	Not applicable,liquid
Vapour pressure	:	Not determined
Vapour density	:	Not determined
Relative density	:	1,07
Solubility	:	Miscible with : Water. alcoholic. Water: No data available
Partition coefficient n-octanol/water	:	No data available
Kinematic viscosity	:	5 - 10 cSt (20°C)
Dynamic viscosity	:	No data available
Explosive properties	:	Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.

Oxidising properties : Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.

Explosive limits : Not relevant

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reference to other sections: 10.4 & 10.5.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under normal conditions. Safe handling: see section 7.

10.5. Incompatible materials

Strong bases. Strong acids. Strong oxidizing agents. Safe handling: see section 7.

10.6. Hazardous decomposition products

Reference to other sections: 5.2.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met.)

Ethanol, 2-butoxy-, manufacture of, by-products from (161907-77-3)	
LD50/oral/rat	2630 mg/kg bodyweight Read-across (Analogy)
LD50/dermal/rat	(24h) 3540 mg/kg bodyweight Read-across (Analogy)

2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL (111-46-6)	
LD50/oral/rat	1120 mg/kg Humans
LD50/dermal/rabbit	11890 mg/kg
LC50/inhalation/4h/rat	> 4600 mg/m³ (Exposure time: 4 h)

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	
LD50/oral/rat	4 ml/kg
LD50/dermal/rabbit	650 mg/kg

Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)	
LD50/oral/rat	2900 mg/kg
LD50/dermal/rat	> 2000 mg/kg
LD50/dermal/rabbit	6200 - 7500 mg/kg
LC50/inhalation/4h/rat	5,3 mg/l

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met.)

pH: 7 - <11,5

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met.)
pH: 7 - <11,5

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met.)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met.)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met.)

2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL (111-46-6)	
NOAEL, male, female, long term, oral, Rat	1160 - 1210 mg/kg bw/day (108 weeks)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met.)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met.)

2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL (111-46-6)	
NOAEL (oral, rat)	100 mg/kg bodyweight
NOAEL (dermal, rat/rabbit)	3549 mg/kg bodyweight Mouse

STOT-repeated exposure : Not classified
Based on available data, the classification criteria are not met.

2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL (111-46-6)	
NOAEL, mammalian, long term, oral, Rat	100 mg/kg bw (225 days)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met.)

Bremsflüssigkeit DOT4	
Kinematic viscosity	5 - 10 mm²/s (20°C)

Other adverse effects : May cause damage to organs through prolonged or repeated exposure.

Other information : Symptoms related to the physical, chemical and toxicological characteristics. For further information see section 4.

SECTION 12: Ecological information

12.1. Toxicity

Environmental properties : According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment".

Ethanol, 2-butoxy-, manufacture of, by-products from (161907-77-3)	
LC50 fish 1	> 1800 mg/l (Scophthalmus maximus) (OECD 203)
EC50 Daphnia 1	> 3200 mg/l (VOECD 202)

2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL (111-46-6)	
LC50 fish 1	75200 ppm (Pimephales promela)
EC50 Daphnia 1	84000 mg/l (Exposure time: 48 h - Species: Daphnia magna)
ErC50 (algae)	2700 mg/l (Scenedesmus quadricauda) TGK 8d
NOEC chronic fish	15380 mg/l EPA 600/4-90/027
NOEC chronic crustacea	8590 mg/l EPA 600/4-90/027
NOEC chronic algae	2700 mg/l OECD 201
EC50, aquatic invertebrates, acute, daphnia	> 10000 mg/l (24 hours, DIN 38414-11)
EC20, aqua FW	> 1995 mg/l (30, ISO 8192)

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	
LC50 fish 1	7500 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	
EC50 Daphnia 1	> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	7500 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)	
LC50 fish 1	> 100 mg/l (Oncorhynchus mykiss))
EC50 Daphnia 1	> 100 mg/l
EC50 other aquatic organisms 1	800 mg/l (3h)

12.2. Persistence and degradability

Bremsflüssigkeit DOT4	
Persistence and degradability	No data available.

Ethanol, 2-butoxy-, manufacture of, by-products from (161907-77-3)	
Persistence and degradability	Readily biodegradable in water.
Biodegradation	76% (OECD 301D (28d) 70% OECD 306 (28d)

2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL (111-46-6)	
Persistence and degradability	Readily biodegradable.

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	
Persistence and degradability	Readily biodegradable.

Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	9,9 % (28d) (OECD301D)

12.3. Bioaccumulative potential

Bremsflüssigkeit DOT4	
Partition coefficient n-octanol/water	No data available
Bioaccumulative potential	No data available.

Ethanol, 2-butoxy-, manufacture of, by-products from (161907-77-3)	
Log Kow	0,44 (20°C)
Bioaccumulative potential	Adsorption/Soil : Low potential.

2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL (111-46-6)	
BCF fish 1	100 - 180
Bioconcentration factor (BCF)	100 (3d, Leuciscus melatonus)
Partition coefficient n-octanol/water	LogPow -1,98
Bioaccumulative potential	Bioaccumulation unlikely.

