# Brake Fluid DOT4

## SECTION 1. IDENTIFICATION

| | |
|---|---|
| **Product Identifier** | Brake Fluid DOT4 |
| **Other Means of Identification** | 35-800PRES, 35-820PRES, 35-821PRES, 35-823CQ, 35-823SO, 15-821OEM, 15-801OEM, 15-801OEMA, 15-801OEME, 15-821OEMA, 15-823LAU, 15-821OEME |
| **Recommended Use** | Please refer to Product label. |
| **Restrictions on Use** | None known. |
| **Manufacturer/Supplier Identifier** | Recochem Inc., 850 Montee de Liesse, Montreal, QC, H4T 1P4, Compliance and Regulatory Department, 905-878-5544, www.recochem.com |
| **Emergency Phone No.** | CANUTEC, 613-996-6666, 24 Hours |
| **SDS No.** | 1516 |

## SECTION 2. HAZARD IDENTIFICATION

**Classification**

Acute toxicity (Oral) - Category 4; Acute toxicity (Dermal) - Category 4; Skin irritation - Category 2; Eye irritation - Category 2A; Reproductive toxicity - Category 2; Specific target organ toxicity (single exposure) - Category 3

**Label Elements**

Signal Word:
Warning

Hazard Statement(s):

| | |
|---|---|
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H361 | Suspected of damaging fertility or the unborn child. |

Prevention:

| | |
|---|---|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P261 | Avoid breathing fume, mist, vapours, spray. |
| P264 | Wash hands and skin thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |

Response:
P301 + P312 IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P330 Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P312 Call a POISON CENTRE or doctor if you feel unwell.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTRE or doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a POISON CENTRE or doctor if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

Storage:
Store in a well ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal:
Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Note:
37.5
. % of the mixture consists of ingredient(s) of unknown acute toxicity.

**Other Hazards**

None known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

| Chemical Name | CAS No. | % | Other Identifiers | Other Names |
|---|---|---|---|---|
| Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]-, triester with boric acid (H3BO3) | 30989-05-0 | 10-30 | | |
| TRIETHYLENE GLYCOL MONOMETHYL ETHER | 112-35-6 | 10-30 | | |
| Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy- | 9004-74-4 | 10-30 | | |
| Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy- | 9004-77-7 | 7-13 | | |
| Triethylene glycol butyl ether | 143-22-6 | 5-10 | | |
| TETRAETHYLENE GLYCOL | 112-60-7 | 5-10 | | |
| Pentaethylene glycol | 4792-15-8 | 1-5 | | |
| Triethylene glycol | 112-27-6 | 1-5 | | |
| Diisopropanolamine | 110-97-4 | 0.5-1.5 | | |
| Diethylene glycol monomethyl ether | 111-77-3 | 0.1-1 | | |

**Notes**

Use of Generic SDS:
If the concentration or actual concentration range of an ingredient of a particular hazardous product in the series is

different from the concentration or actual concentration range disclosed for the rest of the series, either the concentration or the actual concentration range must be indicated beside that ingredient under item 3 (Composition/Information on ingredients) of the SDS. Furthermore, if any other specific information element(s) (such as flash point, numerical measure of toxicity, etc.) for a particular hazardous product in the series differs from that of the other products in the series (without affecting the classification), the information element relevant to that hazardous product must be disclosed on the SDS with an indication to which hazardous product each relates.

Source: Health Canada - Technical Guidance on the Requirements of the Hazardous Products Act and the Hazardous Products Regulations WHMIS 2015 Supplier Requirements - pg 117

## SECTION 4. FIRST-AID MEASURES

**First-aid Measures**

**Inhalation**

Remove source of exposure or move to fresh air. Call a Poison Centre or doctor if you feel unwell.

**Skin Contact**

Avoid direct contact. Wear chemical protective clothing if necessary. Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Quickly and gently blot or brush away excess chemical. Wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 5 minutes. If skin irritation occurs, get medical advice or attention. Call a Poison Centre or doctor if you feel unwell. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.

**Eye Contact**

Avoid direct contact. Wear chemical protective gloves if necessary. Quickly and gently blot or brush chemical off the face. Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Remove contact lenses, if present and easy to do. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists, get medical advice or attention.

**Ingestion**

Rinse mouth with water. Call a Poison Centre or doctor if you feel unwell.

**First-aid Comments**

If exposed or concerned, get medical advice or attention.

**Most Important Symptoms and Effects, Acute and Delayed**

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Immediate Medical Attention and Special Treatment**

**Target Organs**

Kidneys, skin, eyes.

