



Prestone



SAFETY DATA SHEET

Prestone High Performance DOT4 Brake Fluid

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

1.1. Product identifier

Product name	Prestone High Performance DOT4 Brake Fluid
Product number	AS800, AS801, AS800H-6
UFI	UFI: TC5Q-00K7-U00X-9GJG
REACH registration notes	This is a MIXTURE; no registration information contained in this document . Holts are classed as Downstream User.

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

Identified uses	Car maintenance product. Brake fluid.
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1.3. Details of the supplier of the safety data sheet

Supplier	Holt Lloyd Services 52 Rue des 40 Mines, 60000 – Allonne, France Phone: +33 (0)3 64 99 00 32 info@holtsauto.com
Contact person	Contact Email address: info@holtsauto.com
Manufacturer	Holt Lloyd International Ltd Barton Dock Road Stretford Manchester M32 0YQ - England, UK +44 (0) 161 866 4800 FAX +44 (0) 161 866 4854 www.holtsauto.com

1.4. Emergency telephone number

Emergency telephone	UK - 00 44 (0) 161 866 4800 Office hrs = 0900 - 1700 hrs
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National emergency telephone number +43 1 31304 5620; chemikalien@umweltbundesamt.at (Austria)
 +32022649636; info@poisoncentre.be (Belgium)
 +359 2 9154 409; poison_centre@mail.orbitel.bg (Bulgaria)
 +38514686910; toksikologija@hzjz.hr (Croatia)
 +35722405611; cy-chemregistry@dli.mlsi.gov.cy (Cyprus)
 +420267082257; biocidy@mzcr.cz (Czech Republic)
 +45 72 54 40 00; mst@mst.dk (Denmark)
 +372 794 3500; clp@terviseamet.ee, info@terviseamet.ee (Estonia)
 +358 5052 000; kirjaamo@tukes.fi (Finland)
 + 33 3 83 85 21 92; bnpc@chru-nancy.fr (France)
 +49-30-18412-0; bfr@bfr.bund.de (Germany)
 +302106479250; +302106479450; devxp.gcs@aade.gr, environment.gcs@aade.gr (Greece)
 +36 (1) 476 1135; clp.ca@nnk.gov.hu (Hungary)
 +354 543 22 22; eitur@landspitali.is (Iceland)
 +353 (1) 809 2166 / +353 (1) 809 2566; chemicalsinfo@beaumont.ie (Ireland)
 +390649906140; inscweb@iss.it (Italy)
 +371 67032600; lvgmc@lvgmc.lv (Latvia)
 +370 70662008; aaa@aaa.am.lt (Lithuania)
 +320 22649636; +352 24785551; info@poisoncentre.be; direction-sante@ms.etat.lu (Luxembourg)
 +356 2395 2000; info@mccaa.org.mt (Malta)
 +31 88 75 585 61; productnotificatie@umcutrecht.nl (The Netherlands)
 +4573580500; produktregisteret@miljodir.no / +47 21 07 70 00; folkehelseinstituttet@fhi.no (Norway)
 +48 42 2538 400; biuro@chemikalia.gov.pl (Poland)
 +351213303271; ciav.tox@inem.pt (Portugal)
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 +7 495 621 6885; +7 495 628 1687; rtiac@mail.ru; rtiac2003@yahoo.com (Russia)
 +421 2 5465 2307; ntic@ntic.sk (Slovakia)
 + 386 1 522 1293; gp.ukc@kclj.si (Slovenia)
 +34 917689800; intcf.doc@justicia.es (Spain)
 +46104566750; giftinformation@gic.se (Sweden)
 +44 121 507 4123; allistervale@npis.org, sallybradberry@npis.org (UK)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Eye Dam. 1 - H318 Repr. 2 - H361
Environmental hazards	Not Classified

2.2. Label elements

Hazard pictograms



Signal word	Danger
Hazard statements	H318 Causes serious eye damage. H361 Suspected of damaging fertility or the unborn child.

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Precautionary statements	<p>P101 If medical advice is needed, have product container or label at hand.</p> <p>P102 Keep out of reach of children.</p> <p>P260 Do not breathe vapours.</p> <p>P264 Wash skin thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/ attention.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
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UFI UFI: TC5Q-00K7-U00X-9GJG

Contains Triethylene glycol monoethyl ether borate ester, 2-(2-(2-butoxyethoxy)ethoxy)ethanol, Polyethylene glycol monobutyl ether

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<p>Triethylene glycol monoethyl ether 10-30%</p> <p>CAS number: 112-50-5 REACH registration number: 01-2119475102-48-XXXX</p>
<p>Classification</p> <p>Not Classified</p>
<p>polyethylene glycol methyl ether 10-30%</p> <p>CAS number: 9004-74-4</p>
<p>Classification</p> <p>Not Classified</p>
<p>Triethylene glycol monoethyl ether borate ester 10-30%</p> <p>CAS number: 30989-05-0 EC number: 250-418-4 REACH registration number: 01-2119462824-33-XXXX</p>
<p>Classification</p> <p>Repr. 2 - H361</p>
<p>2-(2-(2-butoxyethoxy)ethoxy)ethanol 10-30%</p> <p>CAS number: 143-22-6 EC number: 205-592-6 REACH registration number: 01-2119475107-38-XXXX</p>
<p>Classification</p> <p>Eye Dam. 1 - H318</p>

