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## Bizol Brake Fluid DOT 4

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

#### 1.1. Product identifier

Bizol Brake Fluid DOT 4

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

#### 1.3. Details of the supplier of the safety data sheet

Company name:	BIZOL Germany GmbH	
Street:	Martin-Buber-Str. 12	
Place:	D-14163 Berlin	
Telephone:	+49 (30) 804 869-0	Telefax: +49 (30) 804 869-2860
e-mail:	support@bizol.de	
Internet:	www.bizol.com	

#### 1.4. Emergency telephone number:

Germany: +49 (30) 804 869-0 (08.00-17.00, Mo-Fr)  
In England and Wales: NHS Direct: 0845 4647 or 111 In Scotland: NHS 24 - 08454 24 24 24 In Republic of Ireland: 01 809 2166

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GB CLP Regulation

Eye Irrit. 2; H319  
Skin Sens. 1; H317

Full text of hazard statements: see SECTION 16.

#### 2.2. Label elements

##### GB CLP Regulation

##### Hazard components for labelling

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

Signal word: Warning

##### Pictograms:



##### Hazard statements

H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.

##### Precautionary statements

P102	Keep out of reach of children.
P261	Avoid breathing mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of waste according to applicable legislation.

#### 2.3. Other hazards

No further relevant information available.

### SECTION 3: Composition/information on ingredients

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**3.2. Mixtures**

**Chemical characterization**

Blend of the following materials with non-hazardous additives.

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
143-22-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol			10 - < 25 %
	205-592-6	603-183-00-0	01-2119475107-38	
	Eye Dam. 1; H318			
111-46-6	2,2' -oxybisethanol			5 - < 10 %
	203-872-2	603-140-00-6	01-2119457857-21	
	Acute Tox. 4, STOT RE 2; H302 H373			
161907-77-3	ethanol, 2-butoxy-, manufacture of, by-products from			< 5 %
	310-287-7		01-2119475115-41	
	Eye Dam. 1; H318			
26544-38-7	dihydro-3-(tetrapropenyl)furan-2,5-dione			0,025-<0,25 %
	247-781-6		01-2119979080-37	
	Eye Irrit. 2, Skin Sens. 1A, Aquatic Chronic 4; H319 H317 H413			
128-37-0	2,6-di-tert-butyl-p-cresol			0,025-<0,25 %
	204-881-4		01-2119565113-46	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			
67-56-1	methanol			0,025-<0,25 %
	200-659-6	603-001-00-X	01-2119433307-44	
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, STOT SE 1; H225 H331 H311 H301 H370			

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	10 - < 25 %
		Eye Dam. 1; H318: >= 30 - 100 Eye Irrit. 2; H319: >= 20 - < 30	
111-46-6	203-872-2	2,2' -oxybisethanol	5 - < 10 %
		dermal: LD50 = 11890 mg/kg; oral: ATE = 500 mg/kg	
26544-38-7	247-781-6	dihydro-3-(tetrapropenyl)furan-2,5-dione	0,025-<0,25 %
		oral: LD50 = 2900 mg/kg	
128-37-0	204-881-4	2,6-di-tert-butyl-p-cresol	0,025-<0,25 %
		dermal: LD50 = 2500 mg/kg; oral: LD50 = > 6000 mg/kg	
67-56-1	200-659-6	methanol	0,025-<0,25 %
		inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: ATE = 300 mg/kg; oral: ATE = 100 mg/kg STOT SE 1; H370: >= 10 - 100 STOT SE 2; H371: >= 3 - < 10	

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

**General information**

When in doubt or if symptoms are observed, get medical advice. If unconscious but breathing normally, place in recovery position and seek medical advice. Remove contaminated, saturated clothing immediately.

**After inhalation**

Remove casualty to fresh air and keep warm and at rest.

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### **After contact with skin**

After contact with skin, wash immediately with plenty of water and soap.

### **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.

### **After ingestion**

If swallowed, rinse mouth with water (only if the person is conscious). Let water be drunk in little sips (dilution effect). Call a physician immediately. Do NOT induce vomiting.

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

When in doubt or if symptoms are observed, get medical advice.

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

No information available.

## **SECTION 5: Firefighting measures**

### **5.1. Extinguishing media**

#### **Suitable extinguishing media**

alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO<sub>2</sub>).

#### **Unsuitable extinguishing media**

Full water jet.

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

Hazardous decomposition products: Carbon monoxide Carbon dioxide (CO<sub>2</sub>). Do not inhale explosion and combustion gases.

### **5.3. Advice for firefighters**

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

#### **Additional information**

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Do not allow to enter into soil/subsoil.

## **SECTION 6: Accidental release measures**

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

#### **General advice**

Protective measures: see section 7 + 8.

### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Clean contaminated articles and floor according to the environmental legislation.

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

#### **Other information**

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.

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

Protective measures: see section 7 + 8.

