



**MATERIAL SAFETY DATA SHEET**  
according to Regulation (EC) No. 1907/2006

Product name :

HBF 3  
Issue : 01Version of : 2012-02-13  
Revision date : None**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1. Product identifier**

Product name : HBF 3  
Number  
Hazchem No.: -  
Pure substance / mixture : Mixture

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

Identified uses Brake fluid

**1.3. Details of the supplier of the safety data sheet**

Supplier : TOTAL OIL INDIA PVT. LTD., Lubricants Division  
The Leela Galleria, 3rd Floor  
Andheri Kurla Road  
Andheri East, Mumbai 400 059  
India

For further information, please contact

Contact Point HSE  
E-mail Address  
Emergency telephones : + 91 022 66407700  
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**2. HAZARDS IDENTIFICATION****2.1. Classification of the substance or mixture****REGULATION (EC) No 1272/2008**

For the full text of the H-Statements mentioned in this Section, see Section 2.2.

**Classification****DIRECTIVE 67/548/EEC or 1999/45/EC**

For the full text of the R-phrases mentioned in this Section, see Section 16

The substance/mixture is classified as dangerous in accordance with Directive(s) 67/548/EEC with amendments and/or 1999/45/EC with amendments

**Symbol(s)**

Xi - Irritant

**Classification**

Xi - Irritant

**2.2. Label elements**

Labelled according to:

Directive 1999/45/EC



Xi - Irritant

**R-phrases(s)**

R36 - Irritating to eyes

**S-phrases(s)**

S-phrases(s)

S 2 - Keep out of the reach of children

S25 - Avoid contact with eyes

S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S46 - If swallowed, seek medical advice immediately and show this

**2.3. Other hazards****Physical-Chemical Properties**

Contaminated surfaces will be extremely slippery

**Environmental properties**

Should not be released into the environment

**Properties Affecting Health**

May produce an allergic reaction.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	EC No.	REACH registration no.	CAS-No	Weight %	Classification (Dir. 67/548)	Classification (Dir. 67/548)	Classification (Reg. 1272/2008)
Triethylene glycol, monobutyl ether	205-592-6	no data available	143-22-6	<45		Xi; R41	Eye Dam. 1 (H318)
Diethylene-glycol	203-872-2	no data available	111-46-6	<25		Xn; R22	Acute Tox. 4 (H302)
Poly(oxy-1,2-ethanediyl), abutyl-w-hydroxy		no data available	9004-77-7	<20		Xi;R36	



regulations (see section 13). Keep in suitable, closed containers for disposal.

**6.4. Reference to other sections**

Personal Protective Equipment See Section 8 for more detail  
Waste treatment See section 13

**7. HANDLING AND STORAGE**

**7.1. Precautions for safe handling**

**Advice on safe handling**

When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

**Prevention of fire and explosion**

Take precautionary measures against static discharges. Ground/bond containers, tanks and transfer/receiving equipment.

**Hygiene measures**

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.

**7.2. Conditions for safe storage, including any incompatibilities**

**Technical measures/Storage conditions**

Keep away from food, drink and animal feeding stuffs. Keep in a bunded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Protect from frost, heat and sunlight. Protect from moisture.

**Materials to Avoid**

Strong oxidizing agents

**Packaging material**

Stainless steel, Mild steel.

**7.3. Specific end uses**

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

- Occupational exposure limit

oil mist : 10 mg/m3, for 15 mins  
oil mist : 5 mg/m3, for 8 hrs

Chemical Name	European Union
Diethylene glycol monobutyl ether 112-34-5	TWA 10 ppm TWA 67.5 mg/m3 STEL 15 ppm STEL 101.2 mg/m3
Diethylene glycol monomethyl ether 111-77-3	TWA 10 ppm TWA 50.1 mg/m3 S*
Bisphenol A 80-05-7	TWA 10 mg/m3

Legend

See section 16

**8.2. Exposure controls**

Occupational Exposure Controls  
Engineering measures :

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment. Ensure that eyewash stations and safety showers are close to the workstation location

Personal protective equipment  
General Information

If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers, These recommendations apply to the product as supplied

Respiratory protection

When using a mask or half mask :: Respirator with combination filter for vapour/particulate (EN 141). The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses. .

Eye Protection

Safety glasses with side-shields

Skin and body protection

Long sleeved clothing, Impervious gloves, Protective shoes or boots

Hand Protection

Neoprene gloves, Polyvinylchloride, Nitrile rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves



Industrial hygiene

Avoid prolonged and repeated contact with the skin, especially with used or waste product

Immediately remove all soiled or stained clothing.

