



SAFETY DATA SHEET

HBF DOT 4

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

1.1. Product identifier

Product name HBF DOT 4

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

Identified uses Hydraulic Brake Fluid Please look at the Technical Data Sheet of the product for further information.

1.3. Details of the supplier of the safety data sheet

Supplier OPET FUCHS MADENİ YAĞ SAN. ve TİC. A.Ş.
Atatürk Organize Sanayi Bölgesi 10006 Sok.
No:12 35620 Çiğli/İZMİR
Tel: +90 232 376 78 38
Fax: +90 232 376 78 39

1.4. Emergency telephone number

Emergency telephone UZEM (National Poison Consultancy Center): 114
Emergency Health Service:112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Not Classified

Human health No specific hazards under normal use conditions. USED OILS are more dangerous than new oils. Used oils may contain hazardous components which have the potential to cause skin cancer. May cause sensitisation or allergic reactions in sensitive individuals.

Environmental The product is not expected to be hazardous to the environment.

Physicochemical The product is not classified as flammable, but at a temperature above the flash point is flammable when exposed to flame sources.

2.2. Label elements

Hazard statements NC Not Classified

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

HBF DOT 4

Ethanol, 2-butoxy-, manufacture of, by-products from	10-20%
CAS number: 161907-77-3	EC number: 310-287-7
Classification	
Eye Dam. 1 - H318	
Dietilen glikol	5-10%
CAS number: 111-46-6	EC number: 203-872-2
Classification	
Acute Tox. 4 - H302 STOT RE 2 - H373	
1,1'-IMINODIPROPAN -2-OL	1-5%
CAS number: 110-97-4	EC number: 203-820-9
Classification	
Eye Irrit. 2 - H319	

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Change clothes and shoes contaminated or soaked by product. Never put rags contaminated by product into cloth-pockets. Get medical attention if any discomfort continues. Not expected to give rise to an acute hazard under normal conditions of use.
Inhalation	Remove affected person from source of contamination and immediately take outside to fresh air. Consult a doctor if any discomfort continues.
Ingestion	IF SWALLOWED: Rinse mouth thoroughly with water. Get medical attention immediately. Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Show this Safety Data Sheet to the medical personnel.
Skin contact	Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. Continue to rinse for at least 15 minutes. Brush off loose particles from skin. If adhesive bonding occurs, do not force skin apart. Get medical attention.
Eye contact	Do not rub eye. Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist after washing.
Protection of first aiders	Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves.

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

Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin contact	No specific symptoms known.
Eye contact	No specific symptoms known.

HBF DOT 4

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

Notes for the doctor	Symptomatic treatment should be applied. In case of excessive inhalation of the product vapor may lead to lung inflammation (chemical pneumonitis). Dermatitis may result from prolonged or repeated exposure.
Specific treatments	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use Film-Making Foam Concentrate (A.F.F.F.) to extinguish the burning product. If not available, extinguish with dry chemical powder due to the size of fire. If the product is in pressurized container, cool with water spray jet.
Unsuitable extinguishing media	During a fire, DO NOT extinguish by applying pressurized water and water jet directly on the burning product. Use water fog to cool down.

5.2. Special hazards arising from the substance or mixture

Specific hazards	In case of fire, toxic and corrosive gases may be formed. These gases: Carbondioxide,carbon monoxide,sulphur oxides,phosphorus oxides,metal oxides This product is not explosive.
-------------------------	---

5.3. Advice for firefighters

Protective actions during firefighting	In case of fire, shut off flow if it can be done without risk. Stop leak if safe to do so. Move undamaged containers from fire area if it can be done without risk. Prevent the burning product from entering into drainage system to avoid release of the product. To prevent spreading of the product build-up binders or barriers by using non-burning material such as sand. Use air-supplied respirators to protect against gases/fumes in case of fire-fighting.
Special protective equipment for firefighters	Fire-fighting should be done by trained personnel. Special protective full-clothing, air-supplied respirator, gloves and protective goggles should be worn. Dry chemical sand used for fire extinguishing and other fire extinguishing equipment should meet the national and international standards.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	In case of spills, beware of slippery floors and surfaces. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. For personal protection, see Section 8. Do not smoke,use open fire or other sources of ignition. Wear protective gloves and (in case of splashes) goggles/face shield too.
-----------------------------	---