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triethylene glycol monomethyl ether 5-10%		
CAS number: 112-35-6	EC number: 203-962-1	REACH registration number: 01-2119475101-50-XXXX
Classification Not Classified		
Polyethylene glycol monobutyl ether 5-10%		
CAS number: 9004-77-7	EC number: 500-012-0	REACH registration number: 01-2119475115-41-XXXX
Classification Eye Dam. 1 - H318		
tetraethylene glycol 5-10%		
CAS number: 112-60-7	EC number: 203-989-9	REACH registration number: 01-2119971572-32-XXXX
Classification Not Classified		
Butyl diglycol 5-10%		
CAS number: 112-34-5	EC number: 203-961-6	REACH registration number: 01-2119475104-44-XXXX
Classification Eye Irrit. 2 - H319		
2,2'-OXYBISETHANOL 5-10%		
CAS number: 111-46-6	EC number: 203-872-2	REACH registration number: 01-2119457857-21-XXXX
Classification Acute Tox. 4 - H302		
diethylene glycol monoethyl ether 1-5%		
CAS number: 111-90-0	EC number: 203-919-7	REACH registration number: 01-2119475105-42-XXXX
Classification Not Classified		
1,1'-IMINODIPROPAN -2-OL 1-5%		
CAS number: 110-97-4	EC number: 203-820-9	REACH registration number: 01-2119475444-34-XXXX
Classification Eye Irrit. 2 - H319		

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triethylene glycol 1-5% CAS number: 112-27-6 REACH registration number: 01-2119438366-35-XXXX
Classification Not Classified
Pentaethylene glycol 1-5% CAS number: 4792-15-8 EC number: 225-341-4
Classification Skin Irrit. 2 - H315 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	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
Ingestion	Rinse mouth thoroughly with water.
Skin contact	Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Get medical attention if any discomfort continues.

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

General information	Treat symptomatically.
Inhalation	This is unlikely to occur but symptoms similar to those of ingestion may develop.
Ingestion	May cause discomfort if swallowed.
Skin contact	May be slightly irritating to skin. Prolonged or repeated exposure may cause severe irritation.
Eye contact	Causes serious eye damage. Prolonged contact causes serious eye and tissue damage.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.
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Hazardous combustion products Oxides of carbon.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Avoid release to the environment. Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Contain spillage with sand, earth or other suitable non-combustible material. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Dispose of contents/container in accordance with local regulations.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13. See Section 11 for additional information on health hazards.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid inhalation of vapours and contact with skin and eyes.

Advice on general occupational hygiene Good personal hygiene procedures should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in a cool and well-ventilated place.

Storage class Non-flammable liquids that can not be assigned to any of the aforementioned LGK

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

2,2'-OXYBISETHANOL

Long-term exposure limit (8-hour TWA): WEL 23 ppm 101 mg/m³

Short-term exposure limit (15-minute): WEL

WEL = Workplace Exposure Limit.

Triethylene glycol monoethyl ether (CAS: 112-50-5)

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DNEL	Workers - Inhalation; Long term systemic effects: 169 mg/m ³
	Workers - Dermal; Long term systemic effects: 181 mg/kg/day
	General population - Inhalation; Long term systemic effects: 114 mg/m ³
	General population - Dermal; Long term systemic effects: 85 mg/kg/day
	General population - Oral; Long term systemic effects: 8.5 mg/kg/day
PNEC	Fresh water; 7 mg/l
	Fresh water, Intermittent release; 70 mg/l
	marine water; 0.7 mg/l
	STP; 750 mg/l
	Sediment (Freshwater); 26 mg/kg sediment dry weight
	Sediment (Marinewater); 2.6 mg/kg sediment dry weight
	Soil; 1.2 mg/kg soil dry weight
Secondary Poisoning (Hazard for Predators) - Oral; 97 mg/kg food	

Triethylene glycol monoethyl ether borate ester (CAS: 30989-05-0)

DNEL	Workers - Inhalation; Long term systemic effects: 29.1 mg/m ³
	Workers - Dermal; Long term systemic effects: 8.3 mg/kg/day
	General population - Inhalation; Long term systemic effects: 7.2 mg/m ³
	General population - Dermal; Long term systemic effects: 4.1 mg/kg/day
	General population - Oral; Long term systemic effects: 4.1 mg/kg/day
PNEC	Fresh water; 0.211 mg/l
	Fresh water, Intermittent release; 2.112 mg/l
	marine water; 0.021 mg/l
	STP; 100 mg/l
	Sediment (Freshwater); 0.76 mg/kg sediment dry weight
	Sediment (Marinewater); 0.076 mg/kg sediment dry weight
Soil; 0.028 mg/kg soil dry weight	

2-(2-(2-butoxyethoxy)ethoxy)ethanol (CAS: 143-22-6)

DNEL	Workers - Inhalation; Long term systemic effects: 195 mg/m ³
	Workers - Dermal; Long term systemic effects: 208 mg/kg/day
	General population - Inhalation; Long term systemic effects: 117 mg/m ³
	General population - Dermal; Long term systemic effects: 125 mg/kg/day
	General population - Oral; Long term systemic effects: 12.5 mg/kg/day
	Workers - Hazard for the eyes high hazard (no threshold derived)
	General Population - Hazard for the eyes high hazard (no threshold derived)
PNEC	Fresh water; 2 mg/l
	Fresh water, Intermittent release; 8.5 mg/l
	marine water; 0.2 mg/l
	STP; 200 mg/l
	Sediment (Freshwater); 7.7 mg/kg sediment dry weight
	Sediment (Marinewater); 0.77 mg/kg sediment dry weight
	Soil; 0.47 mg/kg soil dry weight
Secondary Poisoning (Hazard for Predators) - Oral; 111 mg/kg food	

triethylene glycol monomethyl ether (CAS: 112-35-6)

