

Safety Data Sheet

According to Regulation (EC) No 1907/2006

Brake Fluid DOT 4

Version 1.0

Printing date: 15/04/2014

Revision date: 15/04/2014

SDS Record Number: CSSS-TCO-010-114601

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier:

Identification on the label/Trade name: Brake Fluid DOT 4
Additional identification: Not available
Identification of the product: See section 3
Index Number: Not available
REACH registration No.: Not available

1.2 Relevant identified uses of the substance and uses advised against:

1.2.1 Identified uses:

Automotive Industry.

1.2.2 Uses advised against:

Not available.

1.3 Details of the supplier of the safety data sheet:

Supplier(Only representative): -
Supplier(Manufacturer): Honeywell Aftermarket Europe
Address: 21, avenue Saint Mathurin B.P. 50632, 60006 – Beauvais Cedex - France
Telephone: +33 (0) 3 44 12 30 40
Fax: +31 (0) 3 44 12 30 13

1.4 Emergency telephone Number:

+33 (0) 3 44 12 30 40

Available outside office hours?

YES

NO

Section 2 Hazards Identification

2.1 Classification of the substance/mixture:

2.1.1 Classification:

The mixture is classified as following according to 1999/45/EC and REGULATION (EC) No 1272/2008:

REGULATION (EC) No 1272/2008	
Hazard classes/Hazard categories	Hazard codes
Eye Dam. 1	H318

For full text of H- phrases: see section 2.2.

1999/45/EC	
Hazards characteristics	R-Phrases
Xi	R41

For full text of R- phrases: see section 16.

2.2 label elements:

Hazard Pictograms:



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SDS EU

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Signal Word(S): Danger

Hazard Statement: H318: Causes serious eye damage.

Precautionary statement: P280: Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing
P310: Immediately call a POISON CENTER or doctor/physician.

2.3 Other hazards:

Not available.

Section 3 Composition/information on ingredients

Substance/Mixture: Mixture

Ingredient(s):

Chemical Name	Registration No.	CAS No.	EC No.	Concentration
2-[2-(2-BUTOXYETHOXY)ETHOXY] ETHANOL	01-21194751 07-38-xxxx	143-22-6	205-592-6	25-50%
2,2'-OXYBISETHANOL	01-21194578 57-21	111-46-6	203-872-2	10-25%
2-(2-BUTOXYETHOXY)ETHANOL	01-21194751 04-44-xxxx	112-34-5	203-961-6	1-5%
Triethylene Glycol	01-21194383 66-35-xxxx	112-27-6	203-953-2	1-5%
Diisopropanolamine	01-21194754 44-34-xxxx	110-97-4	203-820-9	1-5%
Ethyl Diglycol	01-21194751 05-42-xxxx	111-90-0	203-919-7	1-5%
2,4-dimethyl-6-tert-butyl phenol	01-21195372 89-29-xxxx	1879-09-0	217-533-1	<0.1%

Section 4 First aid measures

4.1 Description of first aid measures:

In all cases of doubt, or when symptoms persist, seek medical attention.

4.1.1 In case of inhalation:

If exposed to fumes from overheating, move person into fresh air. Consult a doctor if necessary.

4.1.2 In case of skin contact:

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.

4.1.3 In case of eyes contact:

Promptly wash eyes with plenty of water while lifting the eye lids. Immediately rinse with water for at least 15 minutes. Get medical attention if any discomfort continues.

4.1.4 In case of ingestion:

Get medical attention immediately. Immediately rinse mouth and drink plenty of water (200-300 ml). Never make an unconscious person vomit or drink fluids.

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

Serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed:

If skin irritation or rash occurs, get medical advice/attention.

Section 5 Fire-Fighting measures

5.1 Extinguishing media:

Suitable extinguishing media: Use extinguishing agents appropriate for surrounding fire. Alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media: Water jet.

5.2 Special hazards arising from the substance or mixture

When heated and in case of fire, toxic vapours/gases may be formed.

