



# DOT 4 BRAKE FLUID

Released: 2015-06-01

Version: 1.1  
Revision Date: 2015-05-28

## 1. IDENTIFICATION OF THE SUBSTANCE / APPLICATION AND THE COMPANY

**Supplier:** Maxima Racing Oils  
9266 Abraham Way  
Santee, CA 92071  
USA  
+1 619 449 5000

**Product Name:** DOT 4 Brake Fluid  
**Article Number:** 80-86912

**Applications:** Disk and Drum Hydraulic Brake Fluid

**Emergency Telephone:** CHEMTREC +1 703 527 3887 (24 hours)

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Skin Irritation: Category 2  
Eye Irritation: Category 2A

### GHS Pictogram



### Signal Word

**Warning!**

### Hazard Statements

Harmful if swallowed.  
Causes mild skin irritation.  
Causes serious eye irritation

### Precautionary Statements

**Prevention** Wear eye and skin protection before handling.  
Do not breathe mist/vapors/spray.  
Use in a well ventilated area.  
Wear protective gloves/protective clothing.

**Response** IF IN EYES: Flush with water for 15 minutes and consult a physician.  
Do not ingest.  
IF SWALLOWED: Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician

**Storage** None

**Disposal** Keep out of waterways.  
Check local, national, and international regulations for proper disposal

**Other Hazards** Combustible liquid. Repeated exposure may cause dryness of the skin.  
Vapors may cause respiratory irritation.



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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	Content %	CAS Number
Triethylene Glycol Monomethyl Borate Ester	30-40	71243-41-9
Triethylene Glycol Monomethyl Ether	28-31	112-35-6
Polyethylene Glycol Monomethyl Ether	14-28	9004-74-4
Diethylene Glycol	<5	111-45-6
Triethylene Glycol Monobutyl Ether	<5	143-22-6
Additives	<1	Proprietary

### 4. FIRST-AID MEASURES

<b>Inhalation</b>	Remove exposed person to fresh air immediately. Restore or assist breathing, if necessary. Get medical attention immediately if symptoms of CNS depression or intoxication develop.
<b>Skin Contact</b>	Remove affected clothing and launder before reuse. Wash affected area for at least 15 minutes with soap and running water. Prolonged or repeated exposure may cause defatting of the skin – symptoms include redness, dryness, cracking.
<b>Eye Contact</b>	Remove contact lenses, if worn. Rinse with running water for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek medical attention.
<b>Ingestion</b>	Do NOT induce vomiting. If conscious, give two full glasses of water. If a significant volume has been swallowed, get medical attention immediately.
<b>Indication of Immediate Medical Attention Needed</b>	Immediate medical attention is not required.
<b>Notes to Physician</b>	Treat appropriately

### 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	For small fires use alcohol foam, dry chemical or CO <sub>2</sub> . For large fires apply large (flooding) quantities of water from as far away as possible in a spray or mist.
<b>Specific Hazards Arising From The Chemical</b>	Not Determined.
<b>Special Protective Equipment And Precautions For Fire-Fighters</b>	Wear a self-container breathing apparatus if necessary based on concentrations of smoke. Material will produce primarily oxides of carbon as combustion products.



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### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Ventilate if released in a confined area. Avoid breathing mists/vapors/spray. Product may present slipping hazard if left on the floor. Beware of vapors pooling in low areas to explosive concentrations.
<b>Environmental Hazards</b>	Avoid release to the environment. Prevent from entering into soil, ditches, sewers, waterways or groundwater.
<b>Methods/Materials for Cleaning up</b>	Use an explosion-proof pump to remove bulk liquid. Residual liquid can be absorbed on inert material. Dispose of contaminated adsorbent as hazardous waste. Wash the area with water after excess product and adsorbent is removed.

