Safety Data Sheet
acc. to OSHA HCS

Printing date 10/08/2025 Reviewed on 10/08/2025

*

1 Identification

· **Product identifier**

· **Trade name: BRAKE FLUID DOT 4**

· **Application of the substance / the mixture**
Only for proper handling.
Brake fluid

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**

MOTOREX AG
Bern–Zürich–Strasse 31, Postfach
CH–4901 Langenthal
Tel. +41 (0)62 919 75 75
www.motorex.com

MOTOREX USA Inc.
993 Federal Road
Brookfield, CT 06804
(203) 775-1291
www.motorex.com/en-us

· **Information department:**
msds@motorex.com
Info.usa@motorex.com
· **Emergency telephone number:**
USA + Canada: 1 800 424 9300 (Chemtrec Chemical Manufacturers Association, Arlington, VA 22209)

2 Hazard(s) identification

· **Classification of the substance or mixture**
The product is not classified, according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 1
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

Health = *1
Fire = 1
Reactivity = 0

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

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of substances

· **Dangerous components:**		
CAS: 111-46-6 EINECS: 203-872-2 Index number: 603-140-00-6	2,2'-oxybisethanol Acute Toxicity - Oral 4, H302	≥5-≤10%
	Reaktionsmasse aus 2-(2-(2-Butoxyethoxy)ethoxy) ethanol und 3,6,9,12-Tetraoxahexadecan-1-ol Eye Damage 1, H318	≥5-≤10%
CAS: 143-22-6 EINECS: 205-592-6 Index number: 603-183-00-0	2-[2-(2-butoxyethoxy)ethoxy]ethanol Eye Damage 1, H318	≥2.5-≤7.5%

4 First-aid measures

· **Description of first aid measures**
· **General information:** No special measures required.
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:** Generally the product does not irritate the skin.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.
· **Advice for firefighters**
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
111-46-6	2,2'-oxybisethanol	6.9 ppm

· **PAC-2:**		
111-46-6	2,2'-oxybisethanol	140 ppm

· **PAC-3:**		
111-46-6	2,2'-oxybisethanol	860 ppm

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· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Precautions for safe handling** No special measures required.
· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** No special requirements.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** None.
· **Storage class:** 10
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

111-46-6 2,2'-oxybisethanol	
WEEL	Long-term value: 10 mg/m³

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**
· **Additional information about design of technical systems:** No further data; see section 7.
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
· **Breathing equipment:** Not required.
· **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Goggles recommended during refilling.
· **Body protection:** Protective work clothing

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9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Physical state**	Liquid
· **Color:**	yellow to amber
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **Melting point/Melting range:**	Undetermined.
· **Boiling point/Boiling range:**	>260 °C (DIN EN ISO 3405)
· **Flammability:**	Not applicable.
· **Explosion limits:**	
· **Lower:**	Not determined.
· **Upper:**	Not determined.
· **Flash point:**	134 °C
· **Decomposition temperature:**	Not determined.
· **pH-value:**	Not determined.
· **Viscosity:**	
· **Kinematic:**	11 mm²/s @ 20 °C
· **Consistency**	
· **Dynamic:**	Not determined.
· **Solubility in / Miscibility with**	
· **Water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Vapor pressure:**	Not determined.
· **Vapor pressure:**	
· **Density at 20 °C:**	1.07 g/cm³ (ASTM D 4052)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.

· **Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Solvent separation test**	
· **VOC (EU)**	0.00 %
· **Change in condition**	
· **Evaporation rate**	Not determined.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:** Based on available data, the classification criteria are not met.

· **LD/LC50 values that are relevant for classification:**		
111-46-6 2,2'-oxybisethanol		
Oral	LD50	1,000 mg/kg (rat)
	NOAEL	10,000 mg/kg (rat)
	NOAEL	128-300 mg/kg/24h (rat)
	LOAEL	40,000 mg/kg (rat)
Dermal	LD50	13,300 mg/kg (rabbit)
	NOAEL	2,200-4,400 mg/kg/24h (dog)
Inhalative	LC50 / 4h	>4.6 mg/l (rat)
143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol		
Oral	LD50	5,000-11,300 mg/kg (rat)
	NOAEL	250-400 mg/kg/24h (rat)
	LOAEL	1,000-1,200 mg/kg/24h (rat)
Dermal	LD50	3,540 mg/kg (rabbit)
	NOAEL	200-4,000 mg/kg/24h (rat)
		1,000 mg/kg/24h (rabbit)
Inhalative	LC50 / 16h	2.4 mg/l (rat)
	NOAEL	94 mg/m3 (rat)
	NOAEC	120-152.52 mg/m3 (rat)
	NOEC	40 mg/m3 (rat)