Prestone High Performance DOT4 Brake Fluid

DNEL Workers - Dermal; Long term systemic effects: 167 mg/kg/day
 General population - Dermal; Long term systemic effects: 100 mg/kg/day
 General population - Oral; Long term systemic effects: 10 mg/kg/day

PNEC Fresh water; 10 mg/l
 Fresh water, Intermittent release; 50 mg/l
 marine water; 1 mg/l
 STP; 200 mg/l
 Sediment (Freshwater); 36.6 mg/kg sediment dry weight
 Sediment (Marinewater); 3.66 mg/kg sediment dry weight
 Soil; 1.56 mg/kg soil dry weight
 Secondary Poisoning (Hazard for Predators) - Oral; 89 mg/kg food

Polyethylene glycol monobutyl ether (CAS: 9004-77-7)

DNEL Workers - Inhalation; Long term systemic effects: 245 mg/m³
 Workers - Dermal; Long term systemic effects: 265 mg/kg/day
 General population - Inhalation; Long term systemic effects: 149 mg/m³
 General population - Dermal; Long term systemic effects: 160 mg/kg/day
 General population - Oral; Long term systemic effects: 16 mg/kg/day
 Workers - Hazard for the eyes
 high hazard (no threshold derived)
 General Population - Hazard for the eyes
 medium hazard (no threshold derived)

PNEC Fresh water; 4.5 mg/l
 Fresh water, Intermittent release; 24.9 mg/l
 marine water; 0.31 mg/l
 STP; 500 mg/l
 Sediment (Freshwater); 6.6 mg/kg sediment dry weight
 Sediment (Marinewater); 0.66 mg/kg sediment dry weight
 Soil; 1.32 mg/l
 Secondary Poisoning (Hazard for Predators) - Oral; 111 mg/kg food

2,2'-OXYBISETHANOL (CAS: 111-46-6)

DNEL Workers - Inhalation; Long term systemic effects: 44 mg/m³
 Workers - Inhalation; Long term local effects: 60 mg/m³
 Workers - Dermal; Long term systemic effects: 43 mg/kg bw/day
 General population - Inhalation; Long term systemic effects: 12 mg/m³
 General population - Inhalation; Long term local effects: 12 mg/m³
 General population - Dermal; Long term systemic effects: 21 mg/kg bw/day

PNEC Fresh water; 10 mg/l
 Fresh water, Intermittent release; 10 mg/l
 marine water; 1 mg/l
 STP; 199.5 mg/l
 Sediment (Freshwater); 20.9 mg/kg sediment dry weight
 Sediment (Marinewater); 2.09 mg/kg sediment dry weight
 Soil; 1.53 mg/kg soil dry weight

Butyl diglycol (CAS: 112-34-5)

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DNEL

Workers - Inhalation; Long term local effects: 67.5 mg/m³
 Workers - Inhalation; Short term local effects: 101.2 mg/m³
 Workers - Dermal; Long term systemic effects: 83 mg/kg bw/day
 General population - Inhalation; Long term local effects: 40.5 mg/m³
 General population - Inhalation; Short term local effects: 60.7 mg/m³
 General population - Dermal; Long term systemic effects: 50 mg/kg bw/day
 General population - Oral; Long term systemic effects: 5 mg/kg bw/day

PNEC

Fresh water; Long term 1.1 mg/l
 Fresh water; Long term 0.11 mg/l
 STP; Long term 200 mg/l
 Sediment (Freshwater); Long term 4.4 mg/kg sediment dry weight
 Sediment (Marinewater); Long term 0.44 mg/kg sediment dry weight
 Soil; Long term 0.32 mg/kg soil dry weight

1,1'-IMINODIPROPAN -2-OL (CAS: 110-97-4)

DNEL

Workers - Inhalation; Long term systemic effects: 6.4 mg/m³
 Workers - Dermal; Long term systemic effects: 5 mg/kg/day
 Workers - Dermal; Long term local effects: 120 µg/cm²
 Workers - Hazard for the eyes
 low hazard (no threshold derived)
 General population - Inhalation; Long term systemic effects: 3.9 mg/m³
 General population - Dermal; Long term systemic effects: 6.3 mg/kg/day
 General population - Oral; Long term systemic effects: 1.3 mg/kg/day
 General Population - Hazard for the eyes
 low hazard (no threshold derived)

PNEC

Fresh water; 0.278 mg/l
 Fresh water, Intermittent release; 2.777 mg/l
 marine water; 0.028 mg/l
 STP; 15000 mg/l
 Sediment (Freshwater); 2.33 mg/kg sediment dry weight
 Sediment (Marinewater); 0.233 mg/kg sediment dry weight
 Soil; 0.303 mg/kg soil dry weight

diethylene glycol monoethyl ether (CAS: 111-90-0)

DNEL

Workers - Inhalation; Long term local effects: 30 mg/m³
 Workers - Dermal; Long term local effects: 1.5 mg/cm²
 General population - Inhalation; Long term local effects: 18 mg/m³
 General population - Dermal; Long term local effects: 0.9 mg/cm²
 General population - Oral; Long term systemic effects: 50 mg/kg/day

PNEC

Fresh water; 1.98 mg/l
 Fresh water, Intermittent release; 19.8 mg/l
 marine water; 0.198 mg/l
 Sediment (Freshwater); 7.32 mg/kg sediment dry weight
 Sediment (Marinewater); 0.732 mg/kg sediment dry weight
 Soil; 0.34 mg/kg soil dry weight
 Secondary Poisoning (Hazard for Predators) - Oral; 444 mg/kg food

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation should be adequate to control worker exposure to airborne contaminants. Avoid inhalation of vapours.

