SAFETY DATA SHEET

Brakefit Brake Fluid DOT 4: Grades with Boiling Points <260°C

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

1.1. Product identifier

Trade name

Brakefit Brake Fluid DOT4: Grades with Boiling Points <260°C

Product no.
BBF500 – 500ML
BBF1 – 1 Litre
BBF5 – 5 Litre

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

Hydraulic fluid

Relevant identified uses of the substance or mixture (REACH) No special

Uses advised against No special

1.3. Details of the supplier of the safety data sheet Company and address

Brakefit
Unit G2 Titan Road,
Patchway
Bristol
BS34 6FD

Technical Helpline - +44 (0) 117 428 8090

Date: 13.11.20
SDS Version 3.0
Date of previous version 2020-07-08 (2.0)

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service). See section 4 “First aid measures”.

SECTION 2: Hazards identification

▼2.1. Classification of the substance or mixture

Eye Irrit. 2; H319, Causes serious eye irritation.

Repr.2;H361d,Suspected of damaging the unborn child.

Classification may be based on test results obtained on the final product rather than calculation

2.2. Label elements Hazard pictogram(s)

Signal word

Warning

▼Hazard statement(s)

Causes serious eye irritation.

Suspected of damaging the unborn child.

Safety statement(s)

General

P101,Ifmedicaladviceisneeded,haveproductcontainerorlabelathand. P102, Keep out of reach of children.

Prevention

P264, Wash hands/exposed areas thoroughly after handling.

▼Response

P301+P310, IF SWALLOWED: Immediately call a POISON CENTER/doctor. P337+P313, If eye irritation persists: 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.

Storage

-

Disposal

P501, Dispose of contents/container to an approved waste disposal plant.

▼Hazardous substances

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

2.3. Other hazards

Additional labelling

Not applicable

Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

Product is not classified as combustible but will burn.

SECTION 3: Composition/information on ingredients

▼3.2 Mixtures

Product/Ingredient name	Identifiers	%w/w	Classification	Note
ButylTriglycol	CASNo.:143-22-6 EC No.:205-592-6 REACH No.: 01-2119475107-38-XXXX IndexNo.:603-183-00-0	20-29.9%	Eye Dam. 1, H318 (SCL: 30.00 %)	
2,2' -oxybisethanol;	CAS No.: 111-46-6 EC No.: 203-872-2 REACH No.: 01-2119457857-21-XXXX	15-24%	Acute Tox. 4,H302	

	Index No.: 603-140-00-6			
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	CAS No.: 30989-05-0 EC No.: 250-418-4 REACH No.: 01-2119462824-33-XXXX Index No.:	5-20%	Repr. 2, H361d	
Butyl Polyglycol	CAS No.: 9004-77-7 EC No.: 500-012-0 REACH No.: 01-2119475115-41-XXXX Index No.:	5-10%	Eye Irrit. 2, H319 (SCL: 20.00 %)	
2-(2-butoxyethoxy)ethanol;	CAS No.: 112-34-5 EC No.: 203-961-6 REACH No.: 01-2119475104-44-XXXX Index No.: 603-096-00-8	0-2.99%	Eye Irrit. 2, H319	Annex XVII, EU
2-(2-methoxyethoxy)ethanol;	CAS No.: 111-77-3 EC No.: 203-906-6 REACH No.: 01-2119475100-52-XXXX Index No.: 603-107-00-6	0-2.99%	Repr. 2, H361d	Annex XVII, EU

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

EU: European occupational exposure limit

Annex XVII: The chemical substance is subject to REACH restrictions, REACH annex XVII.

SECTION 4: First aid measures

4.1. Description of first aid measures General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her. If recovery is not rapid, seek medical attention Skin contact

Immediately remove contaminated clothing and shoes. Ensure that skin, which has been exposed to the

material, is washed thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

Eye contact

Remove contact lenses. Flush eyes immediately with plenty of water or isotonic water (20-30°C) for at least 5 minutes and continue until irritation stops. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

Ingestion

Provide plenty of water for the person to drink and stay with him/her. Seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the victim lean forward with head down to avoid inhalation of- or choking on vomited material. If medical attention is delayed, give adults 90-120 ml hard liquor such as 40%v/v spirits. Give children proportionately less at a rate of 2ml/kg body weight.

