



SAFETY DATA SHEET

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Revised edition no : 2

Date : 13 / 5 / 2012

Supersedes : 23 / 2 / 2012

Gulf Super Brake Fluid DOT 4

PRODUCT CODE
6404

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

1.1. Product identifier:

• **Product name** : Gulf Super Brake Fluid DOT 4

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

- **Relevant identified uses** : Hydraulic fluid for brake- and clutch systems in cars.
- **Uses advised against** : This oil should not be used for any other purpose than the intended use without expert advice.

1.3. Details of the supplier of the Safety Data Sheet:

• **Supplier** : Gulf Oil Nederland B.V.
Ambachtsweg 31 -
1785 AJ - Den Helder - Nederland
Tel: +31 (0)223 634567
E-mail: technicalsupport@gulf.nl
Internet: www.gulf.nl

1.4. Emergency telephone number:

• **Phone number(s)** : +31 (0)223 634567

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture:

• **Classification according to Directive 1999/45/EC** : Classified as dangerous under EC criteria.
Xi; R41

2.2. Label elements:

• **Hazard symbols**



- **Indications of danger** : Xi: Irritant.
- **Risk phrases** : R41 : Risk of serious damage to eyes.
- **Safety advices** : S2 : Keep out of the reach of children. - S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. - S39 : Wear eye/face protection. - S46 : If swallowed seek medical advice immediately and show this container or label. Do not empty into drains ; dispose of this material and its container in a safe way.
- 2.3. Other hazards** : Flammable liquid. Injection under the skin can occur when using high pressure equipment. Overexposure to oil mist may cause respiratory irritations. Spills of this product present a serious slipping hazard.

SECTION 3: Composition/information on ingredients

3.2. Mixtures:

- **Description of the mixture** : Mixture of methyl-glycol ether borates and additives.
This product is considered to be hazardous and contains hazardous components.
- **Composition of the mixture:**

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SECTION 3: Composition/information on ingredients (continued)

Substance name	Contents	CAS No	EC No	Annex No	Ref REACH	Classification
2-[2-(2-butoxyethoxy)ethoxy] ethanol	: 30 - 60 %	143-22-6	205-592-6	603-183-00-0	----	Xi; R41
2,2'-oxydiethanol	: 10 - 30 %	111-46-6	203-872-2	603-140-00-6	----	Xn; R22
2-(2-butoxyethoxy)ethanol	: 1 - 5 %	112-34-5	203-961-6	603-096-00-8	----	Xi; R36
Triethylene glycol	: 1 - 5 %	112-27-6	203-953-2	-----	----	Not classified. (DSD/DPD)
Ethanol, 2-butoxy-, manufacture of, by-products from	: 1 - 5 %	161907-77-3	310-287-7	-----	----	Xi; R41
1,1'-iminodipropen-2-ol	: 1 - 5 %	110-97-4	203-820-9	603-083-00-7	----	Xi; R36
2,4-dimethyl-6-tert-butyl phenol	: 0,01 - 0,1 %	1879-09-0	217-533-1	-----	----	T+; R27 Xn; R22 Xi; R36/38 N; R50-53

For full text of all R-phrases: see SECTION 16.

SECTION 4: First aid measures

General advice : In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible).

4.1. Description of first aid measures:

- **After inhalation** : Assure fresh air breathing. If you feel unwell, seek medical advice.
- **After contact with skin** : Remove contaminated clothing and shoes. Wash skin thoroughly with mild soap and water. Never use kerosine or gasoline for cleaning the skin.
- **After contact with the eyes** : Immediately call a POISON CENTER or doctor/physician. Rinse immediately with plenty of water.
- **After ingestion** : Do not induce vomiting. Seek medical attention immediately.

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

- **After exposure** : No acute or delayed symptoms or effects are anticipated if first aid treatment is applied and is effective.

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

- **After exposure** : If injected under the skin when using high pressure equipment, send casualty immediately to a hospital, even when there are few or no symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media:

- **Suitable extinguishing media** : Water fog. Carbon dioxide. Foam. Dry chemical product.
- **Unsuitable extinguishing media** : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture:

- **In the event of a fire** : Under fire conditions, hazardous fumes will be present.

5.3. Advice for firefighters:

- **Protective actions** : Avoid fire-fighting water to enter environment.
- **Special protective equipment for fire-fighters** : Wear self-contained breathing apparatus, rubber boots and thick rubber gloves. Do not enter fire area without proper protective equipment, including respiratory protection.