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Eye/face protection	Wear chemical splash goggles.
Hand protection	Wear protective gloves. It is recommended that gloves are made of the following material: Polyvinyl chloride (PVC). To protect hands from chemicals, gloves should comply with European Standard EN374.
Other skin and body protection	No specific requirements are anticipated under normal conditions of use.
Hygiene measures	Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Amber.
Odour	Mild.
Initial boiling point and range	>200°C @ 760 mm Hg
Flash point	>121°C
Vapour pressure	0.001 mm Hg @ 20°C
Vapour density	> 1
Relative density	1.00 - 1.07 @ 20°C
Solubility(ies)	Miscible with water.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	Strong oxidising agents. Strong acids.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Strong acids. Strong oxidising agents.
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10.4. Conditions to avoid

Conditions to avoid	No specific requirements are anticipated under normal conditions of use.
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10.5. Incompatible materials

Materials to avoid	No specific requirements are anticipated under normal conditions of use.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of carbon.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

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Notes (oral LD₅₀)	LD ₅₀ > 5000 mg/kg, Oral, Rat
ATE oral (mg/kg)	10,000.0
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ > 2000 mg/kg, Dermal, Rat
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye damage.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Suspected of damaging fertility.
Reproductive toxicity - development	Contains an ingredient listed as: Repr. 2
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.
Inhalation	This is unlikely to occur but symptoms similar to those of ingestion may develop.
Ingestion	May cause discomfort if swallowed.
Skin contact	May be slightly irritating to skin. Prolonged or repeated exposure may cause severe irritation.
Eye contact	Causes serious eye damage. Prolonged contact causes serious eye and tissue damage.
Target organs	Reproductive organs
<u>Toxicological information on ingredients.</u>	

Triethylene glycol monoethyl ether

Acute toxicity - oral

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Notes (oral LD₅₀)	LD ₅₀ 10610 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ 7450 mg/kg, Dermal, Rabbit LD ₅₀ 3450 mg/kg, Dermal, Rabbit REACH dossier information. Read-across data.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	No information available.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	No adverse effect observed (not irritating)
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	No adverse effect observed (not irritating)
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising. Read-across data. REACH dossier information.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	No adverse effects observed (negative)
Genotoxicity - in vivo	No adverse effects observed (negative)
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Fertility - NOAEL 1200 mg/kg/day, Oral, Mouse F1
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 800 mg/kg/day, Oral, Rat This substance has no evidence of toxicity to reproduction.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.
<u>Triethylene glycol monoethyl ether borate ester</u>	
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	LD ₅₀ > 2000 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ > 2000 mg/kg, Oral, Rat
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	No information required. Scientifically unjustified.

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Skin corrosion/irritation

Skin corrosion/irritation No adverse effect observed (not irritating)

Serious eye damage/irritation

Serious eye damage/irritation No adverse effect observed (not irritating)

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No adverse effects observed (not sensitising)

Germ cell mutagenicity

Genotoxicity - in vitro No adverse effects observed (negative)

Genotoxicity - in vivo Scientifically unjustified. No information required. REACH dossier information.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No specific test data are available. REACH dossier information.

Reproductive toxicity - development Developmental toxicity: - NOAEL: 250 mg/kg/day, Oral, Rabbit Repr. 2

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

2-(2-(2-butoxyethoxy)ethoxy)ethanol

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 5170 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 3540 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No information available.

Skin corrosion/irritation

Skin corrosion/irritation No adverse effect observed (not irritating)

Serious eye damage/irritation

Serious eye damage/irritation No adverse effect observed (not irritating)

Respiratory sensitisation

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Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	No adverse effects observed (negative)
Genotoxicity - in vivo	No adverse effects observed (negative)
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No information available.
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 1000 mg/kg/day, Oral, Rat No evidence of reproductive toxicity in animal studies.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.
<u>triethylene glycol monomethyl ether</u>	
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	LD ₅₀ > 10500 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ ca. 7.5 ml/kg, Dermal, Rabbit LD ₅₀ > 2000 mg/kg, Dermal, Rat NOAEL 4000 mg/kg, Dermal, Rat
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	LC ₀ > 10 ppm, Inhalation, Rat
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Not irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	No adverse effects observed (negative)

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Genotoxicity - in vivo	No adverse effects observed (negative)
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No information available.
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 1000 mg/kg/day, Oral, Rat No evidence of reproductive toxicity in animal studies.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.

Polyethylene glycol monobutyl ether

<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	LD ₅₀ > 2000 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ 3540 mg/kg, Dermal, Rabbit
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	No information available.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	No adverse effect observed (not irritating)
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye damage.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	No adverse effects observed (not sensitising)
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	No adverse effects observed (negative)
Genotoxicity - in vivo	No information available.
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No specific test data are available.

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Reproductive toxicity - development This substance has no evidence of toxicity to reproduction. Read-across data.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

tetraethylene glycol

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 30000 mg/kg, Oral, Rat REACH dossier information.

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 22600 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC0 0.49 µg/l, Inhalation, Rat no adverse effects observed

Skin corrosion/irritation

Skin corrosion/irritation No adverse effect observed (not irritating)

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro No adverse effects observed (negative)

Genotoxicity - in vivo No adverse effects observed (negative)

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility Three-generation study - NOAEL 6780 mg/kg/day, Oral, Mouse P1 No adverse effects observed.

Reproductive toxicity - development Developmental toxicity: - NOAEL: 5630 mg/kg/day, Oral, Rat No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

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Aspiration hazard

Aspiration hazard Not relevant.

