

Material Safety Data Sheet

PETRO-CANADA BRAKE FLUID



000003000648

Version 2.0

Revision Date 2014/10/10

Print Date 2014/10/10

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : PETRO-CANADA BRAKE FLUID

Manufacturer or supplier's details

Petro-Canada
P.O. Box 2844, 150 - 6th Avenue South-West
Calgary Alberta T2P 3E3
Canada

Emergency telephone number

Suncor Energy: +1 403-296-3000;
Poison Control Centre: Consult local telephone directory for emergency number(s).

Recommended use of the chemical and restrictions on use

Recommended use : Brake Fluid is a synthetic glycol-based fluid for use in automobile applications requiring DOT 3 type fluids.

Prepared by : Product Safety: +1 905-804-4752

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Caution	
Form	viscous liquid
Colour	Colourless to light amber.
Odour	No data available
Hazard Summary	Harmful if swallowed. Causes eye and skin irritation.

Potential Health Effects

Primary Routes of Entry : Eye contact
Ingestion
Inhalation
Skin contact

Inhalation : May cause respiratory tract irritation.

Skin : Causes skin irritation.

Eyes : Causes eye irritation.

Ingestion : Harmful if swallowed.

Aggravated Medical Condition : None known.

Carcinogenicity:



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IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration (%)
2-(2-(2-ethoxyethoxy)ethoxy)ethanol	112-50-5	50 - 70 %
Poly(oxy-1,2-ethanediyl), .alpha.-hydro.-omega.-hydroxy-Ethane-1,2-diol, ethoxylated	25322-68-3	15 - 40 %
2,2'-oxybisethanol	111-46-6	10 - 12 %

SECTION 4. FIRST AID MEASURES

If inhaled	: Move to fresh air. Artificial respiration and/or oxygen may be necessary. Seek medical advice.
In case of skin contact	: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognized skin cleanser. Wash contaminated clothing before re-use. Seek medical advice.
In case of eye contact	: Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
If swallowed	: Rinse mouth with water. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Seek medical advice.

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Most important symptoms and effects, both acute and delayed : First aider needs to protect himself.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media : No information available.

Specific hazards during firefighting : Cool closed containers exposed to fire with water spray.

Hazardous combustion products : Carbon oxides (CO, CO₂), smoke and irritating vapours as products of incomplete combustion.

Specific extinguishing methods : Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
Wear a positive-pressure supplied-air respirator with full facepiece.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Material can create slippery conditions.

Environmental precautions : If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Prevent further leakage or spillage if safe to do so.
Remove all sources of ignition.
Soak up with inert absorbent material.
Non-sparking tools should be used.
Ensure adequate ventilation.
Contact the proper local authorities.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
In case of insufficient ventilation, wear suitable respiratory equipment.
Avoid contact with skin, eyes and clothing.
Do not ingest.
Keep away from heat and sources of ignition.
Keep container closed when not in use.



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Conditions for safe storage : Store in original container.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Keep in a dry, cool and well-ventilated place.
Keep in properly labelled containers.
To maintain product quality, do not store in heat or direct sunlight.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Respiratory protection : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Filter type : organic vapour filter

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

Hand protection
Material

: nitrile rubber. Consult your PPE provider for breakthrough times and the specific glove that is best for you based on your use patterns. It should be realized that eventually any material regardless of their imperviousness, will get permeated by chemicals. Therefore, protective gloves should be regularly checked for wear and tear. At the first signs of hardening and cracks, they should be changed.

Eye protection : Chemical splash goggles should be worn when handling this material.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Protective measures : Wash contaminated clothing before re-use.
No special protective equipment required.