5.3 Special fire fighting methods and special protective actions for fire-fighters:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Containers close to fire should be removed or cooled with water.

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

6.1.1 For non-emergency personnel: Provide adequate ventilation. Avoid inhalation of vapours and aerosol spray. Avoid skin and eye contact. Refer to section 8 of SDS for personal protection details.

6.1.2 For emergency responders: Wear an appropriate NIOSH/MSHA approved respirator.

6.2 Environmental Precautions:

Do not discharge into drains, water courses or onto the ground.

6.3 Methods for Containment and Cleaning up:

Absorb spillage with suitable absorbent material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

6.4 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 information on disposal.

6.5 Additional information:

Not applicable.

Section 7 Handling and storage

7.1 Precautions for safe handling:

7.1.1 Protective measures: Good hygienic practices should be observed. Avoid contact with skin and eyes. Work clothes should be washed separately at the end of each work day. Keep away from sources of ignition. Ensure good ventilation/exhaustion at the workplace.

7.1.2 Advice on general occupational hygiene: Do not eat, drink and smoke in work areas. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities:

Store in tightly closed original container in a cool, dry, well-ventilated place.

7.3 Specific end use(s):

Not applicable.

Section 8 Exposure Controls/Personal Protection

8.1 Control parameters:

8.1.1 Occupational exposure limits: Not available.

Substance			Occupational Exposure Limit Value	Occupational Exposure Limit Value (15-minute reference)

			(8-hour reference period)		period		
			ppm	mg/ m3	ppm	mg/ m3	Notes
Diethylene glycol	EINECS No. 203-872-2	CAS No. 111-46-6	23	100	-	-	-
2-(2-Butoxyethoxy)ethanol	203-961-6	112-34-5	10	67.5	15	101.2	
2,2'-OXYBISETHANOL	203-872-2	111-46-6		101			
2-[2-(2-BUTOXYETHOXY)ETH OXY]ETHANOL	205-592-6	143-22-6	10	67.5	15	101.2	
Triethylene Glycol	203-953-2	112-27-6	23	101			

8.1.2 Additional exposure limits under the conditions of use: Not available.

8.1.3 DNEL/DMEL and PNEC-Values: Not available.

8.2 Exposure controls:

8.2.1 Appropriate engineering controls: Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Use ventilation to keep exposure to airborne contaminants below the exposure limit.

8.2.2 Individual protection measures, such as personal protective equipment:

Eye/face protection: Safety glasses when eye contact is possible.

Hand protection: Protective gloves of leather, contaminated or damaged gloves should be replaced.

Body protection: Skin covering working clothes; wear dust-proof overalls if large quantities of dust are generated.

Respiratory protection: No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

Thermal hazards: Wear suitable protective clothing to prevent heat.

8.2.3 Environmental exposure controls: Avoid discharge into the environment.
According to local regulations, Federal and official regulations.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties:

Appearance:	Liquid
Colour:	Colourless. to Amber
Odour:	No characteristic odour
Odour threshold:	Not available
pH:	7.0 - 10.5
Melting point/range (°C):	<-50°C
Boiling point/range (°C):	>205°C 760 mm Hg
Flash point (°C):	>90°C
Evaporation rate:	Negligable
Flammability limit - lower (%):	Not available
Flammability (solid, gas):	Not available
Ignition temperature (°C):	Not available
Upper/lower flammability/explosive limits:	Not available
Vapour pressure (20°C):	<2 mbar

Vapour density:	Not available
Relative Density:	1.01 – 1.07 (20°C)
Bulk density (kg/m³):	Not available
Water solubility (g/l):	Miscible with water
n-Octanol/Water (log Po/w):	Not available
Auto-ignition temperature:	>300°C
Decomposition temperature:	Not available
Viscosity, dynamic (mPa.s):	5 – 10 cSt (20°C)
Explosive properties:	Not available
Oxidising properties:	Not available
Molecular Formula:	Not available
Molecular Weight:	Not available