Butyl diglycol

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 2410 mg/kg, Oral, Mouse LD₅₀ 6560 mg/kg, Oral, Rat LD₅₀ 2000 mg/kg, Oral, Guinea pig LD₅₀ 2200 mg/kg, Oral, Rabbit

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rat LD₅₀ 2764 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) inhalation risk test > 29 ppm, Inhalation, Rat

Skin corrosion/irritation

Skin corrosion/irritation No adverse effect observed (not irritating)

Serious eye damage/irritation

Serious eye damage/irritation No adverse effect observed (not irritating)

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro No adverse effects observed (negative)

Genotoxicity - in vivo No adverse effects observed (negative)

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility One-generation study - NOAEL > 1000 mg/kg/day, Oral, Rat P One-generation study - NOAEL > 2000 mg/kg/day, Dermal, Rat P

Reproductive toxicity - development Developmental toxicity: - NOAEL: > 633 mg/kg/day, Oral, Rat Teratogenicity: - NOAEL: > 2000 mg/kg/day, Dermal, Rabbit Fetotoxicity: - NOAEL: > 2050 mg/kg/day, Oral, Rat No adverse effects observed.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

2,2'-OXYBISETHANOL

Acute toxicity - oral

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Notes (oral LD₅₀)	LD ₅₀ 16500 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ 11890 mg/kg, Dermal, Rabbit
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	LC ₅₀ 4.6 µg/l, Inhalation, Rat
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Not irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	No adverse effects observed (negative)
Genotoxicity - in vivo	No adverse effects observed (negative)
<u>Carcinogenicity</u>	
Carcinogenicity	NOAEL 1160 mg/kg bw/day, Oral, Rat Adverse effects observed
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Fertility - NOAEL 3060 mg/kg bw/day, Oral, Mouse Fertility - NOAEL 2200 mg/kg bw/day, Oral, Rat No adverse effects observed.
Reproductive toxicity - development	Developmental toxicity: - NOAEL: > 1000 mg/kg bw/day, Oral, Rabbit No evidence of reproductive toxicity in animal studies.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.
<u>Inhalation</u>	
Inhalation	May cause discomfort.
<u>Ingestion</u>	
Ingestion	Harmful if swallowed.
<u>Skin contact</u>	
Skin contact	May be slightly irritating to skin. Prolonged or repeated exposure may cause severe irritation.
<u>Eye contact</u>	
Eye contact	May be slightly irritating to eyes. Prolonged or repeated exposure may cause severe irritation.

diethylene glycol monoethyl ether

Prestone High Performance DOT4 Brake Fluid

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 10502 mg/kg, Oral, Rat LD₅₀ 6031 mg/kg, Oral, Mouse

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 9143 mg/kg, Dermal, Rabbit LD₅₀ 8476 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC0 25 mg/m³, Inhalation, Rat LC50 > 5.24 mg/l, Inhalation, Rat

Skin corrosion/irritation

Skin corrosion/irritation No adverse effect observed (not irritating)

Serious eye damage/irritation

Serious eye damage/irritation No adverse effect observed (not irritating)

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Scientifically unjustified. REACH dossier information.

Germ cell mutagenicity

Genotoxicity - in vitro No adverse effects observed (negative)

Genotoxicity - in vivo No adverse effects observed (negative)

Carcinogenicity

Carcinogenicity No specific test data are available.

Reproductive toxicity

Reproductive toxicity - fertility Two-generation study - NOAEL 2200 mg/kg/day, Oral, Rat F1 Conclusive data but not sufficient for classification.

Reproductive toxicity - development Maternal toxicity: - NOAEL: 1000 mg/kg/day, Oral, Rat Embryotoxicity: - NOAEL: 300 mg/kg/day, Oral, Rat This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

1,1'-IMINODIPROPAN -2-OL

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ ca. 8000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

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Notes (inhalation LC₅₀)	LC50 > 0.11 g/m ³ , Inhalation, Rat
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Not irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	No adverse effects observed (negative)
Genotoxicity - in vivo	No specific test data are available.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No adverse effects observed. Read-across data. REACH dossier information.
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 1000 mg/kg/day, Oral, Rat No adverse effects observed.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.
<u>triethylene glycol</u>	
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	LD ₅₀ 18080 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ 18080 mg/kg, Dermal, Rabbit
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	LC50 > 5.2 mg/l, Inhalation, Rat
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	No adverse effect observed (not irritating)
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	No adverse effect observed (not irritating)

Prestone High Performance DOT4 Brake Fluid

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No adverse effects observed (not sensitising)

Germ cell mutagenicity

Genotoxicity - in vitro No adverse effects observed (negative)

Genotoxicity - in vivo No adverse effects observed (negative)

Carcinogenicity

Carcinogenicity NOAEL 1160 mg/kg/day, Oral, Rat No evidence of carcinogenicity in animal studies. Read-across data.

Reproductive toxicity

Reproductive toxicity - fertility Two-generation study - NOAEL 6780 mg/kg/day, Oral, Mouse P1, F1 Conclusive data but not sufficient for classification.

Reproductive toxicity - development Maternal toxicity:, Developmental toxicity: - NOAEL: 565 mg/kg/day, Oral, Mouse

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish No information available.

Acute toxicity - aquatic invertebrates Not available.

Acute toxicity - aquatic plants Not available.

Acute toxicity - microorganisms Not available.

Acute toxicity - terrestrial Not available.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not available.

Short term toxicity - embryo and sac fry stages Not available.

Chronic toxicity - aquatic invertebrates Not available.

Ecological information on ingredients.

