



# Safety Data Sheet

Issue Date: 14-Oct-2011

Revision Date: 11-May-2015

Version 1

## 1. IDENTIFICATION

### Product Identifier

Product Name DOT-3 BRAKE FLUID

### Other means of identification

SDS # 7777-015

Product Code 6364

### Recommended use of the chemical and restrictions on use

Recommended Use Brake fluid.

### Details of the supplier of the safety data sheet

#### Supplier Address

PETRA OIL COMPANY  
6100 WEST by NORTHWEST BLVD STE 190  
Houston, TX 77040

### Emergency Telephone Number

Emergency Telephone (24 hr) CHEMTREC 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

Appearance Clear yellow to amber liquid

Physical State Liquid

Odor Mild

### Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Serious eye damage/eye irritation	Category 1
Reproductive toxicity	Category 2

### Signal Word

Danger

### Hazard Statements

Harmful if swallowed  
Harmful in contact with skin  
Causes serious eye damage  
Suspected of damaging fertility or the unborn child



**Precautionary Statements - Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product

**Precautionary Statements - Response**

If exposed or concerned: Get medical advice/attention  
 IF IN EYES: 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  
 IF ON SKIN: Wash with plenty of soap and water  
 Wash contaminated clothing before reuse  
 Call a poison center or doctor/physician if you feel unwell  
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 Rinse mouth

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Unknown Acute Toxicity**

20% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Triethylene glycol, monobutyl ether	143-22-6	5-50
Diethylene Glycol Monobutyl Ether	112-34-5	5-20
Diethylene glycol	111-46-6	5-15
Diethylene glycol monomethyl ether	111-77-3	<5

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

### 4. FIRST-AID MEASURES

**First Aid Measures**

<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. Call a poison center or doctor/physician if you feel unwell.
<b>Inhalation</b>	If symptomatic, move to fresh air. Seek immediate medical attention if irritation, nausea, dizziness or unconsciousness occurs.
<b>Ingestion</b>	Get medical attention if irritation occurs.

**Most important symptoms and effects**

<b>Symptoms</b>	Causes serious eye damage. May cause mild skin irritation. Inhalation may cause mild respiratory irritation. May cause discomfort if swallowed.
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**Indication of any immediate medical attention and special treatment needed**

<b>Notes to Physician</b>	Treat symptomatically.
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**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. Foam. Water spray (fog).

**Unsuitable Extinguishing Media** Water jet.

**Specific Hazards Arising from the Chemical**

Not determined.

**Hazardous Combustion Products** Smoke, fumes or vapors, and oxides of carbon. Various unidentified organic compounds.

**Sensitivity to Mechanical Impact** Not impact sensitive.

**Sensitivity to Static Discharge** Not sensitive.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

<b>Personal Precautions</b>	Use personal protective equipment as required.
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<b>Other Information</b>	Immediately contact emergency personnel.
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<b>Environmental Precautions</b>	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. The National Response Center (NRC) can be reached at 1-800-424-8802. See Section 12 for additional Ecological Information.
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**Methods and material for containment and cleaning up**

<b>Methods for Containment</b>	Small spill: Cover with a non-combustible material and remove to approved disposal container. For large spills, dike far ahead of spill for later disposal. Prevent runoff to storm sewers and ditches leading to natural waterways. Collect using an inert absorbent material and place in appropriate containers for disposal.
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<b>Methods for Clean-Up</b>	Keep in suitable, closed containers for disposal.
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**7. HANDLING AND STORAGE****Precautions for safe handling**

<b>Advice on Safe Handling</b>	Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid breathing vapors or mists. Use only with adequate ventilation. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
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**Conditions for safe storage, including any incompatibilities**

<b>Storage Conditions</b>	Keep containers tightly closed in a cool, well-ventilated place. Store away from incompatible materials. Store locked up. Store away from heat, sparks, flame.
<b>Incompatible Materials</b>	Acids. Bases. Oxidizers.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Diethylene Glycol Monobutyl Ether 112-34-5	TWA: 10 ppm inhalable fraction and vapor	-	-

**Appropriate engineering controls**

<b>Engineering Controls</b>	Ensure adequate ventilation, especially in confined areas.
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**Individual protection measures, such as personal protective equipment**

