



PROTEX/BARDAHL DOT 3 BRAKE FLUID

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 10/31/2014

Version:

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

1.1. Product identifier

Product form : Mixture
Trade name : PROTEX/BARDAHL DOT 3 BRAKE FLUID
Product code : 58130 / 58132 / 58134

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

Use of the substance/mixture : Brake Fluid

1.3. Details of the supplier of the safety data sheet

Bardahl Manufacturing Corp.
1400 NW 52nd St.
Seattle, WA 98107
Tele: 206-783-4851

1.4. Emergency telephone number

Emergency number : CHEMTREC 24 Hour 1-800-424-9300, 1-703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Acute Tox. 4 (Oral) H302
Skin Irrit. 2 H315
Eye Dam. 1 H318
Repr. 2 H361
STOT RE 2 H373

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS05

GHS07

GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H302 - Harmful if swallowed
H315 - Causes skin irritation
H318 - Causes serious eye damage
H361 - Suspected of damaging fertility or the unborn child
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US) : P201 - Obtain special instructions
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust, fumes, gas, mist, vapor, spray
P264 - Wash affected areas thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P301+P312 - If swallowed: Call a poison center, doctor if you feel unwell
P302+P352 - If on skin: Wash with plenty of soap and water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313 - If exposed or concerned: Get medical advice/attention
P310 - Immediately call a poison center, doctor, physician
P314 - Get medical advice/attention if you feel unwell
P321 - Specific treatment: See section 4.1 on SDS
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P362 - Take off contaminated clothing and wash before reuse
P405 - Store locked up
P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

2.3. Other hazards

Other hazards not contributing to the : None under normal conditions.

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classification

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Triethylene Glycol Monomethyl Ether	(CAS No) 112-35-6	5 - 50	Not classified
Triethyleneglycol Monoethyl Ether	(CAS No) 112-50-5	5 - 50	Not classified
Triethylene Glycol Monobutyl Ether	(CAS No) 143-22-6	5 - 50	Eye Dam. 1, H318
3,6,9,12-Tetraoxahexadecane-1-ol	(CAS No) 1559-34-8	5 - 20	Not classified
Polyethylene Glycol 200-600	(CAS No) 25322-68-3	5 - 20	Not classified
2-(2-Butoxyethoxy) Ethanol	(CAS No) 112-34-5	5 - 20	Eye Irrit. 2A, H319
Tetraethylene Glycol Monomethyl Ether	(CAS No) 23783-42-8	5 - 20	Not classified
Oxirane, 2-Methyl-, Polymer with Oxirane, Monobutyl Ether	(CAS No) 9038-95-3	5 - 20	Not classified
Polyalkylene Glycol Monobutyl Ether	(CAS No) 9004-77-7	5 - 20	Not classified
Diethylene Glycol	(CAS No) 111-46-6	5 - 15	STOT RE 2, H373
Diethylene Glycol Monomethyl Ether	(CAS No) 111-77-3	< 5	Flam. Liq. 4, H227 Repr. 2, H361
Diethyleneglycolmonoethyl Ether	(CAS No) 111-90-0	< 5	Eye Irrit. 2A, H319
Trade Secret Inhibitor Package	(CAS No) TRADE SECRET	< 3	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact	: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a POISON CENTER/doctor/physician if you feel unwell.

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

Symptoms/injuries	: Suspected of damaging fertility or the unborn child. Causes damage to organs.
Symptoms/injuries after inhalation	: May cause irritation or asthma-like symptoms.
Symptoms/injuries after skin contact	: Itching. Skin rash/inflammation. Red skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Inflammation/damage of the eye tissue. Irritation of the eye tissue. Redness of the eye tissue. Causes serious eye damage.
Symptoms/injuries after ingestion	: May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways. Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources.
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6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses.
Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill. Contain released substance, pump into suitable containers. Plug the leak, cut off the supply.
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions . Do not handle until all safety precautions have been read and understood. Avoid breathing dust, fume, gas, mist, vapor spray.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed.
Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

Follow Label Directions.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-(2-Butoxyethoxy) Ethanol (112-34-5)		
USA ACGIH	ACGIH TWA (ppm)	10 ppm
USA ACGIH	ACGIH STEL (ppm)	10 ppm

8.2. Exposure controls

Appropriate engineering controls : Local exhaust ventilation, vent hoods.
Personal protective equipment : Gloves. Safety glasses. Avoid all unnecessary exposure.