Burns

Not applicable

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

The most important symptoms are described in sections 2 and 11.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

4.3. Indication of any immediate medical attention and special treatment needed IF exposed or concerned:

Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

Treat symptomatically. There is no specific antidote. Due to the Diethylene Glycol content, treatment as for Ethylene Glycol poisoning may help.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended: alcohol-resistant foam, carbonic acid, powder, water mist. Waterjets should not be used, since they can spread the fire. However they may be used to cool adjacent containers.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / COD).

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures Avoid direct contact with spilled substances.

Avoid inhalation of vapours from spilled material.

Prevent unnecessary personnel entering area of spillage. When cleaning up large spills appropriate protective clothing should be worn -see section 8.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the

regulations on dangerous waste.
Use sand, sawdust, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.
Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section on “Disposal considerations” in regard of handling of waste.
See section on 'Exposure controls/personal protection' for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid any method of handling that generates mists or aerosols. Do not eat, drink or smoke when handling this product.
See section on 'Exposure controls/personal protection' for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Always store in containers of the same material as the original container.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Storage temperature

Room temperature 15 to 30°C

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2
Users are referred to the specification SAE J1707 "Service maintenance of brake fluids".

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

—
2,2' -oxybisethanol;
Long term exposure limit (8 hours): 23 ppm Long term exposure limit (8 hours): 101 mg/m³

—
2-(2-butoxyethoxy)ethanol;
Long term exposure limit (8 hours): 10 ppm Long term exposure limit (8 hours): 67,5 mg/m³ Short term exposure limit (15 minutes): 15 ppm
Short term exposure limit (15 minutes): 101,2 mg/m³

—
2-(2-methoxyethoxy)ethanol;
Long term exposure limit (8 hours): 10 ppm Long term exposure limit (8 hours): 50,1 mg/m³ Annotations:
Sk = Can be absorbed through the skin and lead to systemic toxicity.

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020)

DNEL

Product/Ingredient name	DNEL	Route of exposure	Duration
Butyl Triglycol	50 mg/kgBW/day	Dermal	Long term – Systemic effects - Workers
Butyl Triglycol	195 mg/m3	Inhalation	Long term – Systemic effects - Workers
2,2'-oxybisethanol;	106 mg/kgBW/Day	Dermal	Long term – Systemic

			effects - Workers
2,2'-oxybisethanol;	60mg/m3	Inhalation	Longterm–Systemic effects - Workers
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	8.3mg/kgBW/day	Dermal	Longterm–Systemic effects-Workers
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	29.1mg/m3	Inhalation	Longterm–Systemic effects-Workers
2-(2-butoxyethoxy)ethanol;	20mg/kgBW/day	Dermal	Longterm–Systemic effects - Workers
2-(2-butoxyethoxy)ethanol;	67mg/m3	Inhalation	Longterm–Systemic effects - Workers
2-(2-methoxyethoxy)ethanol;	0.53mg/kgBW/day	Dermal	Longterm–Systemic effects - Workers
2-(2-methoxyethoxy)ethanol;	50.1mg/m3	Inhalation	Longterm–Systemic effects - Workers

PNEC

Product/Ingredient name	PNEC	Routeofexposure	DurationofExposure Butyl
Triglycol	5mg/L	Water	Single
ButylTriglycol	200mg/L	SewageTreatmentPlant	Continuous
2,2'-oxybisethanol;	10mg/L	Water	Single
2,2'-oxybisethanol;	199.5mg/L	SewageTreatmentPlant	Continuous
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	2.112mg/l	Water	Single
Tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate	100mg/l	SewageTreatmentPlant	Continuous
2-(2-butoxyethoxy)ethanol;	3.9mg/L	Water	Single
2-(2-butoxyethoxy)ethanol;	200mg/L	SewageTreatmentPlant	Continuous 2-
(2-methoxyethoxy)ethanol;	12mg/L	Water	Single
2-(2-methoxyethoxy)ethanol;	10000mg/L	SewageTreatmentPlant	Nodataavailable

8.2. Exposure controls

Compliancewiththegivenoccupationalexposurelimitsvaluesshouldbecontrolledonaregularbasis.