If the product comes in contact with the skin, wash the affected area immediately and repeatedly with soap and water

Use no abrasives, solvents or petroleum spirit

Do not use clothes stained with the product to dry hands

Don't put the product-soaked rags in the pockets of working clothes

Do not eat, drink, or smoke while handling the product

**Environmental exposure controls**

General Information

Do not allow material to contaminate ground water system.

**9. PHYSICAL AND CHEMICAL PROPERTIES****9.1. Information on basic physical and chemical properties**

Appearance limpid  
 Color colorless To yellow  
 Physical State @20°C Liquid  
 Odor Sweet

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		Not applicable	
Boiling point/boiling range	>= 205 °C >= 401 °F	Not applicable	ERP ERP
Flash point	>= 110 °C >= 230 °F		PMCC PMCC
Evaporation rate		No information available	
Flammability Limits in Air		No information available	
Vapor Pressure @ 20° C		No information available	
Vapor density			
Density	1040 kg/m3		
Water solubility			soluble
Solubility in other solvents			No information available
logPow			No information available
Auto ignition temperature	> 300 °C > 572 °F	No information available	
Viscosity, kinematic	14 mm2/s 1.5 mm2/s	@ 20 °C  @ 100 °C	
<b>Explosive properties</b>		Not explosive	
<b>Oxidizing Properties</b>		Not applicable	
<b>Possibility of hazardous reactions</b>		Not applicable	

**9.2. Other information****10. STABILITY AND REACTIVITY****10.1. Reactivity****10.2. Chemical stability**

Stability Stable under recommended storage conditions. Hygroscopic.

**10.3. Possibility of hazardous reactions**

Hazardous Reactions None under normal processing

**10.4. Conditions to Avoid**

Conditions to Avoid Heat (temperatures above flash point), sparks, ignition points, flames, static electricity

**10.5. Incompatible Materials**

Materials to Avoid Mineral oil, Water, Strong oxidizing agents

**10.6. Hazardous Decomposition Products**

Hazardous Decomposition Products Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

**11. TOXICOLOGICAL INFORMATION****11.1. Information on toxicological effects****Acute toxicity Local effects, Product Information**

Skin contact Not classified. Absorption through the skin may occur after prolonged or repeated exposure.

Eye contact Irritating to eyes. Based on data of tests done on this product or other similar ones.

Inhalation Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.

Ingestion Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion of high doses may cause systemic effects.

**Acute toxicity Component Information**

Chemical Name	LD 50 ORAL	LD 50 DERMAL	LC 50 INHALATION
Triethylene glycol, monobutyl ether	= 5300 mg/kg ( Rat )	= 3480 mg/kg ( Rabbit )	
Diethylene-glycol	= 12565 mg/kg (Rat)	= 11890 mg/kg ( Rabbit )	

Diethylene glycol monobutyl ether	= 3384 mg/kg (Rat)	= 2700 mg/kg (Rabbit)	
Diethylene glycol monomethyl ether	= 4 mL/kg (Rat)	= 2500 µL/kg (Rabbit)	
Bisphenol A	= 3200 mg/kg (Rat)	= 3000 mg/kg (Rabbit)	
Diethylene glycol dimethyl ether	= 4760 mg/kg (Rat)		

**Sensitization**

Sensitization Not classified as a sensitizer

**Specific effects**

**Carcinogenicity**

This product is not classified carcinogenic.

**Mutagenicity**

None known

**Reproductive toxicity**

This product does not contain any known or suspected reproductive hazards.

**Developmental Toxicity**

None known.

**Repeated Dose Toxicity**

Sub chronic toxicity

No information available.

**Target Organ Effects (STOT)**

Target Organ Effects (STOT)

No information available

**Other information**

Other adverse effects

Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).

**12. ECOLOGICAL INFORMATION**

**12.1. Toxicity**

Not classified.

