Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.11.2011 | Version number 16 | Revision: 11.11.2011

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

· **Product identifier**

· **Trade name:** **DOT 4 Brake Fluid**

· **Article number:** PW.30.00

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

· **Sector of Use**
SU21 Consumer uses: Private households / general public / consumers
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

· **Process category**
PROC1 Use in closed process, no likelihood of exposure
PROC2 Use in closed, continuous process with occasional controlled exposure
PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/ large containers at non-dedicated facilities
PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
PROC20 Heat and pressure transfer fluids in dispersive, professional use but closed systems

· **Environmental release category**
ERC9a Wide dispersive indoor use of substances in closed systems
ERC9b Wide dispersive outdoor use of substances in closed systems

· **Application of the substance / the preparation**
hydraulic fluid for brakes and clutches

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**
Putoline Oil
Dollegoorweg 15
NL-7602 EC ALMELO
Tel.: +31 (0)546 818165

· **Further information obtainable from:**
Product safety department - vib@putoline.com

· **Emergency telephone number:** +31 (0)546 818165 (9 AM to 4 PM, Monday to Friday)

* 2 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xi; Irritant

R41: Risk of serious damage to eyes.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· **Label elements**

· **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals.
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Code letter and hazard designation of product:**

Xi Irritant

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.11.2011 Version number 16 Revision: 11.11.2011

Trade name: DOT 4 Brake Fluid

(Contd. of page 1)

· **Risk phrases:** 41 Risk of serious damage to eyes.

· **Safety phrases:**
2 Keep out of the reach of children.
23 Do not breathe vapour.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
39 Wear eye/face protection.
46 If swallowed, seek medical advice immediately and show this container or label.
56 Dispose of this material and its container to hazardous or special waste collection point.

· **Special labelling of certain preparations:** Contains 2,4-dimethyl-6-tert-butyl phenol. May produce an allergic reaction.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

* 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 143-22-6 EINECS: 205-592-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol Xi R41 Eye Dam. 1, H318	50-100%
CAS: 111-46-6 EINECS: 203-872-2 Reg.nr.: 01-2119457857-21	2,2'-oxybisethanol Xn R22 STOT RE 2, H373; Acute Tox. 4, H302	10-25%
CAS: 112-34-5 EINECS: 203-961-6 Reg.nr.: 01-2119475104-44	2-(2-butoxyethoxy)ethanol Xi R36 Eye Irrit. 2, H319	2.5-10%
CAS: 161907-77-3 EC number: 310-287-7 Reg.nr.: 01-2119475115-41	Butyl Triglycol Xi R41 Eye Dam. 1, H318	2.5-10%
CAS: 110-97-4 EINECS: 203-820-9 Reg.nr.: 01-2119475444-34	1,1'-iminodipropan-2-ol Xi R36 Eye Irrit. 2, H319	2.5-10%
CAS: 1879-09-0 EINECS: 217-533-1	2,4-dimethyl-6-tert-butyl phenol Xn R22-48/22; Xi R36/38; Xi R43; N R50/53 STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317	≤0.1%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

* 4 First aid measures

· **Description of first aid measures**

· **General information:** No special measures required.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.
Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.
Rinse out mouth and then drink plenty of water.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed** If swallowed or in case of vomiting, danger of entering the lungs.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.11.2011 Version number 16 Revision: 11.11.2011

Trade name: DOT 4 Brake Fluid

(Contd. of page 2)

5 Firefighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Water haze
Alcohol resistant foam
Fire-extinguishing powder
Carbon dioxide
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **Special hazards arising from the substance or mixture** Formation of toxic gases is possible during heating or in case of fire.
· **Advice for firefighters**
· **Protective equipment:** Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **Reference to other sections** No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling** No special measures required.
· **Information about fire - and explosion protection:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
· **Specific end use(s)** No further relevant information available.

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8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
111-46-6 2,2'-oxybisethanol	
WEL	Long-term value: 101 mg/m³, 23 ppm
112-34-5 2-(2-butoxyethoxy)ethanol	
WEL	Short-term value: 101.2 mg/m³, 15 ppm Long-term value: 67.5 mg/m³, 10 ppm

· **Additional information:** The lists valid during the making were used as basis.

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:** Immediately remove all soiled and contaminated clothing
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.11.2011 Version number 16 Revision: 11.11.2011

Trade name: DOT 4 Brake Fluid

(Contd. of page 3)

· **Respiratory protection:** In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**

· **Material of gloves** The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to 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.

· **Penetration time of glove material** The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

· **Body protection:** Protective work clothing

* 9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**
Form: Liquid
Colour: Amber coloured
· **Odour:** Characteristic

· **pH-value:** 7 - 10.5

· **Change in condition**
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: > 205℃

· **Flash point:** > 90℃
· **Self-igniting:** Product is not selfigniting.
· **Danger of explosion:** Not determined.
· **Explosion limits:**
Lower: Not determined.
Upper: Not determined.

· **Density at 20℃:** 1.05 g/cm³

· **Solubility in / Miscibility with water:** Fully miscible.

· **Segregation coefficient (n-octanol/water):** <2

· **Viscosity at 20℃:** 5 - 20 mm²/s
· **Other information** No further relevant information available.

* 10 Stability and reactivity

· **Possibility of hazardous reactions** Reacts with strong oxidizing agents.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

* 11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
Inhalative	LC50 (4 h)	>5 mg/l (rat)

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.11.2011 Version number 16 Revision: 11.11.2011

Trade name: DOT 4 Brake Fluid

(Contd. of page 4)

111-46-6 2,2'-oxybisethanol		
Oral	LD50	12565 mg/kg (rat)
Dermal	LD50	11890 mg/kg (rabit)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** Strong irritant with the danger of severe eye injury.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:** The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version: Irritant

*12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Other information:** The product is difficultly biodegradable.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation** Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **European waste catalogue**	
16 01 13*	brake fluids

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

*14 Transport information

· **UN-Number** · **ADR, ADN, IMDG, IATA**	Void
· **UN proper shipping name** · **ADR, ADN, IMDG, IATA**	Void
· **Transport hazard class(es)** · **ADR, ADN, IMDG, IATA** · **Class**	Void
· **Packing group** · **ADR, IMDG, IATA**	Void
· **Environmental hazards:** · **Marine pollutant:**	No
· **Special precautions for user**	Not applicable.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 11.11.2011 Version number 16 Revision: 11.11.2011

Trade name: DOT 4 Brake Fluid

(Contd. of page 5)

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	-

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **National regulations:**

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

*16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

R22 Harmful if swallowed.
R36 Irritating to eyes.
R36/38 Irritating to eyes and skin.
R41 Risk of serious damage to eyes.
R43 May cause sensitisation by skin contact.
R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· **Department issuing MSDS:** Product safety department.
· **Contact:** Product safety department
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

· **Sources**
67/548/EEC - Dangerous Substances Directive
99/45/EEC - Dangerous Preparations Directive

· *** Data compared to the previous version altered.**