**Special Instructions**

No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Medical Conditions Aggravated by Exposure**

Dermatitis.

## SECTION 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

**Suitable Extinguishing Media**

Not combustible. Use extinguishing agent suitable for surrounding fire.

**Unsuitable Extinguishing Media**

None known.

**Specific Hazards Arising from the Product**

Can ignite if strongly heated. Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide; corrosive, oxidizing nitrogen oxides.

**Special Protective Equipment and Precautions for Fire-fighters**

Review Section 6 (Accidental Release Measures) for important information on responding to leaks/spills.
See Skin Protection in Section 8 (Exposure Controls/Personal Protection) for advice on suitable chemical protective materials.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, and Emergency Procedures**

No special precautions are necessary.

**Environmental Precautions**

Do not allow into any sewer, on the ground or into any waterway.

**Methods and Materials for Containment and Cleaning Up**

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## SECTION 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use non-sparking tools. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Conditions for Safe Storage**

Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters**

| | ACGIH TLV® | | OSHA PEL | | AIHA WEEL | |
|---|---|---|---|---|---|---|
| **Chemical Name** | **TWA** | **STEL** | **TWA** | **Ceiling** | **8-hr TWA** | **TWA** |
| Triethylene glycol butyl ether | Not established | Not established | Not established | Not established | | |
| Ethanol, 2-[2-(2-methoxyethoxy)ethoxy]-, triester with boric acid (H3BO3) | 2 mg/m3 | 6 mg/m3 | Not established | Not established | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| TRIETHYLENE GLYCOL MONOMETHYL ETHER | Not established | Not established | Not established | Not established | | |
| TETRAETHYLENE GLYCOL | Not established | Not established | Not established | Not established | | |
| Pentaethylene glycol | Not established | Not established | Not established | Not established | | |
| Triethylene glycol | Not established | Not established | Not established | Not established | | |
| Diisopropanolamine | Not established | Not established | Not established | Not established | | |

**Appropriate Engineering Controls**

The hazard potential of this product is relatively low. General ventilation is usually adequate. For large scale use of this product: provide eyewash and safety shower if contact or splash hazard exists.

**Individual Protection Measures**

**Eye/Face Protection**

Wear chemical safety goggles.

**Skin Protection**

Wear chemical protective clothing e.g. gloves, aprons, boots.

**Respiratory Protection**

Not normally required if product is used as directed. For non-routine or emergency situations: wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

### Basic Physical and Chemical Properties

| | |
|---|---|
| **Appearance** | Yellow liquid. |
| **Odour** | Ammonia-like |
| **Odour Threshold** | Not available |
| **pH** | 7.7 (estimated) |
| **Melting Point/Freezing Point** | < -59 ºC (-74 ºF) (estimated) (melting); < -59 ºC (-74 ºF) (estimated) (freezing) |
| **Initial Boiling Point/Range** | 281.6 ºC (538.9 ºF) |
| **Flash Point** | 132.2 ºC (270.0 ºF) (closed cup) |
| **Evaporation Rate** | Not available |
| **Flammability (solid, gas)** | Not applicable |
| **Upper/Lower Flammability or Explosive Limit** | Not available (upper); Not available (lower) |
| **Vapour Pressure** | < 0.01 mm Hg (0.00 kPa) at 20 ºC (estimated) |
| **Vapour Density (air = 1)** | > 10 |
| **Relative Density (water = 1)** | 1.053 at 20 ºC |
| **Solubility** | Soluble in water; Not available (in other liquids) |
| **Partition Coefficient, n-Octanol/Water (Log Kow)** | Not available |
| **Auto-ignition Temperature** | Not available |
| **Decomposition Temperature** | Not available |
| **Viscosity** | 1100 mm2/s at 25 ºC (77 ºF) (estimated) (kinematic); Not available (dynamic) |

### Other Information

| | |
|---|---|
| **Physical State** | Liquid |
| **Molecular Weight** | Not available |

## SECTION 10. STABILITY AND REACTIVITY

**Reactivity**

None known.

**Chemical Stability**

Normally stable.

**Possibility of Hazardous Reactions**

None known.

**Conditions to Avoid**

Do not allow product to become dry. High temperatures.

**Incompatible Materials**

Strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide), strong oxidizing agents (e.g. perchloric acid).

**Hazardous Decomposition Products**

Very toxic, flammable aldehydes; corrosive, oxidizing nitrogen oxides.