Prestone High Performance DOT4 Brake Fluid

Triethylene glycol monoethyl ether

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: > 10000 mg/l, Pimephales promelas (Fat-head Minnow) LC ₅₀ , 24 hours: > 5000 mg/l, Carassius auratus (Goldfish) NOEC, 96 hours: > 1780 mg/l, Danio rerio
Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hours: > 10000 mg/l, Daphnia magna TLm (Median Tolerance Limit), 924 hours: > 10000 mg/l, Artemia salina
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: 7000 mg/l, QSAR EC ₁₀ , 72 hours: 613 mg/l, Scenedesmus subspicatus EC ₅₀ , 72 hours: > 613 mg/l, Scenedesmus subspicatus EC ₁₀ , EC ₅₀ , 72 hours: > 500 mg/l, Desmodesmus subspicatus Read-across data.
Acute toxicity - microorganisms	EC ₀ , 16 hours: 5000 mg/l, Polybac POLYSEED EC ₅₀ , 16 hours: 36000 mg/l, Polybac POLYSEED

Triethylene glycol monoethyl ether borate ester

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 222.2 mg/l, Oncorhynchus kisutch (Coho salmon)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: > 211.2 mg/l, Daphnia magna
Acute toxicity - aquatic plants	ErC ₅₀ , 72 hours: > 224.4 mg/l, Pseudokirchneriella subcapitata EC ₁₀ , NOEC, 72 hours: 224.4 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC ₁₀ , EC ₅₀ , 3 hours: > 1000 mg/l, Activated sludge NOEC, 3 hours: 1000 mg/l, Activated sludge

2-(2-(2-butoxyethoxy)ethoxy)ethanol

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 2400 mg/l, Pimephales promelas (Fat-head Minnow) LD ₀ , 96 hours: 2150 mg/l, Leuciscus idus (Golden orfe) LD ₁₀₀ , 96 hours: 4640 mg/l, Leuciscus idus (Golden orfe)
Acute toxicity - aquatic invertebrates	EC ₀ , 48 hours: > 500 mg/l, Daphnia magna EC ₅₀ , 48 hours: 2210 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₁₀ , 72 hours: 190 mg/l, Selenastrum capricornutum EC ₅₀ , 48 hours: 840 mg/l, Selenastrum capricornutum EC ₁₀ , 72 hours: 612 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC ₁₀ , NOEC, 30 minutes: > 1995 mg/l, Activated sludge IC ₅₀ , 16 hours: > 5000 mg/l, Activated sludge

triethylene glycol monomethyl ether

Acute aquatic toxicity

Acute toxicity - fish	LC ₀ , 96 hours: > 10000 mg/l, Leuciscus idus (Golden orfe) LC ₀ , 96 hours: > 5000 mg/l, Danio rerio LC ₅₀ , 96 hours: > 10000 mg/l, Pimephales promelas (Fat-head Minnow) NOEC, 96 hours: > 820 mg/l, Danio rerio
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Prestone High Performance DOT4 Brake Fluid

Acute toxicity - aquatic invertebrates	EC ₀ , 48 hours: > 500 mg/l, Daphnia magna EC ₅₀ , 48 hours: > 10000 mg/l, Daphnia magna EC ₅₀ , 48 hours: 47 g/L, QSAR
Acute toxicity - aquatic plants	EC ₂₀ , 72 hours: > 500 mg/l, Scenedesmus subspicatus EC ₅₀ , 96 hours: 4975 mg/l, QSAR NOEC, 96 hours: 1068 mg/l, QSAR
Acute toxicity - microorganisms	EC ₀ , 30 minutes: >2000 mg/l, Activated sludge IC ₁₀ , 16 hours: 5000 mg/l, Polybac POLYSEED IC ₅₀ , 16 hours: > 50000 mg/l, Activated sludge
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - fish early life stage	ChV, 30 days: 133 g/L, QSAR
Chronic toxicity - aquatic invertebrates	ChV, 21 days: 3152 mg/l, QSAR

Polyethylene glycol monobutyl ether

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 1800 mg/l, Scophthalmus maximus
Acute toxicity - aquatic invertebrates	EC ₅₀ , LC ₅₀ , 48 hours: > 3200 mg/l, Daphnia magna NOEC, 48 hours: 1800 mg/l, Daphnia magna EC ₅₀ , 48 hours: 310 mg/l, Acartia tonsa EC ₅₀ , 96 hours: > 1000 mg/l, Crangon crangon
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 2490 mg/l, Selenastrum capricornutum EC ₁₀ , NOEC, 72 hours: ca. 450 mg/l, Selenastrum capricornutum EC ₅₀ , 72 hours: 391 mg/l, Skeletonema costatum EC ₁₀ , NOEC, 72 hours: 188 mg/l, Skeletonema costatum
Acute toxicity - microorganisms	EC ₁₀ , NOEC, 30 minutes: > 1995 mg/l, Activated sludge IC ₅₀ , 16 hours: > 5000 mg/l, Activated sludge
Acute toxicity - terrestrial	LC ₅₀ , 10 days: 6597 mg/kg, Corophium volutator

tetraethylene glycol

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: > 10000 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hours: 7746 mg/l, Daphnia magna LC ₅₀ , 24 hours: > 10000 mg/l, Artemia salina
Acute toxicity - aquatic plants	NOEC, 72 hours: 5000 mg/l, Phaeodactylum tricornutum Toxicity threshold, 8 days: > 10000 mg/l, Scenedesmus quadricauda
Acute toxicity - microorganisms	EC ₂₀ , 30 minutes: > 100 mg/l, Activated sludge IC ₅₀ , 16 hours: 7500 mg/l, Activated sludge