Hand protection : Wear protective gloves.
Eye protection : Chemical goggles or safety glasses.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : Wear appropriate mask.
Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Light yellow to light amber.
Color : Colorless. light yellow.
Odor : Mild.

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Odor threshold	: No data available
pH	: 7.5 - 11.5
Relative evaporation rate (butyl acetate=1)	: < 0.01
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 232 - 273 °C
Flash point	: > 135 °C
Auto-ignition temperature	: 310 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: < 0.01 mm Hg
Relative vapor density at 20 °C	: > 1 (air=1)
Relative density	: 1.025 - 1.075
Solubility	: Soluble in water.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: 2 mm ² /s @ 100 Deg C
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

None. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Toxic fume. . Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

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LD50 oral rat	> 2000 mg/kg
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Triethylene Glycol Monomethyl Ether (112-35-6)

LD50 oral rat	11865 mg/kg (Rat)
LD50 dermal rabbit	7455 mg/kg (Rabbit)

Triethyleneglycol Monoethyl Ether (112-50-5)

LD50 oral rat	7750 mg/kg (Rat)
LD50 dermal rabbit	8168 mg/kg (Rabbit)

Triethylene Glycol Monobutyl Ether (143-22-6)

LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	3480 mg/kg (Rabbit)

3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)

LD50 oral rat	> 5000 mg/kg (Rat)
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3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
LD50 dermal rat	> 4000 mg/kg (Rat)

Polyethylene Glycol 200-600 (25322-68-3)	
LD50 oral rat	> 15000 mg/kg (Rat)
LD50 dermal rabbit	> 20000 mg/kg (Rabbit)

2-(2-Butoxyethoxy) Ethanol (112-34-5)	
LD50 oral rat	5660 mg/kg (Rat)
LD50 dermal rabbit	2764 mg/kg (Rabbit; Experimental value; OECD 402: Acute Dermal Toxicity)

Diethylene Glycol (111-46-6)	
LD50 oral rat	12565 mg/kg (Rat)
LD50 dermal rabbit	11890 mg/kg (Rabbit)

Diethylene Glycol Monomethyl Ether (111-77-3)	
LD50 oral rat	4140 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 20 mg/l/4h (Rat)

Diethyleneglycolmonoethyl Ether (111-90-0)	
LD50 oral rat	5445 mg/kg (Rat)
LD50 dermal rat	5940 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 5.2 mg/l/4h (Rat)

Tetraethylene Glycol Monomethyl Ether (23783-42-8)	
LD50 oral rat	> 15000 mg/kg (Rat)

Oxirane, 2-Methyl-, Polymer with Oxirane, Monobutyl Ether (9038-95-3)	
LD50 oral rat	> 2000 mg/kg body weight (Rat)
LD50 dermal rabbit	> 2000 mg/kg body weight (Rabbit)

Skin corrosion/irritation	: Causes skin irritation. pH: 7.5 - 11.5
Serious eye damage/irritation	: Causes serious eye damage. pH: 7.5 - 11.5
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Polyalkylene Glycol Monobutyl Ether (9004-77-7)	
IARC group	4

Reproductive toxicity	: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if swallowed.
Symptoms/injuries after inhalation	: May cause irritation or asthma-like symptoms.
Symptoms/injuries after skin contact	: Itching. Skin rash/inflammation. Red skin. Causes skin irritation.
Symptoms/injuries after eye contact	: Inflammation/damage of the eye tissue. Irritation of the eye tissue. Redness of the eye tissue. Causes serious eye damage.
Symptoms/injuries after ingestion	: May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways. Swallowing a small quantity of this material will result in serious health hazard.

