

#### 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 : JOHNSEN'S PREMIUM DOT 3 BRAKE FLUID 12 FL.OZ.

Product code : 2212

#### 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

Technical Chemical Company P.O. BOX 139 Cleburne, Texas 76033 T 817-645-6088

#### 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

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**

First-aid measures after inhalation

#### 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.

advice/attentio

First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation

: Assure fresh air breathing. Allow the victim to rest.

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. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Comply with

applicable regulations.

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 venilation, 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 : Liquid.

Color : Colourless to light yellow.

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Odor : Mild.

Odor threshold : No data available : 7.5 - 11.5 рΗ Relative evaporation rate (butyl acetate=1) : < 0.01

Melting point

: No data available : No data available Freezing point : 232 - 273 °C **Boiling point** : > 135 °C Flash point : 310 °C Auto-ignition temperature

Decomposition temperature : No data available : No data available Flammability (solid, gas) Vapor pressure : < 0.01 mm HgRelative 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<sup>2</sup>/s @ 100 deg C : No data available Viscosity, dynamic 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**

#### Reactivity

No additional information available

#### **Chemical stability**

Not established.

#### Possibility of hazardous reactions

Not established.

LD50 oral rat

LD50 dermal rabbit

#### **Conditions to avoid**

None. Direct sunlight. Extremely high or low temperatures.

#### Incompatible materials

Strong acids. Strong bases.

#### **Hazardous decomposition products**

Toxic fume. . Carbon monoxide. Carbon dioxide.

#### **SECTION 11: Toxicological information**

#### 11.1. Information on toxicological effects

: Harmful if swallowed. Acute toxicity

JOHNSEN'S PREMIUM DOT 3 BRAKE FLUID 12 FL.OZ.		
LD50 oral rat	> 2000 mg/kg	
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 dermal rabbit	8168 mg/kg (Rabbit)
Triethylene Glycol Monobutyl Ether (143-22-6)		
	LD50 oral rat	> 5000 mg/kg (Rat)

7750 mg/kg (Rat)

3480 mg/kg (Rabbit)

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3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)		
LD50 oral rat	> 5000 mg/kg (Rat)	
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 (237	283-42-81	
LD50 oral rat	> 15000 mg/kg (Rat)	
Oxirane, 2-Methyl-, Polymer with Oxirane, Mo	onobutyl 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.	
J	pH: 7.5 - 11.5	
Serious eye damage/irritation	: Causes serious eye damage.	
sonous eye damago/imanon	pH: 7.5 - 11.5	
Respiratory or skin sensitization	·	
	: Not classified	
Germ cell mutagenicity	: Not classified : Not classified	
Germ cell mutagenicity Carcinogenicity	<ul><li>Not classified</li><li>Not classified</li><li>Not classified</li></ul>	
Germ cell mutagenicity Carcinogenicity  Polyalkylene Glycol Monobutyl Ether (9004-	Not classified     Not classified     Not classified     Not classified  77-7)	
Germ cell mutagenicity Carcinogenicity  Polyalkylene Glycol Monobutyl Ether (9004- IARC group	: Not classified : Not classified : Not classified  77-7) 4	
Germ cell mutagenicity Carcinogenicity  Polyalkylene Glycol Monobutyl Ether (9004- IARC group Reproductive toxicity	<ul> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> </ul> 77-7)  4 <ul> <li>Suspected of damaging fertility or the unborn child.</li> </ul>	
Germ cell mutagenicity Carcinogenicity  Polyalkylene Glycol Monobutyl Ether (9004- IARC group Reproductive toxicity	: Not classified : Not classified : Not classified  77-7) 4	
	<ul> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> </ul> 77-7)  4 <ul> <li>Suspected of damaging fertility or the unborn child.</li> </ul>	
Germ cell mutagenicity Carcinogenicity  Polyalkylene Glycol Monobutyl Ether (9004- IARC group Reproductive toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated exposure)	<ul> <li>Not classified</li> <li>Not classified</li> <li>Not classified</li> </ul> 77-7) <ul> <li>4</li> <li>Suspected of damaging fertility or the unborn child.</li> <li>Not classified</li> </ul>	
Germ cell mutagenicity Carcinogenicity  Polyalkylene Glycol Monobutyl Ether (9004- IARC group Reproductive toxicity Specific target organ toxicity (single exposure) Specific target organ toxicity (repeated	Not classified     Not classified     Not classified  77-7)  4     Suspected of damaging fertility or the unborn child.     Not classified     May cause damage to organs through prolonged or repeated exposure.	