### 7. HANDLING AND STORAGE

<b>Precautions for Safe Handling</b>	Use in a well ventilated area. Avoid breathing mists/vapors/spray. Avoid handling hot product where possible. Use appropriate personal protective equipment to avoid contact with skin and eyes. Note the location of nearest emergency shower and eye wash station before use.
<b>Conditions for Safe Storage</b>	Store with the lid tightly closed in a cool, dry, well-ventilated place. Product is hygroscopic and effectiveness may diminish if opened product is stored for long periods of time. Dispose of spilled or used material in accordance with local, regional, national, and international regulations. Do not store or handle at elevated temperatures.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

<b>Exposure Limits</b>	Triethylene Glycol Monomethyl Borate Ester	None Established
	Triethylene Glycol Monomethyl Ether	None Established
	Polyethylene Glycol Monomethyl Ether	None Established
	Diethylene Glycol	OSHA TWA: 10mg/m <sup>3</sup>
	Triethylene Glycol Monobutyl Ether	None Established
	<b>Appropriate Engineering Controls</b>	Use in a well ventilated area. Local and general ventilation should keep methanol vapor concentration below permissible limits. Where exposure potential exceeds recommended limits, use a NIOSH/OSHA approved supplied air respirator as recommended. Vapors are heavier than air and will tend to accumulate in low-lying areas.
<b>Personal Protection</b>		
<b>Respiratory</b>	Use a NIOSH or CEN approved full-face respirator with multi-purpose	



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- Protection:** combination or type ABEK respirator cartridges as a backup to engineering controls. If the respiratory is the only means of protection, use a full-face supplied air respirator.
- Eye Protection:** Use tightly-fitting chemical splash goggles. Use face shield, especially where splashing is likely to occur.
- Skin/Body Protection:** No special protective clothing is normally required. Use chemical resistant pants and jackets, preferably of butyl or nitrile rubber.
- Hand Protection:** Use nitrile, butyl, viton, or fluoroelastemer gloves. Even appropriate materials may degrade after prolonged exposure with product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Clear liquid
<b>Color</b>	Pale yellow
<b>Odor</b>	Mild sweet odor
<b>Odor Threshold</b>	No data available
<b>pH</b>	7-11
<b>Freezing Point</b>	No data available
<b>Boiling Point</b>	> 232°C / 449°F
<b>Flash Point</b>	121°C / 250°F
<b>Evaporation Rate</b>	No data available
<b>Flammability (solid, gas)</b>	No data available
<b>Upper Explosion Limit</b>	No data available
<b>Lower Explosion Limit</b>	Vapors may form explosive mixtures with air
<b>Vapor Pressure</b>	0.07 mmHg @ 20°C / 68°F
<b>Vapor Density (Air=1)</b>	>5
<b>Relative Density</b>	1.06 mg/cu. cm @ 15.6°C
<b>Solubility</b>	Miscible in water, alcohol; sparingly soluble in some organic solvents
<b>Partition Coefficient: n-octanol/water</b>	No data available
<b>Auto Ignition Temperature</b>	310°C / 590°F
<b>Decomposition Temperature</b>	No data available
<b>Volatile Organic Compounds (VOC)</b>	No data available
<b>Viscosity</b>	1.8 mm/s <sup>2</sup> @ 100°C



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### 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	Not expected to be reactive.
<b>Chemical Stability</b>	Material is normally stable at ambient temperatures and pressures.
<b>Possibility of Hazardous Reactions</b>	Not determined
<b>Conditions to Avoid</b>	Vapors may catch fire – keep away from strong oxidizers, acids, bases as well as heat/sparks/open flames/hot surfaces.
<b>Incompatible Materials</b>	Keep away from strong oxidizers and strong acids/bases. Keep away from zinc or other active metals.
<b>Hazardous Decomposition Product</b>	Primarily oxidizes to carbon dioxide in normal combustion conditions. In lower oxygen environments carbon monoxide, formaldehyde, or formic acid may be formed.

### 11. TOXICOLOGICAL INFORMATION

#### Potential Health Hazards

**Eye Contact:** Expected to cause mild to moderate irritation of the eye if exposed to liquid or in high vapor concentrations. May cause irritation, tearing, or burning of the eyes.

**Skin Contact:** Expected to be mildly irritating to the skin. Symptoms of irritation may include redness, drying, and cracking of the skin.

