

# Safety Data Sheet

## **1. Identification of the substance and of the supplier**

### **1.1 Product identifiers**

Product name : BRAKE FLUID DOT 4\_TH1

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

Identified uses : No further relevant information available

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

Company : PSP Specialties Co., Ltd  
1 Boromrachachonanee Road, Arunamrin Bangkoknoi Bangkok 10700  
Telephone : 662 4336012 – 15  
Fax : 662 4336016

## **2. Hazards identification**

### **2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

Eye Dam. 1 H318 Causes serious eye damage.

### **2.2 Label elements**

#### **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

#### **Hazard pictograms**



#### **Signal word Danger**

#### **Hazard-determining components of labelling:**

2-[2-(2-butoxyethoxy)ethoxy]ethanol

#### **Hazard statements**

H318 Causes serious eye damage.

#### **Precautionary statements**

P280 Wear eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

### **2.3 Other hazards**

#### **• Results of PBT and vPvB assessment**


• **PBT:** Not applicable.

• **vPvB:** Not applicable.

### **3. Composition/Information on ingredients**

#### **Chemical characterisation: Mixtures**

- Description: Mixture: consisting of the following components.

<b>Non dangerous components:</b>			
CAS: 30989-05-0 EINECS: 250-418-4	tris[2-[2-(2-methoxyethoxy)ethoxy]ethyl] orthoborate		25-50%
CAS: 112-27-6 EINECS: 203-953-2 Reg.nr.: 01-2119438366-35	2,2'-(ethylenedioxy)diethanol		10-25%
<b>Dangerous components:</b>			
CAS: 143-22-6 EINECS: 205-592-6 Reg.nr.: 01-2119475107-38	2-[2-(2-butoxyethoxy)ethoxy]ethanol	 Eye Dam. 1, H318	50-100%

- Additional information: For the wording of the listed hazard phrases refer to section 16.

### **4. First aid measures**

#### **4.1 Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. Then consult a doctor.  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing: If symptoms persist consult doctor.**

#### **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

#### **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### **5. Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing agents :**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

#### **5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

#### **5.3 Advice for firefighters**

- **Protective equipment :** Wear self-contained respiratory protective device.

## **6. Accidental Release Measure**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Not required.

### **6.2 Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

### **6.3 Methods and materials for containment and cleaning up**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

### **6.4 Reference to other sections**

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**

### **7.1 Precautions for safe handling**

Keep receptacles tightly sealed.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

**Information about fire - and explosion protection:** No special measures required.

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

**Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

**Further information about storage conditions:** None.

### **7.3 Specific end use(s)**

See 1.2

No further relevant information available.

## **8. Exposure Controls/Personal Protection**

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

### **8.1 Control parameters**

**Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

<b>• DNELs</b>		
<b>143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol</b>		
Oral	DNEL Long-term - Systemic (consumer)	2.5 mg/kg bw/day (/)
Dermal	DNEL Long-term - Systemic (worker)	50 mg/kg bw/day (/)
Inhalative	DNEL Long-term - Systemic (worker)	195 mg/m <sup>3</sup> (/)
	DNEL Long-term - Systemic (consumer)	117 mg/m <sup>3</sup> (/)
<b>112-27-6 2,2'-(ethylenedioxy)diethanol</b>		
Dermal	DNEL Long-term - Systemic (worker)	40 mg/kg bw/day (/)
	DNEL Long-term - Local (worker)	40 mg/kg bw/day (/)
	DNEL Long-term - Systemic (consumer)	20 mg/kg bw/day (/)
	DNEL Long-term - Local (consumer)	20 mg/kg bw/day (/)
	DNEL Long-term - Systemic (worker)	50 mg/m <sup>3</sup> (/)
	DNEL Long-term - Local (worker)	50 mg/m <sup>3</sup> (/)
	DNEL Long-term - Systemic (consumer)	25 mg/m <sup>3</sup> (/)
	DNEL Long-term - Local (consumer)	25 mg/m <sup>3</sup> (/)
<b>• PNECs</b>		
<b>143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol</b>		
PNEC Fresh water	1.5 mg/l (/)	
PNEC Marine water	0.15 mg/l (/)	
PNEC Intermittent releases	5 mg/l (/)	
PNEC Fresh water sediment	5.77 mg/kg (/)	
PNEC Marine sediment	0.13 mg/kg (/)	
PNEC Soil	0.45 mg/kg (/)	
PNEC STP	200 mg/l (/)	
<b>112-27-6 2,2'-(ethylenedioxy)diethanol</b>		
PNEC Fresh water	10 mg/l (/)	
PNEC Marine water	1 mg/l (/)	
PNEC Fresh water sediment	46 mg/kg (/)	
PNEC Soil	3.32 mg/kg (/)	
PNEC STP	10 mg/l (/)	

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

## 8.2 Exposure controls

### • Personal protective equipment:

#### • General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

#### • 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:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• **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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• **Eye protection:**



