

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

---

#### 1.1 PRODUCT IDENTIFIER

PRODUCT TRADE NAME:

**TUTELA BRAKE FLUID EXTREME HT**

PRODUCT CODE: 1599

#### 1.2 RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE:

Synthetic brake fluid.

USES ADVISED AGAINST

This product should not be used for other purposes than those specified without the advice of an expert.

#### 1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

COMPANY IDENTIFICATION:

PETRONAS LUBRICANTS ITALY S.P.A.

Via Santena 1

10029 Villastellone (Torino) - ITALY

Tel: 0039 01196131

Fax: 0039 0119613313

COMPETENT PERSON RESPONSIBLE FOR SAFETY DATA OF PRODUCT:

Information on the legislation compliance

[info\\_regulation@it.petronas.com](mailto:info_regulation@it.petronas.com)

#### 1.4 EMERGENCY TELEPHONE NUMBER

0039 0382 24444

Pavia Poison Centre - IRCCS Maugeri Foundation, Italy (24/24 h, 7/7 d)

### 2. HAZARDS IDENTIFICATION

---

#### 2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Directives 67/548/EEC or 1999/45/EC:

This product is not considered hazardous for people or for environment according to EC directives (see headings 11 and 12, too).

Regulation (EC) No 1272/2008

The classification of the product has been determined in conformity of Directives 67/548/EEC and 99/45/EC and following adjustments.

#### 2.2 LABEL ELEMENTS

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



### INDICATIONS OF DANGER

Not applicable.

### CONTAINS:

### RISK PHRASES

Not applicable.

### SAFETY PHASES

Not applicable.

### OTHER INDICATIONS:

Contains inhibited mixture of polyglycols, polyglycolethers and boric esters.

Keep out of the reach of children. Avoid contact with skin and eyes. In case of contact with eyes rinse with plenty of water. If swallowed seek medical advice.

### 2.3 OTHER HAZARDS

Prolonged or repeated skin contact of product may scour, and that may cause irritations or dermatitis.

The product is biodegradable, but avoid accidental spills of large quantity of product.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 MIXTURES

Inhibited mixture of polyglycolethers and boric esters.

Directive 67/548/EEC:

HAZARDOUS COMPONENTS	EINECS	CAS	REG_NUM	QUANTITY	SYMBOL	R-PHRASES
Caprylamine, ethoxylated 2-4 OE	239-555-0	15520-05-5	-	<5%	Xn	22 - 38 - 41
Diethyleneglycol (603-140-00-6)	203-872-2	111-46-6	01-2119457857-21-XXXX	<5%	Xn	22 - 48/22

OTHER COMPONENTS	EINECS	CAS	REG_NUM	QUANTITY	SYMBOL	R-PHRASES
2- (2- (2-methoxyethoxy)ethoxy) ethanol	203-962-1	112-35-6	-	8-9%	-	-

Regulation (EC) No 1272/2008

HAZARDOUS COMPONENTS	EINECS	CAS	REG_NUM	QUANTITY	CLASS	H-PHRASES
Caprylamine,	239-555-0	15520-05-5		<5%	Acute	318 -

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



PETRONAS

ethoxylated 2- 4 OE					Tox.4 Skin Irrit.2 Eye Dam.1	315 - 302
Diethyleneglycol (603-140-00-6)	203-872-2	111-46-6	01- 2119457857 -21-XXXX	<5%	Acute Tox.4 STOT RE 2	302 - 373

OTHER COMPONENTS	EINECS	CAS	REG_NUM	QUANTITY	CLASS	H-PHRASES
2- (2- (2-methoxyethoxy)ethoxy) ethanol	203-962-1	112-35-6	-	8-9%	-	-

R-phrases, H-phrases and list of abbreviations: see heading 16.

### 4. FIRST AID MEASURES

#### 4.1 DESCRIPTION OF FIRST AID MEASURES

##### INGESTION:

Do not induce vomiting to avoid aspiration into the respiratory tracts. Wash out thoroughly the mouth with water. Obtain immediate medical attention.

##### EYE CONTACT:

Rinse immediately and thoroughly with plenty of water for at least 10 minutes keeping eyelids open. Obtain medical attention.

##### SKIN CONTACT:

Remove contaminated clothes and shoes and rinse thoroughly with plenty of water and soap.

##### INHALATION:

Expose affected person to fresh air and obtain medical attention.

#### 4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Refer to section 11.

#### 4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Refer to section 4.1.

### 5. FIREFIGHTING MEASURES

FLASH POINT: >130°C (ASTM D 92)

#### 5.1 EXTINGUISHING MEDIA

This product has no special fire risk. In case of fire use foam, carbon dioxide, dry chemical powder and water

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



mist.

Avoid high pressure water jet. Use water jet only to cool down surfaces exposed to fire.

### 5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Don't breathe combustion fumes: fire can form harmful compounds.

COMBUSTION PRODUCTS:

Oxides of carbon, compounds of nitrogen and products of incomplete combustion.

### 5.3 ADVICE FOR FIREFIGHTERS

Protective clothing complete with autobreathing feature.