**Acute aquatic toxicity Product Information**

No information available

**Acute aquatic toxicity Component Information**

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Triethylene glycol, monobutyl ether 143-22-6	EC50 (72h) > 500 mg/L Desmodesmus subspicatus	EC50 (48h) > 500 mg/L Daphnia magna	LC50 (96h) 2200-4600 mg/L Leuciscus idus (static) LC50 (96h) = 2400 mg/L Pimephales promelas () LC50 (96h) =	
Diethylene-glycol 111-46-6		EC50 (48h) = 84000 mg/L Daphnia magna	LC50 (96h) = 75200 mg/L Pimephales promelas (flow through)	
Diethylene glycol monobutyl ether 112-34-5	EC50 (96h) > 100 mg/L Desmodesmus subspicatus	EC50 (48h) > 100 mg/L Daphnia magna EC50 (24h) = 2850 mg/L Daphnia magna	LC50 (96h) = 1300 mg/L Lepomis macrochirus (static)	
Diethylene glycol monomethyl ether 111-77-3	EC50 (72h) > 500 mg/L Desmodesmus subspicatus	EC50 (48h) > 500 mg/L Daphnia magna	LC50 (96h) = 7500 mg/L Lepomis macrochirus (static) LC50 (96h) = 7500 mg/L Lepomis macrochirus () LC50 (96h) =	EC50 > 10000 mg/L 17 h

Bisphenol A 80-05-7	EC50 (96h) = 2.5 mg/L Pseudokirchner iella subcapitata	EC50 (48h) = 10.2 mg/L Daphnia magna EC50 (48h) = 3.9 mg/L Daphnia magna EC50 (48h) 9.2 11.4 mg/L Daphnia magna Static	LC50 (96h) = 4 mg/L Oncorhynchus mykiss () LC50 (96h) = 9.9 mg/L Brachydanio rerio (static) LC50 (96h) 3.6-5.4 mg/L Pimephales promelas (flow)	
Diethylene glycol dimethyl ether 111-96-6		EC50 (96h) = 5868 mg/L Daphnia magna		

**Chronic aquatic toxicity Product Information**

No information available.

**Chronic aquatic toxicity Component Information**

No information available.

**Effects on terrestrial organisms**

No information available.

**12.2. Persistence and degradability**

Persistence and degradability

Experimental data on the finished product are not available

However, the "mineral oil" portion of the virgin product is intrinsically biodegradable. Particular ingredients may not be biodegradable.

**12.3. Bio accumulative potential (Please check table info)**

**Product Information**

No information available

logPow

**Component Information**

Chemical Name	log pow
Triethylene glycol, monobutyl ether - 143-22-6	0.51
Diethylene-glycol - 111-46-6	0
Diethylene glycol monomethyl ether - 111-77-3	0
Bisphenol A - 80-05-7	2.2
Diethylene glycol dimethyl ether - 111-96-6	0

**12.4. Mobility in soil**

Mobility :

Soil

This chemical is known to leach through soil into ground water under certain conditions.

- Water :

Soluble

**12.5. Results of PBT and vPvB assessment**

PBT and vPvB assessment

No information available

**12.6. Other adverse effects**

**13. DISPOSAL CONSIDERATIONS**

**13.1. Waste treatment methods**

Waste from Residues / Unused

Products :

Should not be released into the environment. Dispose of in accordance with the European Directives on waste and hazardous waste. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Contaminated packaging :

Empty containers should be taken to an approved waste handling site for recycling or disposal

EWC Waste Disposal No.

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific., Waste codes should be assigned by the user based on the application for which the product was used.

**14. TRANSPORT INFORMATION**

UN Number :

unregulated

Road(ADR)/Rail(RID)/River(ADNR)

Not restricted for transport

Marine (IMO-IMDG)

Not restricted for transport

Airline (ICAO / IATA)

Not restricted for transport

**15. REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

EINECS/ELINCS -

TSCA -

DSL -

ENCS -

IECSC -

KECL -

PICCS -

AICS -

NZIoC -

Legend

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

**15.2. Chemical Safety Assessment****EUROPEAN REGULATIONS**

- EC labelling

- R Phrase(s) None

- S Phrase(s) None

**16. OTHER INFORMATION**

Full text of R-phrases referred to under sections 2 and 3

R41 - Risk of serious damage to eyes

R36 - Irritating to eyes

R19 - May form explosive peroxides

R10 - Flammable

R43 - May cause sensitization by skin contact

R52 - Harmful to aquatic organisms

R61 - May cause harm to the unborn child

Full text of H-Statements referred to under section 2 and 3

H318 - Causes serious eye damage

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H361d - Suspected of damaging the unborn child

H360Df - May damage the unborn child. Suspected of damaging fertility

H317 - May cause an allergic skin reaction

H361f - Suspected of damaging fertility

H335 - May cause respiratory irritation

H226 - Flammable liquid and vapor

**Abbreviations, acronyms**

Legend Section 8

Legend Section 8

+ Sensitizer \* Skin designation

\*\* Hard designation C: Carcinogen

M: Mutagen R: Toxic reproduction

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

**End of the safety data sheet**