

SAFETY DATA SHEET

BRAKE FLUID DOT4+**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier***Trade name:* BRAKE FLUID DOT4+*Product no.:* 548xxx**1.2. Relevant identified uses of the substance or mixture and uses advised against***Relevant identified uses of* None known.*the substance or mixture:**Use descriptors (REACH):*

Product category	Description
PC 0	Other products

Uses advised against : None known.**1.3. Details of the supplier of the safety data sheet**

Company and address: **EUROLUB GmbH**
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Contact person: Laboratory*E-mail:* info@eurolub.com*Revision:* 02/08/2023*SDS Version:* 1.0*Date of previous version:* 01/08/2023 (1.0)**1.4. Emergency telephone number**

Phone: +49 8165 9591-0

This number is only available at office times.

SECTION 2: HAZARDS IDENTIFICATION

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.1. Classification of the substance or mixture

Not classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

2.2. Label elements

Hazard pictogram(s): Not applicable.

Signal word: Not applicable.

Hazard statement(s): Not applicable.

Precautionary statement(s):

General: -

Prevention: -

Response: -

Storage: -

Disposal: -

Hazardous substances: None known.

Additional labelling: EUH208, Contains Dihydro-3-(tetrapropenyl)furan-2,5-dione. May produce an allergic reaction.

EUH210, Safety data sheet available on request.

2.3. Other hazards

Additional warnings: This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

3.1. Substances

Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
2,2' - oxybisethanol;diethylene glycol	CAS No.: 111-46-6 EC No.: 203-872-2 UK-REACH: Index No.: 603-140-00-6	15-25%	Acute Tox. 4, H302	
2-(2-methoxyethoxy)ethanol;d iethylene glycol monomethyl ether	CAS No.: 111-77-3 EC No.: 203-906-6 UK-REACH: Index No.: 603-107-00-6	1-3%	Repr. 2, H361d	[1], [3]
Dihydro-3-(tetrapropenyl)furan-2,5-dione	CAS No.: 26544-38-7 EC No.: 247-781-6 UK-REACH: Index No.:	<0.1%	Skin Sens. 1A, H317 Eye Irrit. 2, H319 Aquatic Chronic 4, H413	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit.

[3] According to UK REACH, Annex XVII, the substance is subject to restrictions.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

<i>General information:</i>	In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
<i>Inhalation:</i>	Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.
<i>Skin contact:</i>	IF ON SKIN: Wash with plenty of water and soap.

	Remove contaminated clothing and shoes. Ensure to wash exposed skin thoroughly with water and soap. DO NOT use solvents or thinners.
	If skin irritation occurs: Get medical advice/attention.
<i>Eye contact:</i>	If in eyes: Flush eyes with water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.
<i>Ingestion:</i>	If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink. In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.
<i>Burns:</i>	Not applicable.

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

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact. Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

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

Treat symptomatically.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO₂)

5.3. Advice for firefighters

No specific requirements.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. ▼ Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Because of the danger of self-ignition, any waste from the product, spray mist and soiled rags etc. are to be kept in a fire-proof place in air-tight containers, alternatively the waste is to be burned.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material: Always store in containers of the same material as the original container.

Storage temperature: Dry, cool and well ventilated

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Incompatible materials: Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

2,2'-oxybisethanol;diethylene glycol

Long term exposure limit (8 hours) (ppm): 23

Long term exposure limit (8 hours) (mg/m³): 101

2-(2-methoxyethoxy)ethanol;diethylene glycol monomethyl ether

Long term exposure limit (8 hours) (ppm): 10

Long term exposure limit (8 hours) (mg/m³): 50,1

Annotations:

Sk = Can be absorbed through the skin and lead to systemic toxicity.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.

EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

2-(2-methoxyethoxy)ethanol;diethylene glycol monomethyl ether

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	1.33 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	2.22 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	30.1 mg/m ³
Long term – Systemic effects - Workers	Inhalation	50.1 mg/m ³
Long term – Systemic effects - General population	Oral	7.5 mg/kg bw/day

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

2,2' -oxybisethanol;diethylene glycol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	21 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	43 mg/kg bw/day
Long term – Local effects - General population	Inhalation	12 mg/m ³
Long term – Local effects - Workers	Inhalation	60 mg/m ³
Long term – Systemic effects - General population	Inhalation	12 mg/m ³
Long term – Systemic effects - Workers	Inhalation	44 mg/m ³

Dihydro-3-(tetrapropenyl)furan-2,5-dione

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - Workers	Dermal	330 µg/kgbw/day

PNEC

2-(2-methoxyethoxy)ethanol;diethylene glycol monomethyl ether

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		12 mg/L
Freshwater sediment		44.4 mg/kg
Intermittent release (freshwater)		12 mg/L
Marine water		1.2 mg/L
Marine water sediment		440 µg/kg
Predators		90 mg/kg
Sewage treatment plant		10 g/L
Soil		2.1 mg/kg