6.2. Environmental precautions

Environmental precautions	Avoid release to the environment. Avoid discharge into drains,water courses or onto the ground. To prevent release,place container with damaged side up. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to local appropriate regulatory body. Empty container contains product residue which may exhibit hazards of product.
----------------------------------	--

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Large Spillages: Stop leak if possible without risk. DO NOT touch spilled material! Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Avoid the spillage or runoff entering drains, sewers or watercourses. Inform authorities if large amounts are involved. Small Spillages: Stop leak if possible without risk. Dam and absorb spillage with sand,sawdust or other absorbent. Absorb in vermiculite, dry sand or earth and place into containers. Dispose of via an authorised person/licensed waste disposal contractor in accordance with local regulations.
--------------------------------	--

6.4. Reference to other sections

HBF DOT 4

Reference to other sections For handling and storage, see section 7. For personal protection, see Section 8. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Provide adequate ventilation. Container must be kept tightly closed when not in use. Protect against direct sunlight. Avoid spilling, skin and eye contact. Avoid eating, drinking and smoking when using the product.

Advice on general occupational hygiene Use appropriate skin cream to prevent drying of skin.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Protect from freezing and direct sunlight. Store at room temperature.

Storage class Not special storage precautions required.

7.3. Specific end use(s)

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Avoid inhalation of vapours. In case of insufficient ventilation, wear suitable respiratory equipment. Observe any occupational exposure limits for the product or ingredients.

Personal protection

In case of splashing or scattering, wear protective oil-resistant or chemical-resistant clothing.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. Use thin cotton gloves inside the rubber gloves if allergy risk. The selection of suitable gloves does not only depend on the material, but also on further marks of quality varies from manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Other skin and body protection

Use skin protection cream for preventive skin protection. Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station. Do not smoke in work area. Wash hands after contact. Promptly remove non-impervious clothing that becomes contaminated. Contaminated clothing should be placed in a closed container for disposal or decontamination. Remove contaminated clothing and wash the skin thoroughly with soap and water after work. When using do not eat, drink or smoke.

HBF DOT 4

Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: High-efficiency particulate filter.
Thermal hazards	Contact with hot product can cause serious thermal burns. If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures.
Environmental exposure controls	STEL: 10mg/m ³ 15 minutes. Form: Oil mist, mineral TWA: 5mg/m ³ 8 hours. Form: Oil mist, mineral Short-Term Exposure Limit (STEL). The National Institute for Occupational Safety and Health (NIOSH,1992). Time-Weighted Average (TWA). Occupational Safety and Health Administration (OSHA, 29 CFR 1910.1000,Table Z-1).

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Clear, liquid
Colour	Yellow.
Odour	Characteristic.
pH	pH (concentrated solution): 8,5
Melting point	-70°C Solidification point (DIN 51583)
Initial boiling point and range	260°C @ 1,033 mbar
Flash point	139°C ASTM D 7094 (kapalı kap)
Evaporation rate	Not determined.
Upper/lower flammability or explosive limits	: 1,5 Vol
Vapour pressure	< 1 mbar @ 20°C
Relative density	1,06 @ 20°C
Solubility(ies)	Completely soluble in water.
Auto-ignition temperature	> 200°C
Decomposition Temperature	360°C
Viscosity	15-17 mm ² /s @ 20°C

9.2. Other information

Other information	No information required.
--------------------------	--------------------------

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No test data specifically related to reactivity available for this product or its ingredients.
-------------------	--

10.2. Chemical stability

Stability	Stable at normal ambient temperatures.
------------------	--

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Under normal conditions of storage and use, no hazardous reactions will occur.
---	--

10.4. Conditions to avoid

HBF DOT 4

Conditions to avoid None known.