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.

Inflammation/damage of the eye tissue. Irritation of the eye tissue. Redness of the eye tissue. Symptoms/injuries after eye contact

Causes serious eye damage.

: May be harmful if swallowed and enters airways. May be fatal if swallowed and enters airways. Symptoms/injuries after ingestion

Swallowing a small quantity of this material will result in serious health hazard.

#### **SECTION 12: Ecological information**

#### **Toxicity** 12.1.

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)

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Triethylene Glycol Monomethyl Ether (112-35-6)			
TLM fish 1	> 1000 ppm (96 h; Pisces)		
TLM other aquatic organisms 1	> 1000 ppm (96 h)		
Threshold limit algae 1	> 500 mg/l (72 h; Scenedesmus subspicatus)		
Triethydene glycel Menesthyd Ether (442 E0 E)			
Triethyleneglycol Monoethyl Ether (112-50-5)			
LC50 fish 1	> 10000 mg/l (96 h; Pimephales promelas)		
LC50 fish 2	> 5000 mg/l (24 h; Pisces)		
Triethylene Glycol Monobutyl Ether (143-22-6			
LC50 fish 1	2400 mg/l (96 h; Pimephales promelas)		
EC50 Daphnia 1	3200 mg/l (24 h; Daphnia magna)		
LC50 fish 2	2200 mg/l (96 h; Leuciscus idus)		
EC50 Daphnia 2	> 500 mg/l (48 h; Daphnia magna)		
Threshold limit algae 1	> 500 mg/l (72 h; Scenedesmus subspicatus)		
·	7 COO High (12 II, Coolidacinac casciplicates)		
3,6,9,12-Tetraoxahexadecane-1-ol (1559-34-8)			
LC50 fish 1	> 1409 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)		
EC50 Daphnia 1	> 1000 mg/l (48 h; Daphnia magna)		
Polyethylene Glycol 200-600 (25322-68-3)			
LC50 fish 1	> 1000 mg/l (96 h; Pisces)		
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)		
LC50 fish 2	> 5000 mg/l (24 h; Carassius auratus)		
Threshold limit other aquatic organisms 1	<= 100 mg/l (96 h; Plankton)		
Threshold limit other aquatic organisms 2	> 1000 mg/l		
Threshold limit algae 2	500 mg/l (720 h; Algae; No effect)		
2-(2-Butoxyethoxy) Ethanol (112-34-5)			
LC50 fish 1	1300 mg/l (96 h; Lepomis macrochirus)		
LC50 other aquatic organisms 1	10 - 100 mg/l (96 h)		
EC50 Daphnia 1	2850 mg/l (24 h; Daphnia magna; GLP)		
LC50 fish 2	1805 mg/l (48 h; Leuciscus idus)		
EC50 Daphnia 2	> 100 mg/l (48 h; Daphnia magna)		
TLM fish 1	10 - 100,96 h; Pisces		
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; Microcystis aeruginosa)		
Threshold limit algae 2	>= 100 mg/l (96 h; Scenedesmus subspicatus)		
Tilleshold littlit algae 2	>= 100 mg/r (90 m, Scenedesmus subspicatus)		
Diethylene Glycol (111-46-6)			
LC50 fish 1	> 5000 ppm (24 h; Carassius auratus)		
LC50 other aquatic organisms 1	1174 mg/l (Xenopus laevis)		
EC50 Daphnia 1	> 10000 mg/l (24 h; Daphnia magna)		
LC50 fish 2	61072 ppm (168 h; Poecilia reticulata)		
TLM fish 1	> 32000 mg/l (96 h; Gambusia affinis)		
TLM other aquatic organisms 1	> 1000 ppm (96 h)		
Threshold limit other aquatic organisms 1	1174 mg/l (72 h; Xenopus laevis; Toxicity test)		
Threshold limit other aquatic organisms 2	10745 mg/l (16 h; Protozoa; Toxicity test)		
Threshold limit algae 1	2700 mg/l (168 h; Scenedesmus quadricauda)		
Threshold limit algae 2	100 mg/l (Selenastrum capricornutum)		
<u> </u>			
Diethylene Glycol Monomethyl Ether (111-77-3)			
LC50 fish 1	1000 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Static system)		
EC50 Daphnia 1	> 500 mg/l (48 h; Daphnia magna)		
LC50 fish 2	7500 ppm (96 h; Lepomis macrochirus)		
Threshold limit algae 1	> 500 mg/l (72 h; Scenedesmus subspicatus)		
Diethyleneglycolmonoethyl Ether (111-90-0)			
LC50 fish 1	12900 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Flow-through system)		
EC50 Daphnia 1	3940 mg/l (48 h; Daphnia magna)		
EC50 other aquatic organisms 1	10661 mg/l (Echinoidea; Growth)		
LC50 fish 2	9650 mg/l (96 h; Pimephales promelas; Flow-through system)		