2,2' -oxybisethanol;diethylene glycol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		10 mg/L
Freshwater sediment		20.9 mg/kg
Intermittent release (freshwater)		10 mg/L
Marine water		1 mg/L

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Marine water sediment		2.09 mg/kg
Sewage treatment plant		199.5 mg/L
Soil		1.53 mg/kg

Dihydro-3-(tetrapropenyl)furan-2,5-dione

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		20 µg/L
Freshwater sediment		1.7 mg/kg
Intermittent release (freshwater)		200 µg/L
Marine water		2 µg/L
Marine water sediment		170 µg/kg
Sewage treatment plant		10 mg/L
Soil		200 µg/kg

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations: Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits: Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures: Apply standard precautions during use of the product. Avoid inhalation of gas or dust.

Hygiene measures: In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure: No special when used as intended.

Individual protection measures, such as personal protective equipment

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Generally: Use only UKCA marked protective equipment.

Respiratory Equipment:

Type	Class	Colour	Standards	
Respiratory protection is not needed in the event of adequate ventilation.				

Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0.4	> 480	EN374-2, EN374-3, EN388	

Eye protection:

Type	Standards	
In the likelihood of direct or incidental exposure, use face protection.	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state: Testing not relevant or not possible due to the nature of the product.

Colour: Testing not relevant or not possible due to the nature of the product.

Odour / Odour threshold: Testing not relevant or not possible due to the nature of the product.

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

<i>pH:</i>	7-11
<i>Density (g/cm³):</i>	1.07
<i>Kinematic viscosity:</i>	5 (20 °C)
<i>Particle characteristics:</i>	Testing not relevant or not possible due to the nature of the product.

Phase changes

<i>Melting point/Freezing point (°C):</i>	-50
<i>Boiling point (°C):</i>	230
<i>Vapour pressure:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Relative vapour density:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Decomposition temperature (°C):</i>	Testing not relevant or not possible due to the nature of the product.

Data on fire and explosion hazards

<i>Flash point (°C):</i>	100
<i>Flammability (°C):</i>	300
<i>Auto-ignition temperature (°C):</i>	Testing not relevant or not possible due to the nature of the product.
<i>Lower and upper explosion limit (% v/v):</i>	Testing not relevant or not possible due to the nature of the product.

Solubility

<i>Solubility in water:</i>	Testing not relevant or not possible due to the nature of the product.
<i>n-octanol/water coefficient:</i>	Testing not relevant or not possible due to the nature of the product.
<i>Solubility in fat (g/L):</i>	Testing not relevant or not possible due to the nature of the product.

9.2. Other information

<i>VOC (g/L):</i>	0
<i>Other physical and chemical parameters:</i>	No data available.
<i>Oxidizing properties:</i>	Testing not relevant or not possible due to the nature of the product.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Acute toxicity

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

This product contains substances that may trigger an allergic reaction in already sensitized persons.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

Long term effects

None known.

Endocrine disrupting properties

Not applicable.

Other information

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No data available.

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

12.6. Endocrine disrupting properties

Not applicable.

12.7. Other adverse effects

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Product is not covered by regulations on dangerous waste.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

EWC code

- 15 01 10* Packaging containing residues of or contaminated by dangerous substances
- 16 01 13* Brake fluids

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to ADR, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: REGULATORY INFORMATION

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

Restrictions for application: Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education: No specific requirements.

SEVESO - Categories / dangerous substances: Not applicable.

REACH, Annex XVII: 2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether is subject to restrictions, UK-REACH annex XVII (entry 54).

Additional information: Not applicable.

Sources: The Health and Safety at Work etc. Act 1974 Regulations 2013.
Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.
Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

15.2. Chemical safety assessment

No

SECTION 16: OTHER INFORMATION

Full text of H-phrases as mentioned in section 3

H302, Harmful if swallowed.

H317, May cause an allergic skin reaction.

H319, Causes serious eye irritation.

H361d, Suspected of damaging the unborn child.

H413, May cause long lasting harmful effects to aquatic life.

The full text of identified uses as mentioned in section 1

PC 0 = Other products

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

OECD = Organisation for Economic Co-operation and Development

PBT = Persistent, Bioaccumulative and Toxic

PNEC = Predicted No Effect Concentration

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

RRN = REACH Registration Number

SCL = A specific concentration limit

SVHC = Substances of Very High Concern

STOT-RE = Specific Target Organ Toxicity - Repeated Exposure

STOT-SE = Specific Target Organ Toxicity - Single Exposure

TWA = Time weighted average

UN = United Nations

UVBC = Unknown or variable composition, complex reaction products or of biological materials

VOC = Volatile Organic Compound

vPvB = Very Persistent and Very Bioaccumulative

Additional information

Not applicable.

▼ The safety data sheet is validated by

SDB

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en