## 6. ACCIDENTAL RELEASE MEASURES

---

### 6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Avoid contact with skin and eyes by wearing appropriate protective clothing.

### 6.2 ENVIRONMENTAL PRECAUTIONS

Prevent the material from entering soil, sewers and water courses. Contact the appropriate authorities if necessary.

### 6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

In case of large spills dike and pump into suitable containers for disposal. Contain small spills with absorbent material. Put dirty material in suitable container. Dispose of dirty material in accordance with local or national regulations.

### 6.4 REFERENCE TO OTHER SECTIONS

Refer to sections 8 and 13 for more information.

## 7. HANDLING AND STORAGE

---

### 7.1 PRECAUTIONS FOR SAFE HANDLING

Avoid frequent and prolonged skin contact and contact with eyes. Provide adequate ventilation to avoid mist or aerosol. Practice reasonable personal cleanliness.

Avoid the risk of sliding.

### 7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Avoid moisture pick up. Moisture has an adverse effect on the properties of brake fluids. Store under cover in the original container securely closed away from heat and sources of ignition. Keep out of reach of children and away from food and drink.

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



### 7.3 SPECIFIC END USE(S)

Refer to the uses listed in Section 1.2.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

---

### 8.1 CONTROL PARAMETERS

#### OCCUPATIONAL EXPOSURE LIMITS:

About monitoring procedures, refer to relevant national and European legislation.

The recommended exposure limits are:

CHEMICAL AGENT		LIMIT
Diethylene glycol	TWA (8h)	10 mg/m <sup>3</sup> (US. WEEL)

### 8.2 EXPOSURE CONTROLS

#### TECHNICAL PRECAUTIONS:

Avoid production and diffusion of mist and aerosol with utilization of localized ventilation/aspiration or other required precautions. If necessary, adopt all required precaution to avoid product immission in environment (e.g., blasting systems, catch basins, ...).

#### RESPIRATORY PROTECTION:

None required under normal conditions of use. Use approved full face respirator with gas and organic vapour filter cartridge if the recommended exposure limits are exceeded.

#### HAND AND SKIN PROTECTION:

Wear suitable gloves in organic substance-proof material (i.e. neoprene, nitrile). Gloves should be changed when they show wear. The kind of gloves and the term of use must be decided from employer with regard to processing and to allow for legislation on personal protection equipment and glove producer's indications. Wear gloves only with clean hands.

Wear suitable protective clothing (for further information, refer to CEN-EN 14605); change it immediately in case of large contamination and wash it before subsequent use.

Practice reasonable personal cleanliness.

#### EYE PROTECTION:

Chemical goggles and face shield in case of oil splashes.

#### ENVIRONMENTAL EXPOSURE CONTROLS:

Refer to technical precautions and also to sections 6.2, 6.3, 7.2, 12 and 13.

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



### 9. PHYSICAL AND CHEMICAL PROPERTIES

---

#### 9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

CHEMICAL AND PHYSICAL PROPERTIES	VALUE	METHOD
APPEARANCE	YELLOW LIQUID	
SPECIFIC GRAVITY @ 15°C (WATER = 1)	1.08	ASTM D 1298
WATER SOLUBILITY	SOLUBLE AND HYGROSCOPIC	
PH (AT 20°C)	7-8	
VISCOSITY @ 100°C	2.6 CST	ASTM D 445
AUTOIGNITION TEMPERATURE	>200°C	
BOILING POINT	>280°C	ASTM D 1120
FLASH POINT	>130°C	ASTM D 92
ODOUR	NOT DETERMINED	
ODOUR THRESHOLD	NOT DETERMINED	
MELTING POINT/FREEZING POINT	NOT DETERMINED	
EVAPORATION RATE	NOT DETERMINED	
FLAMMABILITY (SOLID, GAS)	NOT APPLICABLE	
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	NOT DETERMINED	
VAPOUR PRESSURE	NOT DETERMINED	
VAPOUR DENSITY	NOT DETERMINED	
PARTITION COEFFICIENT: N-OCTANOL/WATER	NOT DETERMINED	
DECOMPOSITION TEMPERATURE	NOT DETERMINED	
EXPLOSIVE PROPERTIES	NONE	
OXIDISING PROPERTIES	NOT DETERMINED	

#### 9.2 OTHER INFORMATION

None.

### 10. STABILITY AND REACTIVITY

---

#### 10.1 REACTIVITY

Read carefully all information provided in other sections of heading 10.

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



### 10.2 CHEMICAL STABILITY

The product is stable under normal conditions of use.

### 10.3 POSSIBILITY OF HAZARDOUS REACTIONS

Not expected under normal conditions of use.

### 10.4 CONDITIONS TO AVOID

This product must be kept far from heat sources. In any case, avoid exposing product to temperatures above the flash point.

### 10.5 INCOMPATIBLE MATERIALS

Strong oxidizing agents, hard acids and bases.