<b>Eye/Face Protection</b>	No special technical protective measures are necessary. Use chemical safety goggles if contact is likely.
<b>Skin and Body Protection</b>	No special technical protective measures are necessary. Avoid contact with skin.
<b>Respiratory Protection</b>	No protection is ordinarily required under normal conditions of use and with adequate ventilation.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash face, hands and any exposed skin thoroughly after handling.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Odor</b>	Mild
<b>Appearance</b>	Clear yellow to amber liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Clear yellow to amber		
<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>	
<b>pH</b>	10.0-11.5		
<b>Melting Point/Freezing Point</b>	Not determined		
<b>Boiling Point/Boiling Range</b>	248 °C / 480 °F		
<b>Flash Point</b>	> 135 °C / > 275 °F	CC (closed cup)	
<b>Evaporation Rate</b>	< 0.01	(butyl acetate = 1)	
<b>Flammability (Solid, Gas)</b>	Liquid-not applicable		
<b>Upper Flammability Limits</b>	Not determined		
<b>Lower Flammability Limit</b>	Not determined		
<b>Vapor Pressure</b>	Not determined		
<b>Vapor Density</b>	>1	(Air=1)	
<b>Specific Gravity</b>	1.000-1.070	@ 4°C (1=Water)	
<b>Water Solubility</b>	Soluble in water		
<b>Solubility in other solvents</b>	Not determined		
<b>Partition Coefficient</b>	Not determined		
<b>Auto-ignition Temperature</b>	Not determined		
<b>Decomposition Temperature</b>	Not determined		

<b>Kinematic Viscosity</b>	Not determined
<b>Dynamic Viscosity</b>	Not determined
<b>Explosive Properties</b>	Not determined
<b>Oxidizing Properties</b>	Not determined

## 10. STABILITY AND REACTIVITY

### Reactivity

Not reactive under normal conditions.

### Chemical Stability

Stable under recommended storage conditions.

### Possibility of Hazardous Reactions

None under normal processing.

**Hazardous Polymerization**      Hazardous polymerization does not occur.

### Conditions to Avoid

See Sec. 7 Handling & Storage.

### Incompatible Materials

Acids. Bases. Oxidizers.

### Hazardous Decomposition Products

Smoke, fumes or vapors, and oxides of carbon. Unidentified organic compounds.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Eye Contact</b>	Causes serious eye damage.
<b>Skin Contact</b>	Harmful in contact with skin.
<b>Inhalation</b>	Avoid breathing vapors or mists.
<b>Ingestion</b>	Harmful if swallowed.

### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Triethylene Glycol Monomethyl Ether 112-35-6	= 11300 µL/kg ( Rat )	= 7100 µL/kg ( Rabbit )	-
Triethylene Glycol Monoethyl Ether 112-50-5	= 7750 mg/kg ( Rat )	= 8 mL/kg ( Rabbit )	-
Triethylene glycol, monobutyl ether 143-22-6	= 5300 mg/kg ( Rat )	= 3480 mg/kg ( Rabbit )	-
Tetraethylene Glycol Monobutyl Ether 1559-34-8	= 5175 mg/kg ( Rat )	> 4000 mg/kg ( Rat )	-
Polyalkylene Glycol Monomethyl Ether 23783-42-8	> 2000 mg/kg ( Rat )	-	-
Polyethylene glycol 25322-68-3	= 28 g/kg ( Rat )	> 20 mL/kg ( Rabbit ) > 20 g/kg ( Rabbit )	-

Polyalkylene Glycol Monobutyl Ether 9038-95-3	= 12300 µL/kg ( Rat )	> 20 mL/kg ( Rabbit ) = 14100 µL/kg ( Rabbit )	= 147 mg/m <sup>3</sup> ( Rat ) 4 h
Diethylene Glycol Monobutyl Ether 112-34-5	= 3384 mg/kg ( Rat )	= 2700 mg/kg ( Rabbit )	-
Diethylene glycol 111-46-6	= 12565 mg/kg ( Rat )	= 11890 mg/kg ( Rabbit )	-
Diethylene glycol monomethyl ether 111-77-3	= 4 mL/kg ( Rat )	= 650 mg/kg ( Rabbit ) = 2500 µL/kg ( Rabbit )	-
Di(ethylene glycol) ethyl ether 111-90-0	= 1920 mg/kg ( Rat )	= 6 mL/kg ( Rat ) = 4200 µL/kg ( Rabbit )	> 5240 mg/m <sup>3</sup> ( Rat ) 4 h

### Information on physical, chemical and toxicological effects

**Symptoms** Please see section 4 of this SDS for symptoms.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Carcinogenicity** Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Reproductive toxicity** Suspected of damaging fertility or the unborn child.