Tightly sealed goggles

## **9. Physical and Chemical Properties**

• <b>9.1 Information on basic physical and chemical properties</b>	
• <b>General Information</b>	
• <b>Appearance:</b>	
Form:	Fluid
Colour:	Amber coloured
• <b>Odour:</b>	Ether-like
• <b>Odour threshold:</b>	Not determined.
• <b>pH-value at 20 °C:</b>	8
• <b>Change in condition</b>	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.
• <b>Flash point:</b>	Not applicable.
• <b>Flammability (solid, gas):</b>	Not applicable
• <b>Auto-ignition temperature:</b>	202 °C
• <b>Decomposition temperature:</b>	Not determined.
• <b>Auto-ignition temperature:</b>	Product is not selfigniting.
• <b>Explosive properties:</b>	Product does not present an explosion hazard.
• <b>Explosion limits:</b>	
Lower:	0.9 Vol %
Upper:	9.2 Vol %
• <b>Vapour pressure:</b>	Not determined.
• <b>Density at 20 °C:</b>	1.04 g/cm <sup>3</sup>
• <b>Relative density</b>	Not determined.
• <b>Vapour density</b>	Not determined.
• <b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
• <b>oxidizing properties</b>	Not determined.
• <b>Partition coefficient: n-octanol/water:</b>	Not determined.
• <b>Viscosity:</b>	
Dynamic:	Not determined.
Kinematic:	Not determined.
• <b>Solvent content:</b>	
Organic solvents:	17.0 %
VOC-content	17.0 %
• <b>9.2 Other information</b>	No further relevant information available.

## **10. Stability and Reactivity**

<b>10.1 Reactivity</b>	Not determined. No further relevant information available.
<b>10.2 Chemical stability</b>	Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
<b>10.3 Possibility of hazardous reactions</b>	No dangerous reactions known.
<b>10.4 Conditions to avoid</b>	No further relevant information available.
<b>10.5 Incompatible materials</b>	No further relevant information available.
<b>10.6 Hazardous decomposition products</b>	No dangerous decomposition products known.
<b>Additional information:</b>	None.

## **11. Toxicological Information**

### **11.1 Information on toxicological effects**

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

<b>• LD/LC50 values relevant for classification:</b>		
<b>143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol</b>		
Oral	LD50	5170 mg/kg (rat)
Dermal	LD50	3540 mg/kg (rabbit)
<b>112-27-6 2,2'-(ethylenedioxy)diethanol</b>		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **CMR effects** (carcinogenity, mutagenicity and toxicity for reproduction)
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

## **12. Ecological Information**

### **12.1 Toxicity**

#### **Aquatic toxicity:**

##### **143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol**

EC 50 (72 h)	62.5 mg/l (Desmodesmus subspicatus)
LC 50 (96 h)	2200-4600 mg/l (Leuciscus idus)
EC 50 (48 h)	>500 mg/l (daphnia magna)
IC 50 (16 h)	>5000 mg/l (Bacteria)

##### **112-27-6 2,2'-(ethylenedioxy)diethanol**

LC 50	80000 mg/l (Pimephales promelas) 39000 mg/l (daphnia magna) 61000 mg/l (Lepomis macrochirus)
LC/EC/IC 50	>100 mg/l (algae) >100 mg/l (Bacteria)

### **12.2 Persistence and degradability** No further relevant information available.

#### **Degree of elimination:**

##### **143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol**

OECD 301 D	85 % (/)
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##### **112-27-6 2,2'-(ethylenedioxy)diethanol**

OECD 301 E	63 % (/)
OECD 302B	95 % (/)
OECD 301C	92 % (/)

### **12.3 Bioaccumulative potential**

##### **143-22-6 2-[2-(2-butoxyethoxy)ethoxy]ethanol**

BCF	< 100 (/)
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### **12.4 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

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

**PBT:** Not applicable.

**vPvB:** Not applicable.

### **12.6 Other adverse effects** No further relevant information available.

## **13. Disposal Considerations**

### **- 13.1 Waste treatment methods**

#### **- Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

#### **- Uncleaned packaging:**

**- Recommendation:** Disposal must be made according to official regulations.

## **14. Transport Information**

### **14.1 UN number**

- ADR, ADN, IMDG, IATA Void

### **14.2 UN proper shipping name**

- ADR, ADN, IMDG, IATA Void

### **14.3 Transport hazard class(es)**

- ADR, ADN, IMDG, IATA  
- Class Void

### **14.4 Packaging group**

- ADR, IMDG, IATA Void

### **14.5 Environmental hazards**

Not applicable.

### **14.6 Special precautions for user**

Not applicable.

### **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

- UN "Model Regulation": Void

## **15. Regulatory Information**

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

- Labelling according to Regulation (EC) No 1272/2008 GHS label elements

#### **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

- **National regulations:**

- **Technical instructions (air):**

Class	Share in %
NK	17.0

- **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.



## **16. Other Information**

**Date** 1 November 2021

**Prepared by:** PSP SPECIALTIES CO., LTD.

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