9.2. Other information:

Fat solubility(solvent– oil to be specified) etc:	Not available
Surface tension:	Not available
Dissociation constant in water(pKa):	Not available
Oxidation-reduction Potential:	Not available
Specific gravity:	Not available

Section 10 Stability and reactivity

10.1 Reactivity:	The substance is stable under normal storage and handling conditions.
10.2 Chemical stability:	Stable at room temperature in closed containers under normal storage and handling conditions.
10.3 Possibility of hazardous reactions:	No dangerous reactions known.
10.4 Conditions to avoid:	Incompatible materials. Avoid forming spray/aerosol mists.
10.5 Incompatible materials:	Strong oxidizing agents.
10.6 Hazardous decomposition products:	When heated and in case of fire, toxic vapours/gases may be formed.

Section 11 Toxicological information

11.1 Toxicokinetics, metabolism and distribution:

Non-human toxicological data:	Not available
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11.2 Information on toxicological effects:

Acute toxicity: DIETHYLENE GLYCOL

LD50(Oral, Rat):	12565 mg/kg
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LD50(Dermal, Rabbit):	11890 mg/kg
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LC50(Inhalation, Rat):	Not available
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triethylene glycol monobutyl ether

LD50(Oral, Rat):	5170 mg/kg
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LD50(Dermal, Rabbit):	3540 mg/kg
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LC50(Inhalation, Rat):	Not available
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Skin corrosion/Irritation:	Not classified
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Serious eye damage/irritation:	Causes serious eye damage.
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Respiratory or skin sensitization:	Not classified
Germ cell mutagenicity:	Not classified
Carcinogenicity:	Not classified
Reproductive toxicity:	Not classified
STOT- single exposure:	Not classified
STOT-repeated exposure:	Not classified

Section 12 Ecological information

Toxicity: 2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL

Acute toxicity		Time	Species	Method	Evaluation	Remarks
LC50	> 2200 mg/l	96h	Fish	OECD 203	N/A	N/A
EC50	> 500 mg/l	48h	Daphnia	OECD 202	N/A	N/A
EC50	62,5 mg/l	72h	Algae	OECD 201	N/A	N/A

2-[2-(2-BUTOXYETHOXY)ETHOXY]ETHANOL(CAS:143-22-6): Water Degradation (85%) 28 days. Readily biodegradable in water OECD 301 D.

Persistence and degradability:	Bioconcentration potential is low.
Bioaccumulative potential:	Not available.
Mobility in soil:	Not available.
Results of PBT&vPvB assessment:	Not available.
Other adverse effects:	Not available.

Section 13 Disposal considerations

13.1 Waste treatment methods:	The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.
13.2 Product / Packaging disposal:	The user must be aware that the waste category of this product may be affected by the conditions of use. Please refer to Directive 2001/118/EC for waste nomenclature.

Section 14 Transport information

	Land transport(ADR/RID)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN-Number	Not regulated	Not regulated	Not regulated
UN Proper shipping name	Not regulated	Not regulated	Not regulated
Transport hazard Class	Not regulated	Not regulated	Not regulated
Packaging group	Not regulated	Not regulated	Not regulated
Environmental hazards	No	No	No
Special precautions for user	See section 2.2	See section 2.2	See section 2.2
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not regulated	Not regulated	Not regulated

Section 15 Regulation information

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

Relevant information regarding authorization: Not applicable.

Relevant information regarding restriction: Not applicable.

Other EU regulations: Employment restrictions concerning young person must be observed. For use only by technically qualified individuals.

Other National regulations: Not applicable

Chemical Safety Assessment has been carried out? YES NO

Section 16 Other information

16.1 Indication of changes:

Version 1.0 Amended by EU No 453/2010

16.2 Relevant R- phrases (number and full text):

R41 Risk of serious damage to eyes.

16.3 Training instructions:

Not applicable.

16.4 Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

16.5 Notice to reader:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgment of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

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