General recommendations

Donoteat,drinkorsmokeintheworkplace Exposure

scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

Airbornevapourandmistconcentrationsmustbekeptataminimumandbelowcurrentlimitvalues(seeabove). InstallationofaLocalexhaustsystemif normalairflowintheworkroomisnotsufficientisrecommended.

Ensure emergency eyewash and -showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure

Keep spill absorbent materials available in the workplace. If possible, clean up any spills immediately.

Individual protection measures, such as personal protective equipment Generally

Use only CE marked protective equipment.

Respiratory Equipment

No specific requirements Skin protection

No specific requirements Hand protection

Worksituation	Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
	Butyl	0.3	> 480	EN374-2, EN374-3, EN388	
	Nitrile	0.2	> 480	EN374-2, EN374-3, EN388	

Eye protection

Worksituation	Recommended	Standards	
	Wear safety glasses with side shields.	EN166	

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties Form

Liquid

Colour

Amber

Odour

Mild

Odour threshold (ppm)

Testing not relevant or not possible due to nature of the product.

pH

7-10.5

Density (g/cm³)

1.01-1.06

Viscosity

5-10 centistokes (20.00 °C) Phase changes

Melting point (°C)

< -50

Boiling point (°C)

>210 °C

Vapour pressure

1.00 millibar

Vapour density

Testing not relevant or not possible due to nature of the product.

Decomposition temperature (°C) 300

Evaporation rate (n-butylacetate = 100) 0.01

Data on fire and explosion hazards Flash point (°C)

>100 °C

Ignition (°C)

>280 °C

Auto flammability (°C)

Testing not relevant or not possible due to nature of the product.

Explosion limits (% v/v)

Testing not relevant or not possible due to nature of the product.

Explosive properties

Testing not relevant or not possible due to nature of the product.

Oxidizing properties

Testing not relevant or not possible due to nature of the product.

Solubility

Solubility in water Soluble

n-octanol/water coefficient 1.50

Solubility in fat (g/L)

Testing not relevant or not possible due to nature of the product.

9.2. Other information

SECTION 10: Stability and reactivity

▼10.1. Reactivity

No hazardous reactions if stored and handled as indicated.

10.2. Chemical stability

The product is stable under the conditions, noted in the section “Handling and storage”.

10.3. Possibility of hazardous reactions No special

10.4. Conditions to avoid No special

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects Acute toxicity

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

Oral -Based on read across data toxicity is low (LD 50 Rat >5000 mg/kg). Sparse experience indicates toxicity in man could begreater.

Inhalation - Not applicable due to low vapour pressure of product.

Dermal - Based on read across data toxicity is low (LD 50 Rabbit >3000 mg/kg.

General - Although acute toxicity of this product is low, if significant amounts are absorbed there is a risk of renal damage which could lead to kidney failure or even death. Other symptoms of overexposure include Central Nervous System effects, abdominal discomfort, metabolic acidosis and headache or nausea.

Skin corrosion/irritation
Basedonavailabledata,theclassificationcriteriaarenotmet. However, repeated contact may de-fat the skin and cause dermatitis.

Serious eye damage/irritation Causes serious eyeirritation.

Respiratory or skinsensitisation
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
Suspected of damaging the unborn child.

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.

Long term effects
Reproductivetoxicity:Thisproductcontainsteratogenicsubstances,whichmayproduceanomaliesand/or developmental defects to the human offspring.
Adverse effects include: death, growth retardation, congenital disorders, delayed mental development, and functional disorders.
Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs.Exposuremayresultinanincreased absorptionpotentialofotherhazardoussubstancesattheareaof exposure.

