

Revision date:
22.01.2018

Bizol Brake Fluid DOT 4

Page 1 of 10

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

Revision date:
22.01.2018

Bizol Brake Fluid DOT 4

Page 2 of 10

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

Revision date:
22.01.2018

Bizol Brake Fluid DOT 4

Page 3 of 10

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.

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 drunken 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 (CO₂).

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products: Carbon monoxide Carbon dioxide (CO₂). 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.

Revision date:
22.01.2018

Bizol Brake Fluid DOT 4

Page 4 of 10

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

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 ³	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			
DNEL type		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/m³
Consumer DNEL, long-term		inhalation	local	12 mg/m³
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/m³
Consumer DNEL, long-term		inhalation	systemic	0,435 mg/m³
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/m³
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/m³
Worker DNEL, acute		inhalation	systemic	260 mg/m³

Revision date:
22.01.2018

Bizol Brake Fluid DOT 4

Page 5 of 10

PNEC values

CAS No	Substance	
Environmental compartment		Value
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

Additional advice on limit values

- a no restriction
- b End of exposure or end of shift
- c at long-term exposure:
- d before next shift

Y: A risk of reproductive effects needs not to be feared if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

Z: A risk of reproductive effects cannot to be excluded if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

blood (B)

Urine (U)

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.

Revision date:
22.01.2018

Bizol Brake Fluid DOT 4

Page 6 of 10

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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	yellowish	
Odour:	characteristic	
		Test method
Melting point/freezing point:	not determined	
Boiling point or initial boiling point and boiling range:	> 230 °C	
Flammability		
Solid/liquid:	No data available	
Lower explosion limits:	not determined	
Upper explosion limits:	not determined	
Flash point:	> 100 °C	EN ISO 2719
Auto-ignition temperature:	not determined	
Decomposition temperature:	No data available	
pH-Value (at 20 °C):	7,0 - 11,5	
Viscosity / kinematic: (at 20 °C)	5 - 10 mm ² /s	
Water solubility:	completely miscible	
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	not determined	
Density (at 20 °C):	1,07 g/cm ³	
Relative vapour density:	not determined	
Particle characteristics:	not applicable	

9.2. Other information

Other safety characteristics

Pour point:	not determined
Viscosity / dynamic:	not determined
Flow time:	not determined

No further relevant 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.

Revision date:
22.01.2018

Bizol Brake Fluid DOT 4

Page 7 of 10

10.6. Hazardous decomposition products

No information available.

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.

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.

Revision date:
22.01.2018

Bizol Brake Fluid DOT 4

Page 8 of 10

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
111-46-6	2,2' -oxybisethanol					
	Acute fish toxicity	LC50 > 32000 mg/l	96 h	Gambusia affinis		
26544-38-7	dihydro-3-(tetrapropenyl)furan-2,5-dione					
	Acute algae toxicity	ErC50 110 mg/l	96 h	Selenastrum capricornutum		
128-37-0	2,6-di-tert-butyl-p-cresol					
	Acute algae toxicity	ErC50 > 0,4 mg/l	72 h	Desmodesmus subspicatus		
	Acute crustacea toxicity	EC50 0,48 mg/l	48 h	Daphnia magna (Big water flea)		
	Crustacea toxicity	NOEC 0,316 mg/l	21 d	Daphnia magna (Big water flea)		

12.2. Persistence and degradability

There are no data available on the mixture itself.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
128-37-0	2,6-di-tert-butyl-p-cresol			
	OECD 301C	4,5%	28	
	Not readily biodegradable (according to OECD criteria)			

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

Revision date:
22.01.2018

Bizol Brake Fluid DOT 4

Page 9 of 10

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

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.

Revision date:

22.01.2018

Bizol Brake Fluid DOT 4

Page 10 of 10

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.
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) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006

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.

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