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

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

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

Use personal protection equipment. Do not eat, drink or smoke when using this product. Provide fresh air. Handle and open container with care. Conditions to avoid: generation/formation of aerosols.

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

No special measures are necessary.

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

When using do not eat, drink, smoke, sniff.

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

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**Requirements for storage rooms and vessels**

Protect against: Frost. Keep away from heat. Protect from direct sunlight. Keep container tightly closed in a cool, well-ventilated place.

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

Observe technical data sheet.

**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
111-46-6	2,2'-Oxydiethanol	23	101		TWA (8 h)	WEL
128-37-0	2,6-Di-tert-butyl-p-cresol	-	10		TWA (8 h)	WEL
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
111-46-6	2,2'-oxybisethanol			
	Worker DNEL, long-term	dermal	systemic	106 mg/kg bw/day
	Consumer DNEL, long-term	dermal	systemic	53 mg/kg bw/day
	Worker DNEL, long-term	inhalation	local	60 mg/m <sup>3</sup>
	Consumer DNEL, long-term	inhalation	local	12 mg/m <sup>3</sup>
26544-38-7	dihydro-3-(tetrapropenyl)furan-2,5-dione			
	Worker DNEL, long-term	dermal	systemic	0,33 mg/kg bw/day
128-37-0	2,6-di-tert-butyl-p-cresol			
	Worker DNEL, long-term	inhalation	systemic	1,76 mg/m <sup>3</sup>
	Consumer DNEL, long-term	inhalation	systemic	0,435 mg/m <sup>3</sup>
	Worker DNEL, long-term	dermal	systemic	0,5 mg/kg bw/day
	Consumer DNEL, long-term	dermal	systemic	0,25 mg/kg bw/day
	Consumer DNEL, long-term	oral	systemic	0,25 mg/kg bw/day
67-56-1	methanol			
	Worker DNEL, long-term	dermal	systemic	40 mg/kg bw/day
	Worker DNEL, acute	dermal	systemic	40 mg/kg bw/day
	Worker DNEL, long-term	inhalation	systemic	260 mg/m <sup>3</sup>
	Consumer DNEL, long-term	oral	systemic	8 mg/kg bw/day
	Consumer DNEL, acute	oral	systemic	8 mg/kg bw/day
	Consumer DNEL, long-term	dermal	systemic	8 mg/kg bw/day
	Consumer DNEL, acute	dermal	systemic	8 mg/kg bw/day
	Consumer DNEL, long-term	inhalation	systemic	50 mg/m <sup>3</sup>
	Worker DNEL, acute	inhalation	systemic	260 mg/m <sup>3</sup>

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**PNEC values**

CAS No	Substance	Value
Environmental compartment		
111-46-6	2,2' -oxybisethanol	
Freshwater		10 mg/l
Marine water		1 mg/l
Freshwater sediment		20,9 mg/kg
Soil		1,53 mg/kg
26544-38-7	dihydro-3-(tetrapropenyl)furan-2,5-dione	
Marine sediment		0,17 mg/kg
Freshwater sediment		1,7 mg/kg
Soil		0,2 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Marine water		0,002 mg/l
128-37-0	2,6-di-tert-butyl-p-cresol	
Freshwater		0,000199 mg/l
Freshwater (intermittent releases)		0,00199 mg/l
Marine water		0,00002 mg/l
Freshwater sediment		0,0996 mg/kg
Marine sediment		0,00996 mg/kg
Secondary poisoning		8,33 mg/kg
Soil		0,054 mg/kg
67-56-1	methanol	
Freshwater		154 mg/l
Marine water		15,4 mg/l
Freshwater sediment		570,4 mg/l
Marine sediment		57,04 mg/l
Soil		23,5 mg/l

**8.2. Exposure controls**

**Appropriate engineering controls**

See section 7. No additional measures necessary.

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

**Eye/face protection**

Eye glasses with side protection.

**Hand protection**

Wear suitable gloves. Recommended glove articles: EN ISO 374. Suitable material: NBR (Nitrile rubber). Breakthrough time: > 480 min (Thickness of the glove material: 0.4 mm). Breakthrough times and swelling properties of the material must be taken into consideration. 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. Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

**Skin protection**

Protective clothing.

**Respiratory protection**

With correct and proper use, and under normal conditions, breathing protection is not required. When splashes or fine mist form, a permitted breathing apparatus suitable for these purposes must be used. Suitable respiratory protection apparatus: Filtering Half-face mask (EN 149), e.g. FFA P / FFP3.