Butyl diglycol

Acute aquatic toxicity

Prestone High Performance DOT4 Brake Fluid

Acute toxicity - fish	LC ₅₀ , 96 hours: 1300 mg/l, <i>Lepomis macrochirus</i> (Bluegill) LC ₅₀ , 96 hours: > 2000 mg/l, <i>Menidia beryllina</i> ELC50, 96 hours: 2400 mg/l, <i>Pimephales promelas</i> (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 96 hours: > 100 mg/l, <i>Daphnia magna</i>
Acute toxicity - aquatic plants	EC ₀ , EC ₅₀ , 96 hours: > 100 mg/l, <i>Scenedesmus subspicatus</i>
Acute toxicity - microorganisms	EC10, NOEC, 30 minutes: 1995 mg/l, Activated sludge
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - fish early life stage	ChV, NOEC, 30 days: 369 mg/l, QSAR
Chronic toxicity - aquatic invertebrates	EC ₅₀ , 14 days: 112 mg/l, QSAR

2,2'-OXYBISETHANOL

<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LC ₅₀ , 96 hours: 75200 mg/l, <i>Pimephales promelas</i> (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 24 hours: > 10000 mg/l, <i>Daphnia magna</i>
Acute toxicity - aquatic plants	EC10, NOEC, : 100 mg/l, Freshwater algae
Acute toxicity - microorganisms	EC ₂₀ , 30 minutes: > 1995 mg/l, Activated sludge
<u>Chronic aquatic toxicity</u>	
Toxicity to soil	63 days LC50 10974 mg/kg soil dw
Toxicity to terrestrial plants	21 days EC50, 20 077 mg/kg soil dw, seedling emergence, (<i>Elymus lanceolatus</i>), IC50, 1 471 mg/kg soil dw, shoot dry mass, (<i>Elymus lanceolatus</i>); EC50, 18 102 mg/kg soil dw, seedling emergence, (<i>Medicago sativa</i>), IC50, 3 041 mg/kg soil dw, growth, (<i>Medicago sativa</i>); IC50, 1 779 mg/kg soil dw, growth, (<i>Hordeum vulgare</i>).

diethylene glycol monoethyl ether

<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LC ₅₀ , 96 hours: 6010 mg/l, <i>Ictalurus punctatus</i> / <i>I. robustus</i> LC ₅₀ , 96 hours: > 10000 mg/l, <i>Lepomis macrochirus</i> (Bluegill)
Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hours: ca. 1982 mg/l, <i>Daphnia magna</i> LC ₅₀ , 96 hours: 4005 mg/l, <i>Daphnia magna</i>
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 14861 mg/l, <i>Selenastrum capricornutum</i>
Acute toxicity - microorganisms	IC ₅₀ , 16 hours: > 5000 mg/l, Sewage microorganisms

Prestone High Performance DOT4 Brake Fluid

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates EC10, 7 days: 7.38 mg/l, Ceriodaphnia dubia

1,1'-IMINODIPROPAN -2-OL

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 1466 mg/l, Danio rerio

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 277.7 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 339 mg/l, Scenedesmus subspicatus
ErC10, 72 hours: 219 mg/l, Scenedesmus subspicatus
ErC50, 72 hours: 240 mg/l, Skeletonema costatum

Acute toxicity - microorganisms EC₂₀, 30 minutes: > 1995 mg/l, Activated sludge
EC3, TTC (2,3,5,-triphenyltetrazolium chloride), 17 hours: 15000 mg/l, Pseudomonas putida

triethylene glycol

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: > 10000 mg/l, Lepomis macrochirus (Bluegill)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 10000 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC5, 8 days: > 10000 mg/l, Microcystis aeruginosa, Scenedesmus quadricauda
EC₅₀, 96 hours: 20518 mg/l, Green algae, QSAR

Acute toxicity - microorganisms EC10, 30 minutes: > 1995 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - fish early life stage LC₅₀, 28 days: > 1500 mg/l, Menidia peninsulae (Tidewater silverside)

Chronic toxicity - aquatic invertebrates NOEC, 23 days: > 1000 mg/l, Americamysis bahia

12.2. Persistence and degradability

Persistence and degradability No data available.

Biodegradation Data lacking.

Ecological information on ingredients.

Triethylene glycol monoethyl ether

Persistence and degradability Rapidly degradable

Triethylene glycol monoethyl ether borate ester

Persistence and degradability Rapidly degradable

Prestone High Performance DOT4 Brake Fluid

Stability (hydrolysis)	pH4 - DT ₅₀ : < 10 minutes @ 20°C pH7 - DT ₅₀ : < 10 minutes @ 20°C pH9 - DT ₅₀ : < 10 minutes @ 20°C Spontaneous hydrolysis observed
	<u>2-(2-(2-butoxyethoxy)ethoxy)ethanol</u>
Persistence and degradability	85% 28 days Rapidly degradable
	<u>triethylene glycol monomethyl ether</u>
Persistence and degradability	100% 13 days Rapidly degradable
	<u>Polyethylene glycol monobutyl ether</u>
Persistence and degradability	Rapidly degradable
Phototransformation	Air - Half-life : 1.6 - 2.4 hours
	<u>tetraethylene glycol</u>
Persistence and degradability	90-100% 20 days Rapidly degradable
Phototransformation	- Half-life : ~ 2.5 hours
	<u>Butyl diglycol</u>
Persistence and degradability	85% 28 days Rapidly degradable
	<u>2,2'-OXYBISETHANOL</u>
Persistence and degradability	Rapidly degradable
	<u>diethylene glycol monoethyl ether</u>
Persistence and degradability	100% 16 days Rapidly degradable 87% 20 days Rapidly degradable
Phototransformation	Air - Half-life : 4.1 hours
	<u>1,1'-IMINODIPROPAN -2-OL</u>
Persistence and degradability	94% 28 days Rapidly degradable
	<u>triethylene glycol</u>
Persistence and degradability	25 - 92% 28 days Rapidly degradable

12.3. Bioaccumulative potential

Prestone High Performance DOT4 Brake Fluid

Bioaccumulative potential No information available.