SECTION 12: Ecological information

12.1. Toxicity

Triethylene Glycol Monomethyl Ether (112-35-6)	
LC50 fish 1	> 5000 mg/l (96 h; Brachydanio rerio; Measured concentration)
EC50 other aquatic organisms 1	> 5000 mg/l (16 h; Activated sludge; Cell numbers)
LC50 fish 2	> 10000 mg/l (96 h; Pimephales promelas)
TLM fish 1	> 1000 ppm (96 h; Pisces)

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Triethylene Glycol Monomethyl Ether (112-35-6)	
TLM other aquatic organisms 1	> 1000 ppm (96 h)
Threshold limit algae 1	> 500 mg/l (72 h; <i>Scenedesmus subspicatus</i>)
Triethyleneglycol Monoethyl Ether (112-50-5)	
LC50 fish 1	> 10000 mg/l (96 h; <i>Pimephales promelas</i>)
LC50 fish 2	> 5000 mg/l (24 h; <i>Pisces</i>)
Triethylene Glycol Monobutyl Ether (143-22-6)	
LC50 fish 1	2400 mg/l (96 h; <i>Pimephales promelas</i>)
EC50 Daphnia 1	3200 mg/l (24 h; <i>Daphnia magna</i>)
LC50 fish 2	2200 mg/l (96 h; <i>Leuciscus idus</i>)
EC50 Daphnia 2	> 500 mg/l (48 h; <i>Daphnia magna</i>)
Threshold limit algae 1	> 500 mg/l (72 h; <i>Scenedesmus subspicatus</i>)
3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
LC50 fish 1	> 1409 mg/l 96 h; <i>Salmo gairdneri</i> (<i>Oncorhynchus mykiss</i>)
EC50 Daphnia 1	> 1000 mg/l (48 h; <i>Daphnia magna</i>)
Polyethylene Glycol 200-600 (25322-68-3)	
LC50 fish 1	> 1000 mg/l (96 h; <i>Pisces</i>)
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
LC50 fish 2	> 5000 mg/l (24 h; <i>Carassius auratus</i>)
Threshold limit other aquatic organisms 1	<= 100 mg/l (96 h; <i>Plankton</i>)
Threshold limit other aquatic organisms 2	> 1000 mg/l
Threshold limit algae 2	500 mg/l (720 h; <i>Algae</i> ; No effect)
2-(2-Butoxyethoxy) Ethanol (112-34-5)	
LC50 fish 1	1300 mg/l (96 h; <i>Lepomis macrochirus</i>)
LC50 other aquatic organisms 1	10 - 100 mg/l (96 h)
EC50 Daphnia 1	2850 mg/l (24 h; <i>Daphnia magna</i> ; GLP)
LC50 fish 2	1805 mg/l (48 h; <i>Leuciscus idus</i>)
EC50 Daphnia 2	> 100 mg/l (48 h; <i>Daphnia magna</i>)
TLM fish 1	10 - 100,96 h; <i>Pisces</i>
TLM other aquatic organisms 1	10 - 100,96 h
Threshold limit other aquatic organisms 1	10 - 100,96 h
Threshold limit algae 1	53 mg/l (192 h; <i>Microcystis aeruginosa</i>)
Threshold limit algae 2	>= 100 mg/l (96 h; <i>Scenedesmus subspicatus</i>)
Diethylene Glycol (111-46-6)	
LC50 fish 1	> 5000 ppm (24 h; <i>Carassius auratus</i>)
LC50 other aquatic organisms 1	1174 mg/l (<i>Xenopus laevis</i>)
EC50 Daphnia 1	> 10000 mg/l (24 h; <i>Daphnia magna</i>)
LC50 fish 2	61072 ppm (168 h; <i>Poecilia reticulata</i>)
TLM fish 1	> 32000 mg/l (96 h; <i>Gambusia affinis</i>)
TLM other aquatic organisms 1	> 1000 ppm (96 h)
Threshold limit other aquatic organisms 1	1174 mg/l (72 h; <i>Xenopus laevis</i> ; Toxicity test)
Threshold limit other aquatic organisms 2	10745 mg/l (16 h; <i>Protozoa</i> ; Toxicity test)
Threshold limit algae 1	2700 mg/l (168 h; <i>Scenedesmus quadricauda</i>)
Threshold limit algae 2	100 mg/l (<i>Selenastrum capricornutum</i>)
Diethylene Glycol Monomethyl Ether (111-77-3)	
LC50 fish 1	1000 mg/l (96 h; <i>Salmo gairdneri</i> (<i>Oncorhynchus mykiss</i>); Static system)
EC50 Daphnia 1	> 500 mg/l (48 h; <i>Daphnia magna</i>)
LC50 fish 2	7500 ppm (96 h; <i>Lepomis macrochirus</i>)
Threshold limit algae 1	> 500 mg/l (72 h; <i>Scenedesmus subspicatus</i>)
Diethyleneglycolmonoethyl Ether (111-90-0)	
LC50 fish 1	12900 mg/l (96 h; <i>Salmo gairdneri</i> (<i>Oncorhynchus mykiss</i>); Flow-through system)
EC50 Daphnia 1	3940 mg/l (48 h; <i>Daphnia magna</i>)
EC50 other aquatic organisms 1	10661 mg/l (<i>Echinoidea</i> ; Growth)
LC50 fish 2	9650 mg/l (96 h; <i>Pimephales promelas</i> ; Flow-through system)
Tetraethylene Glycol Monomethyl Ether (23783-42-8)	
LC50 fish 1	> 10000 mg/l (96 h; <i>Brachydanio rerio</i>)