2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	
Partition coefficient n-octanol/water	-0,682
Bioaccumulative potential	Bioaccumulation unlikely.

Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)	
Log Kow	>= 4,39
Bioaccumulative potential	Low potential.

12.4. Mobility in soil

Bremsflüssigkeit DOT4	
Mobility in soil	No data available

Dihydro-3-(tetrapropenyl)furan-2,5-dione (26544-38-7)	
Log Koc	2,92

12.5. Results of PBT and vPvB assessment

Bremsflüssigkeit DOT4	
Results of PBT assessment	No data available

ingredient	
Ethanol, 2-butoxy-, manufacture of, by-products from (161907-77-3)	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
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
2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether (111-77-3)	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. Other adverse effects

Other adverse effects : No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Avoid release to the environment. Dispose of empty containers and wastes safely. Safe handling: see section 7. Refer to manufacturer/supplier for information on recovery/recycling. Recycling is preferred to disposal or incineration. If recycling is not possible, eliminate in accordance with local valid waste disposal regulations. Handle contaminated packages in the same way as the substance itself. Dispose of contaminated materials in accordance with current regulations.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
brake fluids
150110* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
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

ADR	IMDG	IATA	ADN	RID
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
No supplementary information available				

14.6. Special precautions for user

Special precautions for user : No data available

- 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. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Code: IBC : No data available.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL - 2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	Ethanol, 2-butoxy-, manufacture of, by-products from - 2,2' -OXYBISETHANOL, DIETHYLENE GLYCOL - 2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether
54. 2-(2-methoxyethoxy)ethanol (DEGME)	2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

France
Installations classées :
Not applicable.

Germany

Reference to AwSV	: Water hazard class (WGK) 1, low hazard to waters (Classification according to AwSV, Annex 1)
German storage class (LGK)	: LGK 12 - Non-combustible liquids
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV	: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

Waterbezwaarlijkheid	: B (5) Weinig schadelijk voor in het water levende organismen
SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid	: None of the components are listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling	: 2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether is listed

Denmark

Recommendations Danish Regulation	: Young people below the age of 18 years are not allowed to use the product. Pregnant/breastfeeding women working with the product must not be in direct contact with the product.

15.2. Chemical safety assessment

Not applicable

SECTION 16: Other information

Indication of changes:

1.1	Trade name/designation	Modified	
1.3	Display additional SDS EU addresses	Modified	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Labelling according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
3.2	Composition	Modified	
4.2	Effects - Symptoms	Modified	
8.1	Exposure limits	Modified	
8.2	Exposure controls	Modified	
11	Toxicological information	Modified	
11.1	STOT-repeated	Removed	

	exposure		
12.	Ecological information	Modified	
13	Disposal considerations	Modified	
15.1	Restrictions on use	Modified	
16	Other information	Modified	

Abbreviations and acronyms:

	ABM = Algemene beoordelingsmethodiek
	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	BTT = Breakthrough time (maximum wearing time)
	DMEL = Derived Minimal Effect level
	DNEL = Derived No Effect Level
	EC50 = Median Effective Concentration
	EL50 = Median effective level
	ErC50 = EC50 in terms of reduction of growth rate
	ErL50 = EL50 in terms of reduction of growth rate
	EWC = European waste catalogue
	LC50 = Median lethal concentration
	LD50 = Median lethal dose
	LL50 = Median lethal level
	NA = Not applicable
	NOEC = No observed effect concentration
	NOEL: no-observed-effect level
	NOELR = No observed effect loading rate
	NOAEC = No observed adverse effect concentration
	NOAEL = No observed adverse effect level
	N.O.S. = Not Otherwise Specified
	OEL = Occupational Exposure Limits - Short Term Exposure Limits (STELs)
	PNEC = Predicted No Effect Concentration
	Quantitative structure-activity relationship (QSAR)
	STOT = Specific Target Organ Toxicity
	TWA = time weighted average
	VOC = Volatile organic compounds
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)

Sources of key data used to compile the datasheet : ECHA (European Chemicals Agency), supplier sds, Loli.

Training advice : Training staff on good practice. Manipulations are to be done only by qualified and authorised persons.

Other information : Assessment/classification CLP. Article 9. Calculation method.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity Category 4
Aquatic Chronic 4	Hazardous to the aquatic environment - chronic hazard category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1

Eye Irrit. 2	Serious eye damage/eye irritation Category 2
Repr. 2	Reproductive toxicity, Hazard Category 2
Skin Sens. 1A	Skin sensitisation, category 1A
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361d	Suspected of damaging the unborn child.
H413	May cause long lasting harmful effects to aquatic life.
EUH208	Contains Dihydro-3-(tetrapropenyl)furan-2,5-dione, 2,2'-[[(5-methyl-1H-benzotriazol-1-yl)methyl]imino]bisethanol, Ethanol, 2,2'-[[(4-methyl-1H-benzotriazol-1-yl)methyl]imino]bis. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

According to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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