

**Safety Data Sheet**

according to UK REACH Regulation

**Mintex Brake fluid DOT 4LV**

Revision date: 13.06.2023

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Mintex Brake fluid DOT 4LV

**Product code:**

MBFESP4-1000B

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

Hydraulic (functional) fluids

**1.3. Details of the supplier of the safety data sheet****Manufacturer**

Company name: TMD Friction Services GmbH  
Street: Schlebuscher Str. 99  
Place: D-51381 Leverkusen  
Telephone: +49 (2171)703-0  
E-mail: serviceline@tmdfriction.com  
Contact person: Hr. Beier  
E-mail: serviceline@tmdfriction.com  
Internet: www.tmdfriction.com

Telephone: +49 (2171)9113-7373

**Supplier**

Company name: TMD Friction UK Ltd  
Street: 46-47, Hardwick Grange  
Place: Woolston, Warrington WA1 4RF  
Telephone: 03300 583908

**1.4. Emergency telephone number:**

GIZ Bonn: +49 (0)228-19240 (24/7)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****GB CLP Regulation**

Repr. 2; H361d

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****GB CLP Regulation****Hazard components for labelling**

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

**Signal word:**

Warning

**Pictograms:**

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#### Hazard statements

H361d Suspected of damaging the unborn child.

#### Precautionary statements

P101 If medical advice is needed, have product container or label at hand.  
 P102 Keep out of reach of children.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P405 Store locked up.  
 P501 Dispose of waste according to applicable legislation.

#### 2.3. Other hazards

This material is combustible, but will not ignite readily.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
30989-05-0	Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate			50 - < 55 %
	250-418-4			
	Repr. 2; H361d			
143-22-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol			1 - < 5 %
	205-592-6	603-183-00-0		
	Eye Dam. 1; H318			
9004-77-7	Polyethylene glycol butyl ether			1 - < 5 %
	500-012-0			
	Eye Irrit. 2; H319			
111-77-3	2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether			1 - < 3 %
	203-906-6	603-107-00-6		
	Repr. 1B; H360D			

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

##### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
143-22-6	205-592-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol; TEGBE; triethylene glycol monobutylether; butoxytriethylene glycol	1 - < 5 %
	Eye Dam. 1; H318: >= 30 - 100 Eye Irrit. 2; H319: >= 20 - < 30		
9004-77-7	500-012-0	Polyethylene glycol butyl ether	1 - < 5 %
	Eye Irrit. 2; H319: >= 20 - 100		
111-77-3	203-906-6	2-(2-methoxyethoxy)ethanol; diethylene glycol monomethyl ether	1 - < 3 %
	Repr. 1B; H360D: >= 3 - 100		

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

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#### General information

When in doubt or if symptoms are observed, get medical advice. Never give anything by mouth to an unconscious person or a person with cramps.

#### After inhalation

Provide fresh air. Call a doctor if you feel unwell.

#### After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. In case of skin reactions, consult a physician.

Clean with detergents. Avoid solvent cleaners.

#### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. Remove contact lenses, if present and easy to do. Continue rinsing.

#### After ingestion

Rinse mouth immediately and drink plenty of water. Observe risk of aspiration if vomiting occurs. Do NOT induce vomiting. Immediately call a doctor.

Following ingestion large scale (Manufacturer): Immediately call a doctor. Alcohol (40 %) 90 - 120 mL (2 mg/kg bw)

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

No information available.

#### 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

Water mist, alcohol resistant foam, Dry extinguishing powder, Carbon dioxide (CO<sub>2</sub>).  
Co-ordinate fire-fighting measures to the fire surroundings.

##### Unsuitable extinguishing media

Full water jet

#### 5.2. Special hazards arising from the substance or mixture

This material is combustible, but will not ignite readily.

In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Pyrolysis products, toxic.

#### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Full protection suit

#### Additional information

Suppress gases/vapours/mists with water spray jet. Use water spray jet to protect personnel and to cool endangered containers. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### General advice

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.  
Use personal protection equipment.

##### For non-emergency personnel

Use personal protection equipment.

##### For emergency responders

Wear personal protection equipment (refer to section 8).

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#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

#### **6.3. Methods and material for containment and cleaning up**

##### **For containment**

Stop leak if safe to do so. Cover drains.

##### **For cleaning up**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

Clean with detergents. Avoid solvent cleaners.

##### **Other information**

Clean contaminated articles and floor according to the environmental legislation.

#### **6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

## **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

Provide adequate ventilation. Avoid contact with skin, eyes and clothes. Do not breathe gas/vapour/aerosol. Wear personal protection equipment.

##### **Advice on protection against fire and explosion**

Usual measures for fire prevention.

##### **Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

#### **7.2. Conditions for safe storage, including any incompatibilities**

##### **Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations.

##### **Hints on joint storage**

Do not store together with: Acid, alkali (Base), Oxidising agent, Reducing agent.

##### **Further information on storage conditions**

storage temperature: 18 - 23 °C

#### **7.3. Specific end use(s)**

Hydraulic (functional) fluids

## **SECTION 8: Exposure controls/personal protection**

#### **8.1. Control parameters**

##### **Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
111-77-3	2-(2-Methoxyethoxy)ethanol	10	50.1		TWA (8 h)	WEL

#### **8.2. Exposure controls**

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#### Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Wear eye/face protection. Eye glasses with side protection

##### Hand protection

Tested protective gloves must be worn  
penetration time (maximum wearing period): > 480 min.

Suitable material: Butyl caoutchouc (butyl rubber)

Thickness of glove material: 0,3 mm

Suitable material: NBR (Nitrile rubber)

Thickness of glove material: 0,2 mm

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. 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. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

##### Skin protection

Use of protective clothing.

##### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

##### Thermal hazards

No information available.

##### Environmental exposure controls

Do not allow to enter into surface water or drains.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	amber
Odour:	characteristic
Odour threshold:	not determined
Melting point/freezing point:	< -50 °C
Boiling point or initial boiling point and boiling range:	> 260 °C
Flammability:	This material is combustible, but will not ignite readily.
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 120 °C
Auto-ignition temperature:	> 280 °C
Decomposition temperature:	300 °C
pH-Value:	7 - 10,5
Viscosity / kinematic: (at 20 °C)	5 - 10 mm <sup>2</sup> /s
Water solubility:	miscible

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Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	1,5
Vapour pressure:	1,0 hPa
(at 20 °C)	
Density:	1,02 - 1,07 g/cm <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	not applicable

**9.2. Other information****Other safety characteristics**

Evaporation rate: (n-Butyl acetate=100) 0,01

**Further Information**

No information available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No hazardous reaction when handled and stored according to provisions.

**10.4. Conditions to avoid**

Keep away from heat.

**10.5. Incompatible materials**

Acid, alkali (Base), Oxidising agent, Reducing agent.

**10.6. Hazardous decomposition products**In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>), Pyrolysis products, toxic.**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in GB CLP Regulation****Acute toxicity**

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

Acute toxicity: no classification. May cause damage to kidneys through prolonged or repeated exposure in contact with skin. May cause damage to kidneys through prolonged or repeated exposure if swallowed.

**ATEmix calculated**

ATE (oral) &gt; 2000 mg/kg; ATE (dermal) &gt; 2000 mg/kg; ATE (inhalation vapour) &gt; 20 mg/l; ATE (inhalation dust/mist) &gt; 5 mg/l

**Irritation and corrosivity**

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

Specific concentration limit (SCL):

CAS No. 143-22-6:

Serious eye damage, Category 1:  $\geq 30\%$ Eye irritation, Category 2:  $20 - < 30\%$ 

CAS No. 9004-77-7:

Eye irritation, Category 2:  $\geq 20\%$ **Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

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Suspected of damaging the unborn child. (Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate)

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

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

Specific concentration limit (SCL):

CAS No. 111-77-3:

Reproductive toxicant, Category 1B :  $\geq 3\%$

#### **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.

#### **Information on likely routes of exposure**

oral, Skin contact, Eye contact, Inhalation.

#### **Practical experience**

Acute toxicity: no classification.

Practical experience/human evidence: Absorption large scale (Manufacturer): May cause damage to organs. (kidneys)

depression of central nervous system, Gastrointestinal complaints, Headache, Vomiting.

#### **11.2. Information on other hazards**

##### **Other information**

No information available.

### **SECTION 12: Ecological information**

#### **12.1. Toxicity**

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

The product is not: Ecotoxic.

#### **12.2. Persistence and degradability**

Product is biodegradable. (OECD 302B)

#### **12.3. Bioaccumulative potential**

Based on the n-octanol/water partition coefficient accumulation in organisms is not expected. ( $\leq 2$ )

#### **12.4. Mobility in soil**

Soluble in: Water. If product enters soil, it will be mobile and may contaminate groundwater.

#### **12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

#### **12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

#### **12.7. Other adverse effects**

No information available.

#### **Further information**

Avoid release to the environment.

### **SECTION 13: Disposal considerations**

#### **13.1. Waste treatment methods**

##### **Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

##### **Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

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**SECTION 14: Transport information****Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

**Air transport (ICAO-TI/IATA-DGR)**

<b>14.1. UN number or ID number:</b>	No dangerous good in sense of this transport regulation.
<b>14.2. UN proper shipping name:</b>	No dangerous good in sense of this transport regulation.
<b>14.3. Transport hazard class(es):</b>	No dangerous good in sense of this transport regulation.
<b>14.4. Packing group:</b>	No dangerous good in sense of this transport regulation.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No information available.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 54, Entry 75

**National regulatory information**

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D):

**Additional information**

Observe in addition any national regulations!

IECSC:

CAS No. 30989-05-0 Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate: Yes.

CAS No. 9004-77-7 Polyethylene glycol butyl ether: Yes.

CAS No. 143-22-6 2-(2-butoxyethoxy)ethanol; diethylene glycol monobutyl ether: Yes.

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 1,3,9,11,12,15.



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**Abbreviations and acronyms**

ACGIH: American Conference of Governmental Industrial Hygienists  
DGR: Dangerous Goods Regulations  
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
ICAO: International Civil Aviation Organization  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
UN: United Nations  
CAS: Chemical Abstracts Service  
ATE: Acute toxicity estimate  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
LL50: Lethal loading, 50%  
EL50: Effect loading, 50%  
EC50: Effective Concentration 50%  
ErC50: Effective Concentration 50%, growth rate  
NOEC: No Observed Effect Concentration  
BCF: Bio-concentration factor  
MARPOL: International Convention for the Prevention of Marine Pollution from Ships  
IBC: Intermediate Bulk Container  
TI: Technical Instructions  
TWA: time-weighted average  
STEL: Short-term exposure limit  
EmS: Emergency Schedules  
LQ: Limited Quantity  
Eye Dam: Eye damage  
Eye Irrit: Eye irritation  
Repr: Reproductive toxicity

**Classification for mixtures and used evaluation method according to GB CLP Regulation**

Classification	Classification procedure
Repr. 2; H361d	Calculation method

**Relevant H and EUH statements (number and full text)**

H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H360D May damage the unborn child.  
H361d Suspected of damaging the unborn child.

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*