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SECTION 5: Firefighting measures (continued)

- Surrounding fires : Use water spray or fog for cooling exposed containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures:

- For non-emergency personnel : Evacuate unnecessary personnel.
- For emergency responders : Equip cleanup crew with proper protection. Wear suitable protective clothing, gloves and eye or face protection. Eliminate every possible source of ignition.

6.2. Environmental precautions:

- In case of accidental spills : Avoid release to the environment. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up:

- Appropriate containment techniques : Clean up any spills as soon as possible, using an absorbent material to collect it.
- Appropriate clean-up procedures : Clean up even minor leaks or spills and spread granular absorbent promptly. Collect spills and put it into appropriated container.

- 6.4. Reference to other sections : See also sections 8 & 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling:

- Measures to prevent fire, aerosol and dust generation : Keep away from sources of ignition. No naked lights. No smoking. Proper grounding procedures to avoid static electricity should be followed.
- Measures to protect the environment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
- Advice on general occupational hygiene : When using, do not eat, drink or smoke. Wash hands and other exposed areas with soap and water before leaving work.

7.2. Conditions for safe storage, including any incompatibilities:

- Technical protective measures : Local exhaust and general ventilation must be adequate to meet exposure standards.
- Conditions of storage : Store locked up
Store this product in a dry location where it can be protected from the elements. Do not store near oxidizing agents or acidic material. Store at temperatures not exceeding .
- Specific designs for storage rooms or vessels : Store in tightly closed, properly ventilated containers away from heat, sparks, open flame, strong oxidizers, radiations, and other initiators.

7.3. Specific end use(s):

- Recommendations : See Product Data Sheet for detailed information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters:

- Occupational exposure limit values : United Kingdom: Occupational Exposure Standard (OES) of 5 mg/m³, 8-hour time-weighted average reference period for oil mist.
The American Conference of Governmental Industrial Hygienists (ACGIH) has

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SECTION 8: Exposure controls/personal protection (continued)

assigned mineral oil mist a threshold limit value (TLV) of 5 mg/m³ as a Time Weighted Average (TWA) for a normal 8-hour workday and a 40-hour workweek and a short-term exposure limit (STEL) of 10 mg/m³ for periods not to exceed 15 minutes. Exposures at the STEL concentration should not be repeated more than four times a day and should be separated by intervals of at least 60 minutes. [ACGIH 1994, p. 28]

- **Biological limit values** : No data available.

8.2. Exposure controls:

8.2.1 Appropriate engineering controls:

- **Technical measures to prevent exposure** : Use adequate ventilation to keep oil mist below applicable standard.

8.2.2 Individual protection measures, such as personal protective equipment:

- **Eye / face protection** : Chemical goggles or safety glasses. (EN 166)
- **Skin protection** : Wear suitable protective clothing. (EN 465, EN 466 or EN 467).
- **Hand protection** : Wear suitable gloves resistant to chemical penetration. (EN 374)
- **Respiratory protection** : The use of Filtertype A (EN 141) is recommended If exceeding the Occupational Exposure Limit.
- **Other** : Protective helmet. Do not wear leather soled shoes.

8.2.3 Environmental exposure controls:

- **Measures to prevent exposure** : Avoid release to the environment.

8.2. Exposure controls

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties:

- **Appearance:**
- **Physical state** : Oily liquid.
- **Colour** : Amber.
- **Odour** : Negligible.
- **pH value** : 8.0
- **Initial boiling point and boiling range** : 205 °C
- **Flash point (ASTM-D92)** : 95 °C
- **Vapour pressure** : <2 mbar @ 20 °C
- **Solubility(ies)** : Miscible with water.
- **Partition coefficient: n-octanol/water** : <2.0
- **Auto-ignition temperature** : >300 °C
- **Viscosity @ 40 °C (ASTM-D445)** : 5-10 mm²/s (cSt)
- **Viscosity @ 100 °C (ASTM-D445)** : 2.1 mm²/s (cSt)
- **Viscosity @ -40 °C** : 1400 mm²/s (cSt)

9.2. Other information:

- **Density @ 20 °C** : 1040 kg/m³
- **Pour point (ASTM-D97)** : <-51 °C

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SECTION 10: Stability and reactivity

- 10.1 Reactivity : No data available.
- 10.2 Chemical stability : Stable under normal conditions.
- 10.3 Possibility of hazardous reactions : None under normal conditions.
- 10.4 Conditions to avoid : Extremely high or low temperatures.
- 10.5 Incompatible materials : Strong oxidizing agents.
- 10.6 Hazardous decomposition products : None under normal conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects:

- Acute toxicity : No specific toxicity data on this product available.
- Irritation : Not expected to be irritant. Prolonged or repeated skin contact with the material will remove natural oils and could lead to a dermatitis.
- Corrosivity : No adverse health effects were noted.
- Sensitisation : No sensitization effects known.
- Repeated dose toxicity : Not applicable.
- Carcinogenicity : This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.
- Mutagenicity : Not expected to be mutagenetic.
- Toxicity for reproduction : Not expected to be toxic.

