

Flo-Perm DOT 3 Brake Fluid

SAFETY DATA SHEET

SECTION 1: Identification

Product identifier

Product name	Flo-Perm DOT 3 Brake Fluid
Part No.	90279, 90280, 90745, 90744, 90743, 90634, 90558
Recommended Use	Automotive brake fluid
Restrictions on Use	None known

Supplier's details

Name	Vulsay Industries Ltd.
Address	35 Regan Road Brampton, Ontario L7A 1B2 Canada
Telephone	905 846 2200
Fax	905 846 2249

Emergency phone number(s) 24 hours EMERGENCY Phone # - 1-800-468-1760

SECTION 2: Hazard identification

Classification of the substance or mixture

GHS classification in accordance with: (CAN) WHMIS 2015

- Eye damage/irritation (chapter 3.3), Cat. 2A
- Specific target organ toxicity, repeated exposure (chapter 3.9), Cat. 2
- Acute toxicity, inhalation (chapter 3.1), Cat. 4
- Acute toxicity, oral (chapter 3.1), Cat. 4
- Eye damage/irritation (chapter 3.3), Cat. 1

GHS label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)
H302 Harmful if swallowed
H318 Causes serious eye damage

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H319 Causes serious eye irritation
 H332 Harmful if inhaled
 H373 May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Precautionary statement(s)

P260 Do not breathe mist, vapours, spray.
 P280 Wear protective gloves, protective clothing, eye protection
 P264 Wash contact areas thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor
 P501 Dispose of contents, container in accordance with local, regional, national regulation

SECTION 3: Composition/information on ingredients

Hazardous components

Component	Concentration
2-[2-(2-butoxyethoxy)ethoxy]ethanol (CAS no.: 143-22-6; EC no.: 205-592-6; Index no.: 603-183-00-0)	15 - 50 % (Weight)
DIETHYLENE GLYCOL (CAS no.: 111-46-6; EC no.: 203-872-2; Index no.: 603-140-00-6)	15 - 25 % (Weight)
Ethanol, 2-[2-(2-ethoxyethoxy)ethoxy]- (CAS no.: 112-50-5)	10 - 15 % (Weight)
2-(2-BUTOXYETHOXY)ETHANOL (CAS no.: 112-34-5; EC no.: 203-961-6; Index no.: 603-096-00-8)	5 - 15 % (Weight)
Ethanol, 2-(2-propoxyethoxy)- (CAS no.: 6881-94-3)	2 - 5 % (Weight)

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact Wash off with soap and plenty of water. Get medical attention if symptoms occur.

In case of eye contact Rinse thoroughly with plenty of water for at least 30 minutes. Remove contact lenses, if present and easy to do. Get medical attention at once.

If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms/effects, acute and delayed

Symptoms/injuries: General - Causes serious eye damage. Causes damage to organs through prolonged or repeated exposure. Causes serious eye irritation.
 Symptoms/Injuries After Inhalation: Prolonged exposure may cause irritation.
 Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.
 Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

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Symptoms/Injuries After Ingestion: Acute exposure of humans to ethylene glycol by ingesting large quantities causes three stages of health effects. CNS depression, including such symptoms as vomiting, drowsiness, coma, respiratory failure, convulsions, metabolic changes, and gastrointestinal upset are followed by cardiopulmonary effects and later renal damage.

Chronic Symptoms: May cause damage to organs through prolonged or repeated exposure.

Indication of immediate medical attention and special treatment needed, if necessary

If exposed or concerned, get medical advice and attention immediately. If medical advice is needed, have product container or label at hand.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Suitable Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Specific hazards arising from the chemical

Fire Hazard: Not considered flammable but may burn at high temperatures.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Special protective actions for fire-fighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present.

Firefighting Instructions: Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid breathing vapours, mist or gas. DO NOT get into eyes, on skin, or on clothing. Wash hands before breaks and immediately after handling the product. Use appropriate personal protective equipment.

Environmental precautions

Should not be released into the environment. Do not allow into any sewer, on the ground or into any waterway.

Methods and materials for containment and cleaning up

SMALL SPILLS: Contain and absorb with absorbent material and place into containers for later disposal. Wash site of spillage thoroughly with water. LARGE SPILLS: Dike far ahead of spill to prevent further movement. Recover by pumping or by using a suitable absorbent material and place into containers for later disposal. Dispose in suitable waste container.

SECTION 7: Handling and storage

Precautions for safe handling

Ensure adequate ventilation. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

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SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 111-46-6 (EC: 203-872-2)

DIETHYLENE GLYCOL

ACGIH: 10 mg/m³ TWA inhalation

CAS: 112-34-5

2-(2-BUTOXYETHOXY)ETHANOL

ACGIH: 10 ppm TWA inhalation

CAS: 112-50-5

Ethanol, 2-[2-(2-ethoxyethoxy)ethoxy]-

No data available

CAS: 143-22-6

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

No data available

CAS: 6881-94-3

Ethanol, 2-(2-propoxyethoxy)-

No data available

Appropriate engineering controls

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Chemical safety goggles

Skin protection

Wear suitable protective clothing.