**Inhalation:** High vapor concentrations may cause transient irritation to the respiratory system.

**Ingestion:** Toxicity is similar to that for oral ingestion, though this exposure mode is far less likely to occur.

**Chronic Effects of Overexposure:** This product may cause dryness or defatting of the skin, dermatitis, or may aggravate existing skin conditions..

**Sensitization:** None of the components have been found to cause sensitization in animals or humans.

**Mutagenicity:** Available information does not suggest that this product is a germ cell mutagen

**Reproductive Toxicity:** Available information does not suggest that this product is a reproductive toxin.

**Carcinogenicity:** This product and its components are NOT listed by the IARC, NTP, ACGIH, or OSHA as carcinogens

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

**Freshwater Fish** Acute LD50 > 590 mg/L (96h)

**Freshwater Invertebrates** Acute LD50 > 10g/l (48h)

**Biodegradation** No data available. Expected to biodegrade rapidly and degrade by photo-oxidative reactions with the air

**Bioaccumulation** Product is very mobile in soil and water and is somewhat volatile – it is not



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**Mobility in soil** expected to bioaccumulate.  
Product has high mobility in soil, slowly evaporates at environmentally relevant temperatures

**Other adverse effects:** None known.

### 13. DISPOSAL CONSIDERATIONS

**Disposal** All disposal practices must be in accordance with local, regional, national, and international regulations. Store material for disposal as indicated in Section 7. Disposal by controlled incineration or by secure land fill may be acceptable – review applicable regulations or regulatory bodies before making disposal decisions.

**Contaminated Containers** Empty containers are likely to contain flammable vapors or explosive mixtures of vapor and air. Do NOT weld, cut, or grind empty containers. Rinse empty containers with water and dispose of in accordance with local, regional, national, and international regulations.

### 14. TRANSPORT INFORMATION

Not considered dangerous goods by transport regulations.

	UN Number	Proper shipping name	Hazard Class	Packing Group	Environmental Hazard
DOT		Not Regulated			
TDG		Not Regulated			
IMDG		Not Regulated			
IATA		Not Regulated			

**Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code):** Not applicable – product is transported only in packaged form

**Special precautions:** None known.

### 15. REGULATORY INFORMATION

**CERCLA:** No components listed. See 40 CFR 302

**EPA SARA 311 Hazard Classification:** No components listed as Extremely Hazardous Substances list. See 40 CFR 355

**EPA SARA 311/313:** Triethylene glycol monobutyl ether (CAS # 143-22-6) and triethylene glycol monomethyl ether (CAS # 112-35-6) are subject to reporting under SARA Title III, Section 313. See 40 CFR 372

**California Proposition 65:** This product does not contain any chemicals known to the State of California cause cancer, birth defects, or any other reproductive harm.



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**EU:** Components of this product and similar mixtures are registered under REACH. Consult the Europea Chemicals Agency regarding REACH registration, reporting, and other legal requirements for methanol solutions before importing to the EU.

**New Zealand:** May require notification before sale under New Zealand Regulations

**Canada:** All components of this product are listed on the Canadian Domestic Substances List (DSL).

**Canada WHMIS:** B3

**Korea:** All of the components in this product are listed on the Korean Existing Chemical Inventory (KECL).

### State Regulations

#### Right to Know Component

Triethylene glycol monobutyl ether  
(CAS # 143-22-6)

Triethylene glycol monomethyl borate ester  
(CAS # 71243-41-9)

Triethylene glycol monomethyl ether  
(CAS # 143-22-6)

Tetraethylene glycol  
(CAS # 112-60-7)

#### Right to Know States

NJ, PA

NJ, PA

NJ, PA

NJ, PA

### 16. OTHER INFORMATION

NFPA Rating (NFPA 704):	Health: 2	Fire: 1	Instability: 0
HMIS Rating:	Health: 2	Fire: 1	Physical Hazard: 0

Date of Revision: May 28, 2015

Date of Previous Revision: August 2004

Revision History:

5/28/15: Converted to GHS format. All section revised

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.