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Tetraethylene Glycol Monomethyl Ether (23783-42-8)	
Threshold limit other aquatic organisms 1	> 12500 mg/l (3 h; Activated sludge)

Oxirane, 2-Methyl-, Polymer with Oxirane, Monobutyl Ether (9038-95-3)	
LC50 fish 1	> 10000 mg/l (96 h; Pisces)
LC50 other aquatic organisms 1	> 10000 mg/l (96 h)
Threshold limit other aquatic organisms 1	> 10000 mg/l (96 h)

12.2. Persistence and degradability

PROTEX/BARDAHL DOT 3 BRAKE FLUID 64 FL.OZ.	
Persistence and degradability	Not established.

Triethylene Glycol Monomethyl Ether (112-35-6)	
Persistence and degradability	Inherently biodegradable. Non degradable in the soil. Photodegradation in the air.

Triethyleneglycol Monoethyl Ether (112-50-5)	
Persistence and degradability	Readily biodegradable in water.

Triethylene Glycol Monobutyl Ether (143-22-6)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.02 g O ₂ /g substance
Chemical oxygen demand (COD)	1.83 g O ₂ /g substance

3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
Persistence and degradability	Not readily biodegradable in water. Inherently biodegradable.
ThOD	2.05 g O ₂ /g substance

Polyethylene Glycol 200-600 (25322-68-3)	
Persistence and degradability	Biodegradability in water: no data available.

2-(2-Butoxyethoxy) Ethanol (112-34-5)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. No (test)data on mobility of the substance available. Photodegradation in the air.
Biochemical oxygen demand (BOD)	0.25 g O ₂ /g substance
Chemical oxygen demand (COD)	2.08 g O ₂ /g substance
ThOD	2.173 g O ₂ /g substance
BOD (% of ThOD)	0.11 % ThOD

Diethylene Glycol (111-46-6)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	0.02 g O ₂ /g substance
Chemical oxygen demand (COD)	1.51 g O ₂ /g substance
ThOD	1.51 g O ₂ /g substance
BOD (% of ThOD)	0.015 % ThOD

Diethylene Glycol Monomethyl Ether (111-77-3)	
Persistence and degradability	Readily biodegradable in water. Photolysis in the air. Photodegradation in the air.
Chemical oxygen demand (COD)	1.71 g O ₂ /g substance
ThOD	1.73 g O ₂ /g substance

Diethyleneglycolmonoethyl Ether (111-90-0)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.20 g O ₂ /g substance
Chemical oxygen demand (COD)	1.85 g O ₂ /g substance
ThOD	1.9078849 g O ₂ /g substance
BOD (% of ThOD)	0.11 % ThOD

Tetraethylene Glycol Monomethyl Ether (23783-42-8)	
Persistence and degradability	Inherently biodegradable. Photolysis in the air.