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

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**SECTION 9: Physical and chemical properties**

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

Physical state:	Liquid
Colour:	yellowish
Odour:	characteristic

**Test method**

**Changes in the physical state**

Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	> 230 °C	
Pour point:	not determined	
Flash point:	> 100 °C	EN ISO 2719
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Auto-ignition temperature:	not determined	
Decomposition temperature:	No information available.	
pH-Value (at 20 °C):	7,0 - 11,5	
Viscosity / dynamic:	not determined	
Viscosity / kinematic: (at 20 °C)	5 - 10 mm <sup>2</sup> /s	
Flow time:	not determined	
Water solubility:	completely miscible	
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	not determined	
Density (at 20 °C):	1,07 g/cm <sup>3</sup>	
Relative vapour density:	not determined	

**9.2. Other information**

**Other safety characteristics**

Evaporation rate: not determined

**Further Information**

No information available.

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No information available.

**10.2. Chemical stability**

No information available.

**10.3. Possibility of hazardous reactions**

No hazardous reaction when handled and stored according to provisions.

**10.4. Conditions to avoid**

Heat.

**10.5. Incompatible materials**

No information available.

**10.6. Hazardous decomposition products**

No information available.

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in GB CLP Regulation**

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**Acute toxicity**

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
111-46-6	2,2' -oxybisethanol				
	oral	ATE 500 mg/kg			
	dermal	LD50 11890 mg/kg	Rabbit		
26544-38-7	dihydro-3-(tetrapropenyl)furan-2,5-dione				
	oral	LD50 2900 mg/kg	Rat	OECD 423	
128-37-0	2,6-di-tert-butyl-p-cresol				
	oral	LD50 > 6000 mg/kg	Rat		
	dermal	LD50 2500 mg/kg	Rabbit	ATE	
67-56-1	methanol				
	oral	ATE 100 mg/kg			
	dermal	ATE 300 mg/kg			
	inhalation vapour	ATE 3 mg/l			
	inhalation dust/mist	ATE 0,5 mg/l			

**Irritation and corrosivity**

Causes serious eye irritation.

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

**Sensitising effects**

May cause an allergic skin reaction. (dihydro-3-(tetrapropenyl)furan-2,5-dione)

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

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**

**Other information**

Keeping to the general worker's protection rules and the industrial hygienics, there is no risk in handling this product through the personnel.

**SECTION 12: Ecological information**

**12.1. Toxicity**

There are no data available on the mixture itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
26544-38-7	dihydro-3-(tetrapropenyl)furan-2,5-dione					
	Acute algae toxicity	ErC50 110 mg/l	96 h	Selenastrum capricornutum		

**12.2. Persistence and degradability**

There are no data available on the mixture itself.

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**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
111-46-6	2,2'-oxybisethanol	-1,98 (25°C)
26544-38-7	dihydro-3-(tetrapropenyl)furan-2,5-dione	>=4,39
128-37-0	2,6-di-tert-butyl-p-cresol	5,1

**12.4. Mobility in soil**

No data available

**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 data available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Disposal recommendations**

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to EC directives 75/442/EEC and 91/689/EEC in the corresponding versions, covering waste and dangerous waste.

**List of Wastes Code - residues/unused products**

160113 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); brake fluids; hazardous waste

**List of Wastes Code - used product**

150202 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; absorbents, filter materials, wiping cloths and protective clothing; absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances; hazardous waste

**List of Wastes Code - contaminated packaging**

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

**Contaminated packaging**

Non-contaminated packages may be recycled. Consult the appropriate local waste disposal expert about waste disposal.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

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

**Marine transport (IMDG)**

- 14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.
  - 14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.
  - 14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.
  - 14.4. Packing group:** No dangerous good in sense of this transport regulation.
- Marine pollutant: NO



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

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

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No data available

**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**

**EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 69, Entry 75

2010/75/EU (VOC): 0 %

**National regulatory information**

Water hazard class (D): 2 - obviously hazardous to water

**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): 2,9,15.

**Abbreviations and acronyms**

- ADR: Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations concerning the International Carriage of Dangerous Goods by Rail)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 ICAO: International Civil Aviation Organization  
 CAS: Chemical Abstracts Service (a division of the American Chemical Society)  
 DNEL/DMEL: Derived No-Effect Level / Derived Minimal Effect Level  
 PNEC: Predicted No Effect Concentration  
 WEL (UK): Workplace Exposure Limits  
 TWA (EC): Time-Weighted Average  
 STEL (EC): Short Term Exposure Limit  
 ATE: Acute Toxicity Estimate  
 LD50: Lethal Dose, 50% (median lethal dose)  
 LC50: Lethal Concentration, 50% (median lethal concentration)  
 EC50: half maximal Effective Concentration  
 ErC50: EC50 in terms of reduction of growth rate  
 AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen

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

Classification	Classification procedure
Eye Irrit. 2; H319	On basis of test data
Skin Sens. 1; H317	On basis of test data

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

- H225 Highly flammable liquid and vapour.  
 H301 Toxic if swallowed.  
 H302 Harmful if swallowed.

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H311	Toxic in contact with skin.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

**Further Information**

Safety Data Sheet according to COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH). -----

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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