Ecological information on ingredients.

Triethylene glycol monoethyl ether

Partition coefficient log Pow: -0.6 @ 20 deg C

Triethylene glycol monoethyl ether borate ester

Bioaccumulative potential No potential for bioaccumulation.

Partition coefficient log Pow: < -1.0

2-(2-(2-butoxyethoxy)ethoxy)ethanol

Bioaccumulative potential The study does not need to be conducted because the substance has a low potential for bioaccumulation based on log Kow / log Pow <=3

Partition coefficient Log Kow (Log Pow): 0.51 @ 20 deg C

triethylene glycol monomethyl ether

Bioaccumulative potential The study does not need to be conducted because the substance has a low potential for bioaccumulation based on log Kow / log Pow <=3

Partition coefficient Log Kow (Log Pow): -1.12 @ 20 deg C

Polyethylene glycol monobutyl ether

Bioaccumulative potential The study does not need to be conducted because the substance has a low potential for bioaccumulation based on log Kow / log Pow <=3

Partition coefficient Log Kow (Log Pow): 0.44 @ 20 deg C

tetraethylene glycol

Bioaccumulative potential The study does not need to be conducted because the substance has a low potential for bioaccumulation based on log Kow / log Pow <=3

Partition coefficient Log Kow (Log Pow): -2.0 @ 25 deg C QSAR data.

Butyl diglycol

Bioaccumulative potential The study does not need to be conducted because the substance has a low potential for bioaccumulation based on log Kow / log Pow <=3

Partition coefficient Log Kow (Log Pow): 1.0 @ 20 deg C

2,2'-OXYBISETHANOL

Bioaccumulative potential BCF: 100 l/kg, Leuciscus idus (Golden orfe)

Partition coefficient log Pow: -1.98

diethylene glycol monoethyl ether

Bioaccumulative potential The study does not need to be conducted because the substance has a low potential for bioaccumulation based on log Kow / log Pow <=3

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Partition coefficient Log Kow (Log Pow): -0.54 @ 20 deg C

1,1'-IMINODIPROPAN -2-OL

Bioaccumulative potential The study does not need to be conducted because the substance has a low potential for bioaccumulation based on log Kow / log Pow <=3

Partition coefficient : -0.79 @ 23 deg C

triethylene glycol

Bioaccumulative potential The study does not need to be conducted because the substance has a low potential for bioaccumulation based on log Kow / log Pow <=3

Partition coefficient Log Kow (Log Pow): -1.75 @ 25 deg C QSAR data.

12.4. Mobility in soil

Ecological information on ingredients.

Triethylene glycol monoethyl ether borate ester

Adsorption/desorption coefficient Soil - Koc: 0.008 @ 20°C QSAR

triethylene glycol monomethyl ether

Adsorption/desorption coefficient No information available.

tetraethylene glycol

Adsorption/desorption coefficient - Koc: ~ 0.05 @ 20°C QSAR

Butyl diglycol

Henry's law constant 15.2 E-5 atm m³/mol @ 25°C

diethylene glycol monoethyl ether

Adsorption/desorption coefficient Scientifically unjustified. REACH dossier information.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

Triethylene glycol monoethyl ether

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Triethylene glycol monoethyl ether borate ester

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Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

2-(2-(2-butoxyethoxy)ethoxy)ethanol

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

triethylene glycol monomethyl ether

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Polyethylene glycol monobutyl ether

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

tetraethylene glycol

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Butyl diglycol

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

2,2'-OXYBISETHANOL

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

diethylene glycol monoethyl ether

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

1,1'-IMINODIPROPAN -2-OL

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

triethylene glycol

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

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Disposal methods Collect and place in suitable waste disposal containers and seal securely. Dispose of contents/container in accordance with local regulations.

SECTION 14: Transport information

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

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

Environmentally hazardous substance/marine pollutant

No.

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 Not applicable.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

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

National regulations The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

EU legislation 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).
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).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

15.2. Chemical safety assessment

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

ATE: Acute Toxicity Estimate.

BOD: Biochemical Oxygen Demand.

CAS: Chemical Abstracts Service.

DNEL: Derived No Effect Level.

EC₅₀: 50% of maximal Effective Concentration.

GHS: Globally Harmonized System.

IARC: International Agency for Research on Cancer.

IATA: International Air Transport Association.

ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

LC₅₀: Lethal Concentration to 50 % of a test population.

LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).

LOAEC: Lowest Observed Adverse Effect Concentration.

LOAEL: Lowest Observed Adverse Effect Level.

NOAEC: No Observed Adverse Effect Concentration.

NOAEL: No Observed Adverse Effect Level.

NOEC: No Observed Effect Concentration.

PBT: Persistent, Bioaccumulative and Toxic substance.

PNEC: Predicted No Effect Concentration.

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

SVHC: Substances of Very High Concern.

UVCB - Unknown or variable composition, complex reaction products or Biological materials.

vPvB: Very Persistent and Very Bioaccumulative.

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SDS number 13419

Hazard statements in full H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H361 Suspected of damaging fertility or the unborn child.