### 10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of carbon and nitrogen.

## 11. TOXICOLOGICAL INFORMATION

---

### 11.1 INFORMATION ON TOXICOLOGICAL EFFECTS

#### INGESTION:

Unlike to cause harm if accidentally swallowed in small doses, though ingestion of large quantities may cause gastro-intestinal effects.

#### INHALATION:

Inhalation of mists and vapours generated at elevated temperatures may cause respiratory irritation.

#### EYE CONTACT:

Contact may cause slight irritations.

#### SKIN CONTACT:

Contact may cause slight irritations.

#### CARCINOGENICITY:

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

#### MUTAGENICITY:

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

#### TOXICITY FOR REPRODUCTION:

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



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

### 12. ECOLOGICAL INFORMATION

---

#### 12.1 TOXICITY

This product is not classified dangerous for the environment.

This product has following eco-toxicological characteristics:

LD50 (Leuciscus idus, 96 h, DIN 38412 T.15) = 250-350 mg/l

EC50 (sludges, OECD 209) > 5 g/l

#### 12.2 PERSISTENCE AND DEGRADABILITY

The product is readily biodegradable (97%, 14 d., OECD 301 E, analogy).

#### 12.3 BIOACCUMULATIVE POTENTIAL

Not available.

#### 12.4 MOBILITY IN SOIL

Given its physical and chemical characteristics, the product is soluble in water, penetrates easily into soil and shows weak tendency to evaporation. Anyway, avoid large spills of product to prevent soil, watercourse and groundwater pollution.

#### 12.5 RESULTS OF PBT AND VPVB ASSESSMENT

Not available.

#### 12.6 OTHER ADVERSE EFFECTS

No effect known.

### 13. DISPOSAL CONSIDERATIONS

---

#### 13.1 WASTE TREATMENT METHODS

Prevent contamination of soil, drains and surface waters.

Do not discharge in sewers, tunnels or water courses. Dispose in accordance with local or national regulations via authorised person/licensed waste disposal contractor.

The used product is to be considered a special waste to be classified in accordance to Directive 2008/98/EC on wastes and related legislation.

### 14. TRANSPORT INFORMATION

---

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



### 14.1 UN NUMBER

Not applicable

### 14.2 UN PROPER SHIPPING NAME

Not applicable

### 14.3 TRANSPORT HAZARD CLASS(ES)

Not applicable

### 14.4 PACKING GROUP

Not applicable

### 14.5 ENVIRONMENTAL HAZARDS

Not applicable

### 14.6 SPECIAL PRECAUTIONS FOR USER

Not applicable

### 14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL73/78 AND THE IBC CODE

Not applicable

## 15. REGULATORY INFORMATION

---

### 15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Danish legislation - PR n° 1058467

Regulation (EC) No 1272/2008, with all National and European related legislations - on classification, labelling and packaging of substances and mixtures - and following adjustments to technical and scientific progress.

Regulation (EC) No 790/2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Directive 1999/45/EC and all following updates, together with its national realization, about classification, packaging and labelling of dangerous preparations

Regulation (EC) No 1907/2006, with all National and European related legislations - concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



**PETRONAS**

Directives 89/391/EC, 89/654/EC, 89/655/EC, 89/656/EC, 90/269/EC, 90/270/EC, 90/394/EC, 90/679/EC and all following updates, together with its national realization, about improvement of worker safety and health

Directives 98/24/EC and all following updates, together with its national realization, about protection of worker safety and health against chemical agent risks

Directive 1991/156/EC and all following updates, together with national waste legislation

EC directives and national environment protection legislation (air, water and soil)

All components of this product are listed on the TSCA Inventory.

Glycol ethers (SARA 313 category) total: 12-13%

### 15.2 CHEMICAL SAFETY ASSESSMENT

This product contains substances for which chemical safety assessments are not yet available.

### 16. OTHER INFORMATION

---

Sheet complies with the criteria of Annex I of Regulation (EU) No. 453/2010 as well as with Regulation (EC) No. 1272/2008 and Directive 99/45/EC and following adjustments.

This product must not be used in applications other than recommended without first seeking the advice of the Technical Department.

As regard as the previous version this sheet has been changed at following headings:  
3, 8, 15.

Caption about heading 3, R-phrases and H-statements:

R	22	Harmful if swallowed.
R	38	Irritating to skin.
R	41	Risk of serious damage to eyes.
R	48/22	Harmful: danger of serious damage to health by prolonged exposure if swallowed.
H	318	Causes serious eye damage
H	315	Causes skin irritation
H	302	Harmful if swallowed
H	373	May cause damage to organs through prolonged or repeated exposure

List of abbreviations used:

N.A. Not applicable

N.D. Not available

PBT: Persistent, Bioaccumulative and Toxic

vPvB: Very Persistent and very Bioaccumulative

# Safety Data Sheet

## TUTELA BRAKE FLUID EXTREME HT

Revision Date 24/07/2014

Version 1.1



DNEL: Derived No-Effect Levels

PNEC: Predicted No-Effect Concentration

This product must be stored, handled and used according to correct industrial hygienic practices and in compliance with laws in force.

The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be considered as any guarantee of specific properties.