Oxirane, 2-Methyl-, Polymer with Oxirane, Monobutyl Ether (9038-95-3)	
Persistence and degradability	Not readily biodegradable in water.

Trade Secret Inhibitor Package (TRADE SECRET)	
Persistence and degradability	Not established.

Polyalkylene Glycol Monobutyl Ether (9004-77-7)	
Persistence and degradability	Not established.

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12.3. Bioaccumulative potential

PROTEX/BARDAHL DOT 3 BRAKE FLUID 64 FL.OZ.	
Bioaccumulative potential	Not established.
Triethylene Glycol Monomethyl Ether (112-35-6)	
Log Pow	-1.13
Bioaccumulative potential	Bioaccumulation: not applicable.
Triethyleneglycol Monoethyl Ether (112-50-5)	
Bioaccumulative potential	Not bioaccumulative.
Triethylene Glycol Monobutyl Ether (143-22-6)	
Log Pow	0.51 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)	
Log Pow	-0.26 (Calculated)
Bioaccumulative potential	Bioaccumulation: not applicable.
Polyethylene Glycol 200-600 (25322-68-3)	
Log Pow	-1.2
Bioaccumulative potential	Bioaccumulation: not applicable.
2-(2-Butoxyethoxy) Ethanol (112-34-5)	
BCF fish 1	0.46 (QSAR)
Log Pow	0.56 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Diethylene Glycol (111-46-6)	
Log Pow	-1.98
Bioaccumulative potential	Bioaccumulation: not applicable.
Diethylene Glycol Monomethyl Ether (111-77-3)	
Log Pow	-1.14 - -0.68
Bioaccumulative potential	Bioaccumulation: not applicable.
Diethyleneglycolmonoethyl Ether (111-90-0)	
Log Pow	-1.19 - -0.08
Bioaccumulative potential	Bioaccumulation: not applicable.
Tetraethylene Glycol Monomethyl Ether (23783-42-8)	
Log Pow	-0.6
Bioaccumulative potential	Bioaccumulation: not applicable.
Oxirane, 2-Methyl-, Polymer with Oxirane, Monobutyl Ether (9038-95-3)	
Bioaccumulative potential	Not bioaccumulative.
Trade Secret Inhibitor Package (TRADE SECRET)	
Bioaccumulative potential	Not established.
Polyalkylene Glycol Monobutyl Ether (9004-77-7)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Triethylene Glycol Monomethyl Ether (112-35-6)	
Surface tension	0.0314 N/m
2-(2-Butoxyethoxy) Ethanol (112-34-5)	
Surface tension	0.034 N/m (25 °C)
Diethylene Glycol (111-46-6)	
Surface tension	0.0485 N/m
Diethylene Glycol Monomethyl Ether (111-77-3)	
Surface tension	0.035 N/m (25 °C)
Diethyleneglycolmonoethyl Ether (111-90-0)	
Surface tension	0.032 N/m (25 °C)

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12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to appropriate waste disposal facility, in accordance with local, regional, national, international regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

US DOT (ground): Not Regulated,

ICAO/IATA (air): Not Regulated,

IMO/IMDG (water): Not Regulated,

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Not Regulated

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard Immediate (acute) health hazard
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2-(2-Butoxyethoxy) Ethanol (112-34-5)

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Reactive hazard
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15.2. International regulations

CANADA

2-(2-Butoxyethoxy) Ethanol (112-34-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects
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EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Repr.Cat.3; R63

Xi; R41

Full text of R-phrases: see section 16

15.2.2. National regulations

No additional information available

PROTEX/BARDAHL DOT 3 BRAKE FLUID

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

15.3. US State regulations

No additional information available

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 4	Flammable liquids Category 4
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
H227	Combustible liquid
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
H373	May cause damage to organs through prolonged or repeated exposure

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 1 - Must be preheated before ignition can occur.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 1 Slight Hazard

Physical : 0 Minimal Hazard

Personal Protection : B

SDS US (GHS HazCom 2012) - TCC

The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product

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