BRAKE FLUID XBF DOT 4 BARDAHL

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
SDS Reference Number: 5904
Issue date: 06-01-21 Revision date: 17-07-24 Supersedes version of: 19-01-24 Version: 2.1

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

1.1. Product identifier

Product form : Mixture
Product name : BRAKE FLUID XBF DOT 4 BARDAHL
UFI : 5U3F-A00N-AJ0T-7J6E
Product code : 5904 # 734590VR2

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

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Distributor
SADAPS BARDAHL Additives & Lubricants
ZI TOURNAI OUEST 2 - RUE DU MONT DES CARLIERS, 3
7522 TOURNAI
BELGIQUE
T +32 (0).69.59.03.60, F +32 (0).69.59.03.61
msds@bardahlfrance.com, www.bardahl.be

Supplier
SADAPS BARDAHL Additives & Lubricants
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BELGIQUE
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msds@bardahlfrance.com, www.bardahl.be

1.4. Emergency telephone number

Emergency number : + 32 (0)70.245.245 / +33 (0)1.45.42.59.59

Country/Area	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	
Saudi Arabia	Poison Control Center-Riyadh	General Directorate of Health Affairs Medial Province	+966 112324180 +966 112324189	
United Arab Emirates	Health Authority – Abu Dhabi (HAAD) Poison & Drug Information Center (PDIC)	P.O. Box 5674	+ 800-424	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Serious eye damage/eye irritation, Category 2 H319
Reproductive toxicity, Category 2 H361fd
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07 GHS08

Signal word (CLP) : Warning

Contains : Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate

Hazard statements (CLP) : H319 - Causes serious eye irritation.
H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child.

Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing, eye protection/face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P501 - Dispose of contents/container to a hazardous or special waste collection point.

Extra phrases : For professional users only.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH 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 substance(s) are 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

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
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: 01-2119475108-38	25 - 40	Eye Dam. 1, H318 Eye Irrit. 2, H319
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	CAS-No.: 30989-05-0 EC-No.: 250-418-4 REACH-no: 01-2119462824-33	15 - 25	Repr. 2, H361fd
2,2'-oxybisethanol substance with national workplace exposure limit(s) (AT, BG, DE, DK, EE, HR, IE, LT, PL, RO, SE, SI, SK)	CAS-No.: 111-46-6 EC-No.: 203-872-2 EC Index-No.: 603-140-00-6 REACH-no: 01-2119457851-21	5 - 10	Acute Tox. 4 (Oral), H302
3,6,9,12-tetraoxahexadecan-1-ol	CAS-No.: 1559-34-8 EC-No.: 216-322-1	5 - 10	Eye Irrit. 2, H319
2-(2-butoxyethoxy)ethanol substance with national workplace exposure limit(s) (FR); substance with a Community workplace exposure limit	CAS-No.: 112-34-5 EC-No.: 203-961-6 EC Index-No.: 603-096-00-8	1 - 3	Eye Irrit. 2, H319

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-(2-methoxyethoxy)ethanol substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, ES, FI, FR, GB, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK); 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	Repr. 1A, H360D

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: 01-2119475108-38	(20 ≤ C < 30) Eye Irrit. 2; H319 (30 ≤ C ≤ 100) Eye Dam. 1; H318
2-(2-methoxyethoxy)ethanol	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. 1A; 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 : Never give anything by mouth to an unconscious person. If medical advice is needed, have product container or label at hand.

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.

First-aid measures after skin contact : Remove contaminated clothes. Wash skin with plenty of water. Wash contaminated clothing before reuse. Do not use solvents or thinners.

First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Drink plenty of water. Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If swallowed, seek medical advice immediately and show this container or label.

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

Symptoms/effects : Suspected of damaging the unborn child. Suspected of damaging fertility.

Symptoms/effects after eye contact : Causes serious eye irritation.

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 : Alcohol resistant foam. Powder. Water spray.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Fire will produce dense black smoke.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO2).

5.3. Advice for firefighters

Firefighting instructions : Exercise caution when fighting any chemical fire.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
Other information : Prevent liquid from entering sewers, watercourses, underground or low areas.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Eliminate every possible source of ignition. Ensure adequate ventilation, especially in confined areas. Keep public away from danger area. Equip cleanup crew with proper protection.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Dike for recovery or absorb with appropriate material. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Recover the product with absorbent material.
Methods for cleaning up : Clean up any spills as soon as possible, using an absorbent material to collect it.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not eat, drink or smoke when using this product.
Hygiene measures : Wash contaminated clothing before reuse. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide local exhaust or general room ventilation.
Storage conditions : Store in a closed container. Containers which are opened should be properly resealed and kept upright to prevent leakage.
Storage temperature : 18 – 23 °C
Heat and ignition sources : Keep away from naked flames/heat. Keep away from ignition sources.
Storage area : Store in a dry place. Store in a well-ventilated place.
Special rules on packaging : Store in original container.

Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

2,2'-oxybisethanol (111-46-6)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	44 mg/m³
	10 ppm
MAK (OEL STEL)	176 mg/m³
	40 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	10 mg/m³
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	101 mg/m³
	23 ppm
Denmark - Occupational Exposure Limits	
OEL TWA	11 mg/m³
	2,5 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	45 mg/m³
	10 ppm
OEL STEL	90 mg/m³
	20 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	44 mg/m³
	10 ppm
Ireland - Occupational Exposure Limits	
OEL TWA	100 mg/m³
	23 ppm
OEL STEL	300 mg/m³
	69 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	45 mg/m³
	10 ppm
TPRV (OEL STEL)	90 mg/m³
	20 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	10 mg/m³
Romania - Occupational Exposure Limits	
OEL TWA	500 mg/m³

2,2'-oxybisethanol (111-46-6)	
	115 ppm
OEL STEL	800 mg/m³
	184 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	44 mg/m³
	10 ppm
NPHV (OEL STEL)	90 mg/m³
Slovenia - Occupational Exposure Limits	
OEL TWA	44 mg/m³
	10 ppm
OEL STEL	176 mg/m³
	40 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	45 mg/m³
	10 ppm
KGV (OEL STEL)	90 mg/m³
	20 ppm

2-(2-butoxyethoxy)ethanol (112-34-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-(2-Butoxyethoxy)ethanol
IOEL TWA	67,5 mg/m³
	10 ppm
IOEL STEL	101,2 mg/m³
	15 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
France - Occupational Exposure Limits	
Local name	2-(2-butoxyethoxy)éthanol
VME (OEL TWA)	67,5 mg/m³
	10 ppm
VLE (OEL C/STEL)	101,2 mg/m³
	15 ppm
Remark	Valeurs règlementaires indicatives
Regulatory reference	Arrêté du 30 juin 2004 modifié (réf.: INRS ED 984, 2016)

2-(2-methoxyethoxy)ethanol (111-77-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	50,1 mg/m³
	10 ppm

2-(2-methoxyethoxy)ethanol (111-77-3)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	50,1 mg/m³
	10 ppm
Belgium - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	50,1 mg/m³
	10 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	50 mg/m³
Denmark - Occupational Exposure Limits	
OEL TWA	50 mg/m³
	10 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	50 mg/m³
	10 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	50,1 mg/m³
	10 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	50,1 mg/m³
	10 ppm
Gibraltar - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Greece - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	50,1 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³

2-(2-methoxyethoxy)ethanol (111-77-3)	
	10 ppm
OEL STEL	150,3 mg/m³
	30 ppm
Italy - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	50,1 mg/m³
	10 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Malta - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	45 mg/m³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	50 mg/m³
Portugal - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Romania - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	50,1 mg/m³
	10 ppm
Slovenia - Occupational Exposure Limits	
OEL TWA	50,1 mg/m³
	10 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	50,1 mg/m³
	10 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	50 mg/m³

2-(2-methoxyethoxy)ethanol (111-77-3)	
	10 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	50,1 mg/m³
	10 ppm
WEL STEL (OEL STEL)	150,3 mg/m³
	30 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	50 mg/m³
	10 ppm
Korttidsverdi (OEL STEL)	75 mg/m³
	20 ppm

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

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:
Safety glasses. ISO 16321-1. Wear eye protection

Eye protection			
Type	**Field of application**	**Characteristics**	**Standard**
Safety glasses		With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Gloves. ISO 374-1. Wear protective gloves

Hand protection					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Gloves	Butyl rubber	6 (> 480 minutes)	0.3		EN 374-2, EN 374-3, EN 388
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.2		EN 374-2, EN 374-3, EN 388

8.2.2.3. Respiratory protection

Respiratory protection:
Good ventilation of the workplace required

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	brown.
Odour	:	sweet odour.
Odour threshold	:	Not available
Melting point	:	< -50 °C
Freezing point	:	Not available
Boiling point	:	> 260 °C
Flammability	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	> 100 °C
Auto-ignition temperature	:	> 280 °C
Decomposition temperature	:	300 °C
pH	:	7 – 10,5
Viscosity, kinematic	:	5 – 10 mm²/s (20°C)
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Partition coefficient n-octanol/water (Log Pow)	:	1,5
Vapour pressure	:	1 mbar
Vapour pressure at 50°C	:	Not available
Density	:	1,02 – 1,07 g/cm³
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

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

Not established.

