

1. Identification

Product number FVPBF312, FVPBF31GAL, FVPBF332
Product identifier **DOT 3 BRAKE FLUID**
Revision date 09-13-2018
Company information Factory Motor Parts
 1380 Corporate Center Curve
 Ste. 200
 Eagan, MN 55121 United States
Company phone (866) 387-3343
Emergency telephone US 1-800-424-9300
Emergency telephone outside US 1-703-527-3887
Version # 03
Supersedes date 08-17-2018
Recommended use Cleaner
Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards Not classified.
Health hazards Reproductive toxicity Category 2
 Specific target organ toxicity, repeated exposure Category 2
OSHA defined hazards Not classified.
Label elements



Signal word Warning
Hazard statement Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.
Precautionary statement
Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Wear protective gloves/protective clothing/eye protection/face protection.
Response If exposed or concerned: Get medical advice/attention.
Storage Store locked up.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC) None known.
Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Diethylene Glycol Monobutyl Ether		112-34-5	2.5 - 10
Diethylene Glycol n-Butyl Ether		111-46-6	2.5 - 10
Polyethylene Glycol		25322-68-3	2.5 - 10

Chemical name	Common name and synonyms	CAS number	%
Diethylene Glycol Monomethyl Ether		111-77-3	0.1 - 1
Other components below reportable levels			90 - 100

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Use water spray to reduce vapors or divert vapor cloud drift. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist or vapor. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Diethylene Glycol Monobutyl Ether (CAS 112-34-5)	TWA	10 ppm	Inhalable fraction and vapor.

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Diethylene Glycol n-Butyl Ether (CAS 111-46-6)	TWA	10 mg/m3	
Polyethylene Glycol (CAS 25322-68-3)	TWA	10 mg/m3	Particulate.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical respirator with organic vapor cartridge and full facepiece.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other

Use of an impervious apron is recommended.

Respiratory protection

Chemical respirator with organic vapor cartridge and full facepiece.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Liquid.

Color

Not available.

Odor

Not available.

Odor threshold

Not available.

pH

8.6

Melting point/freezing point

-59.8 °F (-51 °C) Supplier estimated / < -58 °F (< -50 °C) Supplier

Initial boiling point and boiling range

500 °F (260 °C) 760 mmHg ASTM E1719

Flash point

280.4 °F (138.0 °C) Pensky-Martens Closed Cup Supplier

Evaporation rate

Not available.

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Not available.

Flammability limit - upper (%)

Not available.

Explosive limit - lower (%)

Not available.

Explosive limit - upper (%)

Not available.

Vapor pressure

< 0.01 mm Hg @ 20C estimated

Vapor density

Not available.

Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	590 °F (310 °C) supplier
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Flammability class	Combustible IIIB estimated
Heat of combustion (NFPA 30B)	1.65 kJ/g estimated
Kinematic viscosity	990 cSt @-40 °C ISO 3104
Oxidizing properties	Not oxidizing.
Percent volatile	25.79 % estimated
Specific gravity	1.06 supplier estimated
VOC (Weight %)	25.79 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics
Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	Species	Test Results
Diethylene Glycol Monobutyl Ether (CAS 112-34-5)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	2764 mg/kg, 24 Hours
	Rat	2021 mg/kg
Inhalation		
LC50	Rat	74 mg/l/4h
Oral		
LD100	Rabbit	4000 mg/kg
LD50	Guinea pig	2000 mg/kg
	Mouse	2410 mg/kg

Components	Species	Test Results
Diethylene Glycol Monomethyl Ether (CAS 111-77-3)	Rabbit	2500 - 3000 mg/kg
	Rat	7291 mg/kg
<u>Acute</u>		
Dermal		
LD50	Guinea pig	8000 mg/kg, Days
	Rabbit	9404 mg/kg, 24 Hours
		8980 ml/kg
Oral		
LD100	Rabbit	10000 mg/kg
LD50	Cat	> 4080 mg/kg
	Guinea pig	4160 mg/kg
	Mouse	7128 mg/kg
	Rabbit	> 4000 mg/kg
	Rat	7128 mg/kg
		6700 ml/kg

Diethylene Glycol n-Butyl Ether (CAS 111-46-6)

Acute

Oral

LD50	Human	1120 mg/kg
	Rat	16500 mg/kg

Polyethylene Glycol (CAS 25322-68-3)

Acute

Oral

LD50	Rat	4300 mg/kg
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* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

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 an aspiration hazard.

Chronic effects May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Diethylene Glycol Monobutyl Ether (CAS 112-34-5)			
Aquatic			
Crustacea	EC50	Daphnia	2803 mg/L, 48 Hours
Fish	LC50	Bluegill (Lepomis macrochirus)	1300 mg/l, 96 hours
		Fish	1304 mg/L, 96 Hours
Diethylene Glycol Monomethyl Ether (CAS 111-77-3)			
Aquatic			
Algae	IC50	Algae	500.0001 mg/L, 72 Hours
Crustacea	EC50	Daphnia	500.0001 mg/L, 48 Hours
Fish	LC50	Bluegill (Lepomis macrochirus)	7500 mg/l, 96 hours
Diethylene Glycol n-Butyl Ether (CAS 111-46-6)			
Aquatic			
Crustacea	EC50	Daphnia	84000 mg/L, 48 Hours
Fish	LC50	Western mosquitofish (Gambusia affinis)	> 32000 mg/l, 96 hours
Polyethylene Glycol (CAS 25322-68-3)			
Aquatic			
Fish	LC50	Atlantic salmon (Salmo salar)	> 1000 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Diethylene Glycol Monobutyl Ether 0.56

Mobility in soil

No data available.

Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations

Dispose in accordance with all applicable regulations.

Hazardous waste code

The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Diethylene Glycol Monomethyl Ether (CAS 111-77-3)

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Diethylene Glycol Monomethyl Ether (CAS 111-77-3)

Diethylene Glycol n-Butyl Ether (CAS 111-46-6)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene Glycol Monomethyl Ether (CAS 109-86-4) Listed: January 1, 1989

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Ethylene Glycol Monomethyl Ether (CAS 109-86-4) Listed: January 1, 1989

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 08-09-2018

Revision date 09-13-2018

Version # 03

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