11.2. Information on likely routes of exposure:

- After ingestion : Ingestion may cause nausea, vomiting and diarrhoea.
- After inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
- After skincontact : Prolonged or repeated skin contact with the material will remove natural oils and could lead to a dermatitis.
- After eyecontact : Slight eye irritant upon direct contact.

11.3. Symptoms related to the physical, chemical and toxicological characteristics:

- General : No adverse symptoms/effects were noted.

11.4. Delayed and immediate effects as well as chronic effects from short and long-term exposure:

- General : No acute or delayed symptoms or effects are anticipated if first aid treatment is applied and is effective.

11.5. Other toxicological information : No data available.

SECTION 12: Ecological information

12.1. Toxicity:

- Ecotoxicity : No specific ecotoxicity data on this product available.
- Acute toxicity : No specific toxicity data on this product available.
- Chronic toxicity : No specific toxicity data on this product available.

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SECTION 12: Ecological information (continued)

12.2. Persistence and degradability:

- **Biodegradation** : Biodegradable.

12.3. Bioaccumulative potential:

- **Partition coefficient: n-octanol/water** : <2.0
- **Bioconcentration factor (BCF)** : Not determined.
- **Bioaccumulation** : Not determined.

12.4. Mobility in soil:

- **Mobility** : It is to be expected small mobility in soil. Some or a few components may get into the soil and may cause pollution of ground water.

12.5. Results of PBT and vPvB assessment : Not applicable.

12.6 Other adverse effects : Spills may contaminate water supplies / pollute public waters.

SECTION 13: Disposal considerations

13.1. Waste treatment methods:

- **Waste disposal** : Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. Recover waste liquids for recycling/re-use. See Directive 2001/118/EC.
- **Waste Code European Waste List** : 16 01 13: brake fluids
15 01 10 - packaging containing residues of or contaminated by dangerous substances.

SECTION 14: Transport information

Not regulated.

SECTION 15: Regulatory information

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

15.1.1 National regulations:

- **Germany** : Water Hazard Class: 1 - slightly hazardous to water
- **Netherlands** : Water pollution effect indication {11}: Slightly harmful to aquatic organisms.
Abatement effort: B

15.1.2 International Regulations:

- **Europe** : All components listed in the European Inventory of Existing Commercial Chemical Substances(EINECS)

15.2. Chemical safety assessment : Not applicable.

SECTION 16: Other information

- **Indication of changes** : Revision according to Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006.

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SECTION 16: Other information (continued)

- **Abbreviations and acronyms**
 - : ACGIH = American Conference of Industrial Hygienists
 - CLP = Classification and Labelling of Substances and Preparations
 - DOT = Department of Transport
 - EC = European Commission. EN = European Norm
 - IARC = International Agency for Research on Cancer
 - IP = Institute of Petroleum. ISO = International Organization for Standardization
 - NLGI = National Lubricating Grease Institute
 - PCA = Polycyclic Aromatics
 - SAE = Society of Automotive Engineers
 - TLV = Threshold Limit Value. TWA = Time Weighted Average
 - VG = Viscosity Grade
- **Key literature references and sources for data**
 - : Concawe Report 01/53, Concawe Report 01/54, Concawe Report 05/87.
 - Regulations (EC) No 1907/2006, 1272/2008 & 453/2010 of the European Parliament and of the Council.
- **List of relevant R-phrases**
 - : R22 : Harmful if swallowed.
 - R27 : Very toxic in contact with skin.
 - R36 : Irritating to eyes.
 - R36/38 : Irritating to eyes and skin.
 - R41 : Risk of serious damage to eyes.
 - R50/53 : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Training advice**
 - : See information supplied by the manufacturer.
- **Further information**
 - : Specifications and technical informations on the product may be obtained by your dealer.

The contents and format of this SDS are in accordance with COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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