10.4. Conditions to avoid

Heat. Open flame. Sparks. Water, humidity. Freezing.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers. Strong reducing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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

BRAKE FLUID XBF DOT 4 BARDAHL	
LD50 oral rat	≥ 5000 mg/kg
LD50 dermal rabbit	≥ 3000 mg/kg

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (143-22-6)	
LD50 oral rat	5300 mg/kg
LD50 dermal rabbit	3540 mg/kg

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
LD50 oral rat	> 2000 mg/kg
LD50 oral	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LD50 dermal	> 2000 mg/kg

2,2'-oxybisethanol (111-46-6)	
LD50 oral rat	12565 mg/kg
LD50 dermal rabbit	11890 mg/kg
LC50 Inhalation - Rat	4600 mg/m³ (4h)

2-(2-methoxyethoxy)ethanol (111-77-3)	
LD50 oral rat	4 ml/kg
LD50 oral	4 ml/kg
LD50 dermal rabbit	9404 mg/kg
LD50 dermal	9404 mg/kg

Skin corrosion/irritation : Prolonged or repeated skin contact with the material will remove natural oils which leads to a dermatitis
pH: 7 – 10,5

Serious eye damage/irritation	:	Causes serious eye irritation. pH: 7 – 10,5
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Suspected of damaging fertility. Suspected of damaging the unborn child.
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	Not classified

BRAKE FLUID XBF DOT 4 BARDAHL	
Viscosity, kinematic	5 – 10 mm²/s (20°C)

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute)	:	Not classified
Hazardous to the aquatic environment, long–term (chronic)	:	Not classified

BRAKE FLUID XBF DOT 4 BARDAHL	
LC50 - Fish [1]	> 100 mg/l (96h ; Oncorhynchus Mykiss)

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (143-22-6)	
LC50 - Fish [1]	2400 mg/l
EC50 - Crustacea [1]	> 500 mg/l
EC50 72h - Algae [1]	> 500 mg/l (Species: Desmodesmus subspicatus)

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
LC50 - Fish [1]	> 222,2 mg/l (Oncorhynchus mykiss)
EC50 - Crustacea [1]	> 211,2 mg/l
EC50 - Other aquatic organisms [1]	> 224,4 mg/l (Pseudokirchneriella subcapitata)
EC50 96h - Algae [1]	430 mg/l (Species: Pseudokirchneriella subcapitata)

2,2'-oxybisethanol (111-46-6)	
LC50 - Fish [1]	75200 mg/l
EC50 - Crustacea [1]	84000 mg/l

2-(2-methoxyethoxy)ethanol (111-77-3)	
LC50 - Fish [1]	7500 mg/l (Lepomis macrochirus [static])
LC50 - Fish [2]	7500 mg/l (Lepomis macrochirus)
EC50 - Crustacea [1]	> 500 mg/l (Daphnia magna)
EC50 72h - Algae [1]	> 500 mg/l (Desmodesmus subspicatus)

12.2. Persistence and degradability

BRAKE FLUID XBF DOT 4 BARDAHL	
Persistence and degradability	Rapidly degradable

2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol (143-22-6)	
Persistence and degradability	Rapidly degradable

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
Persistence and degradability	Readily biodegradable.

2,2'-oxybisethanol (111-46-6)	
Persistence and degradability	Rapidly degradable

3,6,9,12-tetraoxahexadecan-1-ol (1559-34-8)	
Persistence and degradability	Rapidly degradable

2-(2-butoxyethoxy)ethanol (112-34-5)	
Persistence and degradability	Rapidly degradable

2-(2-methoxyethoxy)ethanol (111-77-3)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

BRAKE FLUID XBF DOT 4 BARDAHL	
Partition coefficient n-octanol/water (Log Pow)	1,5

Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate (30989-05-0)	
Partition coefficient n-octanol/water (Log Pow)	-4,37
Bioaccumulative potential	not bioaccumulable.

2,2'-oxybisethanol (111-46-6)	
BCF - Fish [1]	100 – 180

12.4. Mobility in soil

BRAKE FLUID XBF DOT 4 BARDAHL	
Ecology - soil	In water, material soluble. Mobility in soil.

12.5. Results of PBT and vPvB assessment

No additional information available

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

Waste treatment methods	:	Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Sewage disposal recommendations	:	Do not discharge into drains or the environment.
Product/Packaging disposal recommendations	:	Collect all waste in suitable and labelled containers and dispose according to local legislation.
Additional information	:	Empty the packaging completely prior to disposal. Do not re-use empty containers.
Ecological waste information	:	Do not discharge the product into the environment.
European List of Waste (LoW, EC 2000/532)	:	16 01 13* - brake fluids

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / RID

ADR	IMDG	IATA	RID
14.1. UN number or ID number			
Not regulated for transport			
14.2. UN proper shipping name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available			

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Rail transport

Not regulated

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**
54.	2-(2-methoxyethoxy)ethanol

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)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

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)

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

France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : 2-(2-methoxyethoxy)ethanol is listed

Denmark

Danish National Regulations : 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

Poland

Polish National Regulations : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
The ADR Agreement - Annex to the J. o L. of 26 April 2019 Government Statement of 18 February 2019 on the entry into force of the amendments to Annex A and B to the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o L. 2019, item 769)
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
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.
Repr. 1A	Reproductive toxicity, Category 1A
Repr. 2	Reproductive toxicity, Category 2

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.