### Numerical measures of toxicity

Not determined

**Unknown Acute Toxicity** 20% of the mixture consists of ingredient(s) of unknown toxicity.

## 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.

### Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Triethylene Glycol Monomethyl Ether 112-35-6	500: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	5000: 96 h <i>Brachydanio rerio</i> mg/L LC50 static 10000: 96 h <i>Pimephales promelas</i> mg/L LC50 static 10000: 96 h <i>Leuciscus idus</i> mg/L LC50 static		500: 48 h <i>Daphnia magna</i> mg/L EC50
Triethylene glycol, monobutyl ether 143-22-6	500: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	2400: 96 h <i>Pimephales promelas</i> mg/L LC50 static 2400: 96 h <i>Pimephales promelas</i> mg/L LC50 2200 - 4600: 96 h <i>Leuciscus idus</i> mg/L LC50 static		500: 48 h <i>Daphnia magna</i> mg/L EC50
Tetraethylene Glycol Monobutyl Ether 1559-34-8	1000: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50	1000: 96 h <i>Salmo gairdneri</i> mg/L LC50		1000: 48 h <i>Daphnia magna</i> mg/L EC50
Polyalkylene Glycol Monomethyl Ether 23783-42-8		10000: 96 h <i>Brachydanio rerio</i> mg/L LC50		
Polyethylene glycol 25322-68-3		5000: 24 h <i>Carassius auratus</i> mg/L LC50		
Diethylene Glycol Monobutyl Ether 112-34-5	100: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50	1300: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static		100: 48 h <i>Daphnia magna</i> mg/L EC50 2850: 24 h <i>Daphnia magna</i> mg/L EC50

Diethylene glycol 111-46-6		75200: 96 h Pimephales promelas mg/L LC50 flow-through	EC50 = 29228 mg/L 15 min	84000: 48 h Daphnia magna mg/L EC50
Diethylene glycol monomethyl ether 111-77-3	500: 72 h Desmodesmus subspicatus mg/L EC50	7500: 96 h Lepomis macrochirus mg/L LC50 static 7500: 96 h Lepomis macrochirus mg/L LC50 5741: 96 h Pimephales promelas mg/L LC50	EC50 > 10000 mg/L 17 h	500: 48 h Daphnia magna mg/L EC50
Di(ethylene glycol) ethyl ether 111-90-0		10000: 96 h Lepomis macrochirus mg/L LC50 static 19100 - 23900: 96 h Lepomis macrochirus mg/L LC50 flow-through 11400 - 15700: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 11600 - 16700: 96 h Pimephales promelas mg/L LC50 flow-through 13400: 96 h Salmo gairdneri mg/L LC50 flow-through		3940 - 4670: 48 h Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Chemical Name	Partition Coefficient
Triethylene Glycol Monomethyl Ether 112-35-6	1.13
Triethylene glycol, monobutyl ether 143-22-6	0.51
Polyalkylene Glycol Monomethyl Ether 23783-42-8	-0.6
Diethylene glycol 111-46-6	-1.98
Diethylene glycol monomethyl ether 111-77-3	-0.682
Di(ethylene glycol) ethyl ether 111-90-0	-0.8

**Other Adverse Effects**

Not determined

### 13. DISPOSAL CONSIDERATIONS

**Waste Treatment Methods****Disposal of Wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

**Contaminated Packaging**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

## 14. TRANSPORT INFORMATION

<b>Note</b>	Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.
<b>DOT</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG</b>	Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Triethylene glycol, monobutyl ether	Present	X		Present		Present	X	Present	X	X
Diethylene Glycol Monobutyl Ether	Present	X		Present		Present	X	Present	X	X
Diethylene glycol	Present	X		Present		Present	X	Present	X	X
Diethylene glycol monomethyl ether	Present	X		Present		Present	X	Present	X	X

### Legend:

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical Substances*

*IECSC - China Inventory of Existing Chemical Substances*

*KECL - Korean Existing and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

*AICS - Australian Inventory of Chemical Substances*

### US Federal Regulations

### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS No	Weight-%	SARA 313 - Threshold Values %
Triethylene Glycol Monomethyl Ether - 112-35-6	112-35-6	5-50	1.0
Triethylene Glycol Monoethyl Ether - 112-50-5	112-50-5	5-50	1.0
Triethylene glycol, monobutyl ether - 143-22-6	143-22-6	5-50	1.0
Diethylene Glycol Monobutyl Ether - 112-34-5	112-34-5	5-20	1.0
Diethylene glycol monomethyl ether - 111-77-3	111-77-3	<5	1.0
Di(ethylene glycol) ethyl ether - 111-90-0	111-90-0	<5	1.0

**US State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Triethylene Glycol Monomethyl Ether 112-35-6	X		X
Triethylene Glycol Monoethyl Ether 112-50-5	X		X
Triethylene glycol, monobutyl ether 143-22-6	X		X
Diethylene Glycol Monobutyl Ether 112-34-5	X		X
Diethylene glycol 111-46-6			X
Diethylene glycol monomethyl ether 111-77-3	X	X	X
Di(ethylene glycol) ethyl ether 111-90-0	X		X

**16. OTHER INFORMATION****NFPA****Health Hazards****Flammability****Instability****Special Hazards**

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Not determined

**HMIS****Health Hazards****Flammability****Physical Hazards****Personal Protection**

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Not determined

**Issue Date:**

14-Oct-2011

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11-May-2015

**Revision Note:**

New format

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**