· **Primary irritant effect:**
· **on the skin:** Based on available data, the classification criteria are not met.
· **on the eye:** Based on available data, the classification criteria are not met.
· **Sensitization:** Based on available data, the classification criteria are not met.
· **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.
· **Specific target organ toxicity - single exposure**
Based on available data, the classification criteria are not met.
· **Specific target organ toxicity - repeated exposure**
Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

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12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
111-46-6 2,2'-oxybisethanol	
LC50	75.2 mg/l/96h (fish)
LC50	1,500 mg/l/28d (fish)
EC50	10,000 mg/l/24h (aquatic invertebrates)
EC50	6,500-13,000 mg/l/96h (algae / cyanobacteria)
EC50	33,911 mg/l/21d (aquatic invertebrates)
NOEC	7,500-15,000 mg/l/21d (aquatic invertebrates)
NOEC	100 mg/l/72h (algae / cyanobacteria)
NOEC	8,590-24,000 mg/l/7d (aquatic invertebrates)
	15,380-32,000 mg/l/7d (fish)
143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol	
LC50	2,182-14,257 mg/l/96h (fish)
LC0	2,150 mg/l/96h (fish)
LC100	4,600 mg/l/96h (fish)
LC50	1,740-5,521 mg/l/48h (aquatic invertebrates)
	2,400 mg/l/48h (fish)
LC50	2,400-2,967 mg/l/24h (fish)
EC10	233.9-235.6 mg/l/21d (aquatic invertebrates)
EC50	174.5-3,167.5 mg/l/24h (aquatic invertebrates)
EC10	151-1,185 mg/l/72h (algae / cyanobacteria)
EC50	500-3,211 mg/l/72h (algae / cyanobacteria)
EC50	518.3 mg/l/21d (aquatic invertebrates)
EC0	500 mg/l/48h (aquatic invertebrates)
EC50	500-3,141.3 mg/l/48h (aquatic invertebrates)
NOEC	97.7-174.6 mg/l/21d (aquatic invertebrates)
	174.6 mg/l/21d (fish)
NOEC	62.5-499 mg/l/72h (algae / cyanobacteria)

· **Persistence and degradability** No further relevant information available.

· **Bioaccumulative potential**	
111-46-6 2,2'-oxybisethanol	
Partition coefficient	≤1.98 [---] (log Kow) (Bioaccumulation)
Biologische Abbaubarkeit	90-100 % (28d) (Biodegradability) (OECD 301 A)
143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol	
Partition coefficient	0.51 [---] (log Kow) (Bioaccumulation)
Biologische Abbaubarkeit	85 % (28d) (Biodegradability) (OECD 301 A)

· **Mobility in soil** No further relevant information available.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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· **Other adverse effects**
· **Additional ecological information:**
· **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Return product and/or partially emptied container in original packaging to the point of sale or hand it over to a collection point for special waste.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number** · **DOT, ADR/RID/ADN, IMDG, IATA**	Void
· **UN proper shipping name** · **DOT, ADR/RID/ADN, IMDG, IATA**	Void
· **Transport hazard class(es)** · **DOT, ADR/RID/ADN, ADN, IMDG, IATA** · **Class**	Void
· **Packing group** · **DOT, ADR/RID/ADN, IMDG, IATA**	Void
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	Void

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
· **Sara**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

143-22-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol

· **TSCA (Toxic Substances Control Act):**

111-46-6	2,2'-oxybisethanol	ACTIVE

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143-22-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol	ACTIVE
1559-34-8	3,6,9,12-tetraoxahexadecan-1-ol	ACTIVE

· **Hazardous Air Pollutants**
None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

*
16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
The classification of the mixture was carried out by calculation in accordance with the rules laid down in Annex I of Regulation (EC) No 1272/2008.
No special training instructions to ensure protection of human health and environment are required.

· **Department issuing SDS:** Abteilung Produktsicherheit
· **Date of previous version** 03/27/2025
· **Version number of previous version:** 1.0
· **Date of preparation / last revision** 10/08/2025 / 1.0
· **Abbreviations and acronyms:**
Acute Toxicity - Oral 4: Acute toxicity – Category 4
Eye Damage 1: Serious eye damage/eye irritation – Category 1
· *** Data compared to the previous version altered.**