Hygiene measures : Remove and wash contaminated clothing and gloves, including the inside, before re-use.
Wash face, hands and any exposed skin thoroughly after handling.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: viscous liquid
Colour	: Colourless to light amber.
Odour	: No data available
Odour Threshold	: No data available
pH	: No data available
Pour point	: No data available
Boiling point/boiling range	: 235 - 246 °C (455 - 475 °F)
Flash point	: 132 °C (270 °F) Method: Pensky-Martens closed cup
Fire Point	: No data available
Auto-Ignition Temperature	: No data available
Evaporation rate	: No data available
Flammability	: Low fire hazard. This material must be heated before ignition will occur.
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapour pressure	: < 0.1 mmHg (20 °C / 68 °F)
Relative density	: 1.038 - 1.04
Density	: No data available
Solubility(ies)	
Water solubility	: completely soluble
Partition coefficient: n-octanol/water	: No data available
Viscosity	
Viscosity, kinematic	: No data available
Explosive properties	: Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	: Hazardous polymerisation does not occur. Stable under normal conditions.
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Conditions to avoid	: No data available
Incompatible materials	: Reactive with oxidising agents.
Hazardous decomposition products	: May release CO _x , smoke and irritating vapours when heated to decomposition.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product:

Acute oral toxicity	: Remarks: Toxic if swallowed.
Acute inhalation toxicity	: Remarks: No data available
Acute dermal toxicity	: Remarks: No data available

Components:

2-(2-(2-ethoxyethoxy)ethoxy)ethanol:

Acute oral toxicity	: LD50 Rat: 7,750 mg/kg, LD50 Mouse: 5,798 mg/kg,
Acute dermal toxicity	: LD50 Rabbit: 8,170 mg/kg,

2,2'-oxybisethanol:

Acute oral toxicity	: LD50 Rat: 12,000 mg/kg, LD50 Mouse: 2,300 mg/kg,
Acute dermal toxicity	: LD50 Rabbit: 11,890 mg/kg,

Skin corrosion/irritation

Product:

Result: Skin irritation

Serious eye damage/eye irritation

Product:

Result: Eye irritation

Remarks: There is no data available for this product.

Respiratory or skin sensitisation

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No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

2-(2-(2-ethoxyethoxy)ethoxy)ethanol:

Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-Ethane-1,2-diol, ethoxylated:

2,2'-oxybisethanol:

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Aspiration toxicity

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae : Remarks: No data available

Toxicity to bacteria : Remarks: No data available

Persistence and degradability

Product:

Biodegradability : Remarks: No data available

No data available

Bioaccumulative potential

Product:

Partition coefficient: n-octanol/water : Remarks: No data available

Mobility in soil

No data available

Other adverse effects

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No data available

Product:

Additional ecological information : No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Offer surplus and non-recyclable solutions to a licensed disposal company.
Waste must be classified and labelled prior to recycling or disposal.
Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.
Dispose of product residue in accordance with the instructions of the person responsible for waste disposal.

SECTION 14. TRANSPORT INFORMATION

International Regulation

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

49 CFR

Not regulated as a dangerous good

TDG

Not regulated as a dangerous good

Special precautions for user

Not applicable

SECTION 15. REGULATORY INFORMATION

OSHA Hazards

WHMIS Classification

: Toxic by ingestion, Moderate skin irritant, Moderate eye irritant
: D1B: Toxic Material Causing Immediate and Serious Toxic Effects
D2B: Toxic Material Causing Other Toxic Effects
Toxic by ingestion

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Moderate skin irritant
Moderate eye irritant

The components of this product are reported in the following inventories:

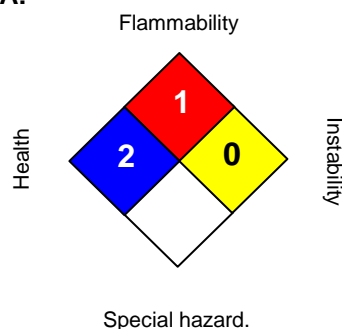
DSL
TSCA

On the inventory, or in compliance with the inventory
All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

For Copy of (M)SDS

: Internet: www.petro-canada.ca/msds
Canada-wide: telephone: 1-800-668-0220; fax: 1-800-837-1228
For Product Safety Information: 1 905-804-4752

Prepared by

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