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Tetraethylene Glycol Monomethyl Ether (23783-42-8)			
LC50 fish 1	> 10000 mg/l (96 h; Brachydanio rerio)		
Threshold limit other aquatic organisms 1	> 12500 mg/l (3 h; Activated sludge)		
Oxirane, 2-Methyl-, Polymer with Oxirane, Mo	nobutyl 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			
JOHNSEN'S PREMIUM DOT 3 BRAKE FLUID	12 EL 07		
Persistence and degradability	Not established.		
Triethylene Glycol Monomethyl Ether (112-35			
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 <sub>2</sub> /g substance		
Chemical oxygen demand (COD)	1.83 g O <sub>2</sub> /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 <sub>2</sub> /g substance		
Delivethylene Chical 200 C00 (25222 C0.2)			
Polyethylene Glycol 200-600 (25322-68-3) Persistence and degradability	Biodegradability in water: no data available.		
	blouegradability 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 <sub>2</sub> /g substance		
Chemical oxygen demand (COD)	2.08 g O <sub>2</sub> /g substance		
ThOD	2.173 g O <sub>2</sub> /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 <sub>2</sub> /g substance		
Chemical oxygen demand (COD)	1.51 g O <sub>2</sub> /g substance		
ThOD	1.51 g O <sub>2</sub> /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 <sub>2</sub> /g substance		
ThOD	1.73 g O <sub>2</sub> /g substance		
Diethyleneglycolmonoethyl Ether (111-90-0)			
Persistence and degradability	Readily biodegradable in water.		
Biochemical oxygen demand (BOD)	0.20 g O <sub>2</sub> /g substance		
Chemical oxygen demand (COD)	1.85 g O <sub>2</sub> /g substance		
ThOD	1.9078849 g O <sub>2</sub> /g substance		
BOD (% of ThOD)	0.11 % ThOD		
Tetraethylene Glycol Monomethyl Ether (2378	33-42-8)		
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 SEC			
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		
JOHNSEN'S PREMIUM DOT 3 BRAKE FLUID 12 FL.OZ.		
Bioaccumulative potential	Not established.	
·		
Triethylene Glycol Monomethyl Ether (112-35		
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	-1.140.68	
Bioaccumulative potential	Bioaccumulation: not applicable.	
Diethyleneglycolmonoethyl Ether (111-90-0)		
Log Pow	-1.190.08	
Bioaccumulative potential	Bioaccumulation: not applicable.	
Tetraethylene Glycol Monomethyl Ether (2378	(3-42-8)	
Log Pow	-0.6	
Bioaccumulative potential	Bioaccumulation: not applicable.	
Oxirane, 2-Methyl-, Polymer with Oxirane, Mo	nobutyl Ethor (0039-05-3)	
Bioaccumulative potential	Not bioaccumulative.	
'		
Trade Secret Inhibitor Package (TRADE SEC	•	
Bioaccumulative potential	Not established.	
Polyalkylene Glycol Monobutyl Ether (9004-7		
Bioaccumulative potential	Not established.	
12.4. Mobility in soil		
Triethylene Glycol Monomethyl Ether (112-35	·	
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

JOHNSEN'S PREMIUM DOT 3 BRAKE FLUID 12 FL.OZ.	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
	Immediate (acute) health hazard

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

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

#### 15.2. International regulations

#### CANADA

2-(2-Butoxyethoxy) Ethanol (112-34-5)	
Listed on the Canadian DSL (Domestic Sustances List)	
WHMIS Classification	Class B Division 3 - Combustible Liquid Class D Division 2 Subdivision B - Toxic material causing other toxic effects

#### **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

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#### 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

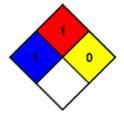
NFPA health hazard : 1 - Exposure could cause irritation but only minor residual

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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