Other information No special

SECTION 12: Ecological information

12.1. Toxicity
Product is of low ecotoxicity
Fish 96h LC50 >100mg/l (Oncorhynchus Mykiss)
Daphnia48hEC50Notdeterminedbutexpectedtobevirtuallynon-toxic Algae72h EC50Not determinedbutexpectedtobevirtuallynon-toxic

12.2. Persistence anddegradability
Productisinherentlybiodegradableandisexpectedtobereadilybiodegradablebasedoningredients(OECD 302B).
Ifadmittedintoadaptedbiologicalwatertreatmentplantsnoadverseeffectsofthedegradingactionofthelive sludge areexpected

12.3. Bioaccumulative potential
Not expected to Bio-accumulate. Log POW for all main ingredients <2.0

12.4. Mobility insoil
Productissolubleinwaterandwillbemobileinsoiluntildegraded.Volatilisationfromwatertoairnotexpected.

12.5. Results of PBT and vPvB assessment
This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. Other adverseeffects No special

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Product is covered by the regulations on hazardous waste.

Dispose of in accord with local and national regulations. Recycling or controlled incineration with energy recovery are recommended.

EWC code

160113* Brake fluids

Specific labelling

Not applicable

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

14.1 - 14.4

Not dangerous goods according to ADR, IATA and IMDG. ADR/RID

Not applicable

IMDG

Not applicable Not

IATA

applicable

"MARINE POLLUTANT"

No

14.5. Environmental hazards Not applicable

14.6. Special precautions for user Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code No data available

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

▼Restrictions for application

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education No

specific requirements

SEVESO - Categories / dangerous substances Not applicable

Additional information Tactile

warning.

Sources

Council Directive 94/33/EC of 22 June 1994 on the protection of young people at work.
Council Directive 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (CLP).
Regulation (EC) 1907/2006 (REACH).

15.2. Chemical safety assessment No

SECTION 16: Other information

▼Full text of H-phrases as mentioned in section 3

H318, Causes serious eye damage. H302,
Harmful if swallowed.
H361d, Suspected of damaging the unborn child. H319, Causes
serious eye irritation.

Abbreviations and acronyms

ADN=European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR=The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate BCF =
Bioconcentration Factor CAS=Chemical
Abstracts Service
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] CSA = Chemical Safety
Assessment
CSR = Chemical Safety Report
DMEL=Derived Minimal Effect Level DNEL=
Derived No Effect Level
EINECS = European Inventory of Existing Commercial chemical Substances ES = Exposure Scenario
EUH statement = CLP-specific Hazard statement EWC =
European Waste Catalogue
GHS = Globally Harmonized System of Classification and Labelling of Chemicals IARC = International Agency for
Research on Cancer (IARC)
IATA = International Air Transport Association IBC =
Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL=International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD=Organisation for Economic Co-operation and Development PBT = Persistent,
Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID=The Regulations concerning the International Carriage of Dangerous Goods by Rail RRN = REACH Registration
Number
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure STOT-SE=Specific
Target Organ Toxicity - Single Exposure TWA = Time weighted average
UN = United Nations
UVCB = Complex hydrocarbon substance VOC =
Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

In accordance with Regulation (EC) No. 1272/2008 (CLP) the evaluation of the classification of the mixture is based on:
The classification of the mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)
The classification of the mixture is based on test data.
The information contained here in is based on the present knowledge and experience of Brakefit. It in no way constitutes the users own assessment of work place risk as required by other Health and Safety legislation.
Brakefit does not, by supplying this information, guarantee or warrant any specific properties or qualities of goods supplied. It is the responsibility of the purchaser to determine whether the goods ordered are fit for any purpose for which they may be required.
This information is provided subject to Brakefit's Conditions of Sale, and in particular Conditions 9 and 14 thereof.
This data sheet is available in other European Languages.

Data sheets for other areas of the Globe may be available on request.

Thesafetydatasheetisvalidatedby Steve Jay

Other

Achange(inproportiontothelastessentialchange(firstcipherinSDSversion,seesection1))ismarkedwitha blue triangle.
Theinformationinthissafetydatasheetappliesonlytothisspecificproduct(mentionedinsection1)andisnot necessarily correct for use with other chemicals/products.
Itisrecommendedtohandoverthissafetydatasheettotheactualuseroftheproduct. Information in this safety data sheet cannot be used as a product specification.