10.5. Incompatible materials

Materials to avoid Not known.

10.6. Hazardous decomposition products

Hazardous decomposition products Under normal conditions of storage and use, hazardous decomposition products are not expected.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 5,050.51

Acute toxicity - dermal

Notes (dermal LD₅₀) Not determined.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not determined.

Skin corrosion/irritation

Skin corrosion/irritation No specific test data are available.

Serious eye damage/irritation

Serious eye damage/irritation No specific test data are available.

Respiratory sensitisation

Respiratory sensitisation Not determined.

Skin sensitisation

Skin sensitisation Not determined.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Genotoxicity - in vivo No information available.

Carcinogenicity

Carcinogenicity No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development bilgi bulunmamaktadır

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard Not relevant.

General information

Information given is based on a knowledge of the components and the toxicology of similar products.

HBF DOT 4

Inhalation	Not expected to cause irritation. Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
Ingestion	May cause discomfort if swallowed. The main symptoms are gastrointestinal ailments, including upset stomach.
Skin contact	Skin irritation should not occur when used as recommended. Repeated exposure may cause skin dryness or cracking. May cause sensitisation or allergic reactions in sensitive individuals.
Eye contact	Not expected to cause eye irritation. Vapors formed from heating may cause eye irritation.
Acute and chronic health hazards	USED OILS are more dangerous than new oils. Used oils may contain hazardous components which have the potential to cause skin cancer.

SECTION 12: Ecological Information

12.1. Toxicity

Acute toxicity - fish	, hour: 250-350 mg/l, <i>Leuciscus idus</i> (Golden orfe)
Acute toxicity - microorganisms	EC50 6,25 mg/l Kaynak: Analogy

12.2. Persistence and degradability

Persistence and degradability	90 % (15 d) Readily biodegradable. Method: Static test Source: Analogy
--------------------------------------	---

12.3. Bioaccumulative potential

Bioaccumulative potential	Not determined.
----------------------------------	-----------------

12.4. Mobility in soil

Mobility	The product is soluble in water.
-----------------	----------------------------------

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	No data available.
---	--------------------

12.6. Other adverse effects

Other adverse effects	Do not allow to enter groundwater, waterways or waste water.
------------------------------	--

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Empty packages and wastes produced after the usage of the product should be taken under control according to the current environmental regulations. Unless otherwise noted all wastes should be evaluated as hazardous waste.
Disposal methods	Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.
Waste class	European Waste Catalogue: 13 01 13* Other hydraulic oils

SECTION 14: Transport information

General	The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).
----------------	--

HBF DOT 4

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

EU legislation 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 (as amended).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information	All ingredients are listed in the European Inventories. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. This data sheet is a safety data sheet according to 91/155/EU. For products which are not subject to classification according to EU lists this data sheet is made on a voluntary base.
Key literature references and sources for data	December 13, 2014, No. 29204, "the Ministry of Environment and the Ministry of Urban Development Related to Safety Data Sheets on Hazardous Substances and Mixtures Direction"
Revision comments	It has been revised according to the 1272/2008 CLP regulation. Referans dokuman Form No.: 000000181578 _revizyon tarihi 20.05.2015
Issued by	EBRU SEN R&D Engineer Certificated by NBC for MSDS (Certificate No: 01.42.06) Opet Fuchs Madeni Yağ San. Tic. A.Ş. AOSB Mustafa Kemal Bulvarı No:12 35620 Çiğli/İZMİR E-mail: ebru.sen@opetfuchs.com.tr
Revision date	22/08/2017

HBF DOT 4

Revision	5
Supersedes date	21/12/2010
SDS number	OPET.GBF.1101
Hazard statements in full	H302 Harmful if swallowed. H318 Causes serious eye damage. H319 Causes serious eye irritation. H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information contained in this data sheet. OPET FUCHS MADENI YAG SAN. VE TIC. A.Ş. shall not be responsible for any injury or damage resulting from the abnormal use of the product, recipient assumes all such risks.