Body protection

Materials for Protective Clothing: Chemically resistant materials and fabrics.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection

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Environmental exposure controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance/form (physical state, color, etc.)	Clear to amber, Liquid
Odor	No data available.
Odor threshold	No data available.
pH	10.5
Melting point/freezing point	No data available.
Initial boiling point and boiling range	205 deg C
Flash point	203 deg C
Evaporation rate	No data available.
Flammability (solid, gas)	No data available.
Upper/lower flammability limits	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Relative density	1.04 - 1.07
Solubility(ies)	No data available.
Partition coefficient: n-octanol/water	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	<1500 cSt
Explosive properties	No data available.
Oxidizing properties	No data available.

SECTION 10: Stability and reactivity

Reactivity

Hazardous reactions will not occur under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to avoid

Do not store beside incompatible materials

Incompatible materials

Strong acids, strong bases, strong oxidizers.

Hazardous decomposition products

CO, CO₂, Nitrogen oxides

SECTION 11: Toxicological information

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Information on toxicological effects

Acute toxicity

Triethylene glycol monoethyl ether (112-50-5)

LD50 Oral Rat

7750 mg/kg

Diethylene glycol monoethyl ether (111-90-0)

LD50 Oral Rat

6031 mg/kg

LC50 Inhalation Rat

> 5240 mg/m³ (Exposure time: 4 h)

Diethylene glycol monobutyl ether (112-34-5)

LD50 Oral Rat

5660 mg/kg

LD50 Dermal Rabbit

2700 mg/kg

Diethylene glycol (111-46-6)

LD50 Oral Rat

1120 mg/kg

LD50 Dermal Rabbit

11890 mg/kg

Skin corrosion/irritation

Not classified

Serious eye damage/irritation

Causes serious eye damage

Respiratory or skin sensitization

Not classified

Germ cell mutagenicity

Not classified

Carcinogenicity

Not classified

Reproductive toxicity

Not classified

STOT-single exposure

Not classified

STOT-repeated exposure

May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Aspiration hazard

Not classified

Additional information

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Symptoms/injuries: General - Causes serious eye damage. Causes damage to organs through prolonged or repeated exposure. Causes serious eye irritation.

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Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: Causes permanent damage to the cornea, iris, or conjunctiva.

Symptoms/Injuries After Ingestion: Acute exposure of humans to ethylene glycol by ingesting large quantities causes three stages of health effects. CNS depression, including such symptoms as vomiting, drowsiness, coma, respiratory failure, convulsions, metabolic changes, and gastrointestinal upset are followed by cardiopulmonary effects and later renal damage.

Chronic Symptoms: May cause damage to organs through prolonged or repeated exposure.

SECTION 12: Ecological information

Toxicity

Ecology - General: Not classified.

Triethylene glycol monobutyl ether (143-22-6)

LC50 Fish 1

2400 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

EC50 Daphnia 1

> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)

LC50 Fish 2

2400 mg/l (Exposure time: 96 h - Species: Pimephales promelas)

Diethylene glycol (111-46-6)

LC50 Fish 1

75200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

EC50 Daphnia 1

84000 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Diethylene glycol monobutyl ether (112-34-5)

LC50 Fish 1

1300 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])

EC50 Daphnia 1

> 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Persistence and degradability

No data available.

Bioaccumulative potential

Bioaccumulative Potential

Not established.

Triethylene glycol monobutyl ether (143-22-6)

BCF Fish 1

(no significant bioaccumulation)

Log Pow

0.51 at 25 °C (77 °F)

Diethylene glycol (111-46-6)

BCF Fish 1

100 - 180

Log Pow

-1.98 at 25 °C (77 °F)

Diethylene glycol monobutyl ether (112-34-5)

BCF Fish 1

(no bioconcentration expected)

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Mobility in soil

No data available.

Results of PBT and vPvB assessment

No data available.

Other adverse effects

Avoid release to the environment.

SECTION 13: Disposal considerations

Disposal of the product

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Disposal of contaminated packaging

Container may remain hazardous when empty. Continue to observe all precautions.

SECTION 14: Transport information

UN Number None

UN Proper Shipping Name None

Not regulated under Canadian TDG Regulations

Not regulated under US DOT Regulations

Special precautions for user None

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question**Canadian Domestic Substances List (DSL)**

All ingredients of this product are listed on the Canadian Domestic Substances List (DSL)

Toxic Substances Control Act (TSCA) Inventory

All ingredients of this product are listed on the United States Toxic Substances Control Act (TSCA)

SECTION 16: Other information

SDS Prepared By: Quality Assurance Department

Phone #: 905 846 2200

Preparation date: March 06, 2016

Revision #: First Issue

Further information/disclaimer



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The recommendations and data presented herein are based on sources considered to be reliable. However, no warranty is expressed or implied regarding the accuracy of the data or the results obtained from the use of this information or the use of product. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.