## SECTION 11. TOXICOLOGICAL INFORMATION

**Likely Routes of Exposure**

Skin contact; eye contact.

**Acute Toxicity**

| Chemical Name | LC50 | LD50 (oral) | LD50 (dermal) |
|---|---|---|---|
| Triethylene glycol butyl ether | Not available | 5300 mg/kg (male rat) | 3.54 ml/kg bw (rabbit) |
| Diethylene glycol monomethyl ether | > 50000 mg/m3 (rat) (4-hour exposure) | 6830 mg/kg (rat) | 9404 mg/kg (rabbit) |
| Ethanol, 2-[2-(2-methoxyethoxy) ethoxy]-, triester with boric acid (H3BO3) | Not available | Not available | Not available |
| TRIETHYLENE GLYCOL MONOMETHYL ETHER | Not available | 11.8 g/kg (rat) | 7100 mg/kg (rabbit) |
| Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy- | | 39800 mg/kg (rat) | > 20000 mg/kg (rabbit) |
| Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy- | Not available | Not available | Not available |
| TETRAETHYLENE GLYCOL | Not available | 32700 mg/kg (rat) | 22570 mg/kg (rabbit) |
| Pentaethylene glycol | Not available | 22500 mg/kg (guinea pig) | Not available |
| Triethylene glycol | > 3.9 mg/L (rat) (4-hour exposure) | 17000 mg/kg (rat) | 22460 mg/kg (rabbit) |
| Diisopropanolamine | Not available | 4765 mg/kg (rat) | 8000 mg/kg (rabbit) |

LC50: Not applicable.

LD50 (oral): Not applicable.

LD50 (dermal): Not applicable.

**Skin Corrosion/Irritation**

Human experience and animal tests show moderate or severe irritation.

**Serious Eye Damage/Irritation**

Animal tests show serious eye damage. (Triethylene glycol butyl ether)

**STOT (Specific Target Organ Toxicity) - Single Exposure**

**Inhalation**

May be harmful based on limited evidence. Nose and throat irritation. At high concentrations. (Pentaethylene glycol)

**Skin Absorption**

May be harmful based on limited evidence. (Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy-)

**Ingestion**

May be harmful based on limited evidence. (Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy-)

**Aspiration Hazard**

Not known to be an aspiration hazard.

**STOT (Specific Target Organ Toxicity) - Repeated Exposure**

May cause Following skin contact: dermatitis. Symptoms may include dry, red, cracked skin (dermatitis). effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above.
Causes At high concentrations harmful effects on the kidneys.

**Respiratory and/or Skin Sensitization**

Not known to be a respiratory sensitizer. Not known to be a skin sensitizer.

**Carcinogenicity**

| Chemical Name | IARC | ACGIH® | NTP | OSHA |
|---|---|---|---|---|
| Triethylene glycol butyl ether | Not Listed | Not designated | Not Listed | Not Listed |
| Diethylene glycol monomethyl ether | Not Listed | Not designated | Not Listed | Not Listed |
| Ethanol, 2-[2-(2-methoxyethoxy) ethoxy]-, triester with boric acid (H3BO3) | Not Listed | Not designated | Not Listed | Not Listed |
| TRIETHYLENE GLYCOL MONOMETHYL ETHER | Not Listed | Not designated | Not Listed | Not Listed |
| Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy- | Not Listed | Not designated | Not Listed | Not Listed |
| Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy- | Not Listed | Not designated | Not Listed | Not Listed |
| TETRAETHYLENE GLYCOL | Not Listed | Not designated | Not Listed | Not Listed |
| Triethylene glycol | Not Listed | Not designated | Not Listed | Not Listed |
| Diisopropanolamine | Not Listed | Not designated | Not Listed | Not Listed |

**Reproductive Toxicity**

**Development of Offspring**

Animal studies show effects on the offspring. However, these effects are only seen with significant toxicity in the mothers. Has been associated with: if swallowed: decreased weight. (Triethylene glycol)
Animal studies show effects on the offspring. Following skin contact. (Diethylene glycol monomethyl ether)
Animal studies show effects on the offspring. However, these effects are only seen with significant toxicity in the mothers. If swallowed. (Diethylene glycol monomethyl ether)
May cause effects on the unborn child based on limited evidence. However, these effects are only seen with significant toxicity in the mothers.

**Sexual Function and Fertility**

Animal studies show effects on sexual function and/or fertility. However, these effects were seen in the presence of significant other toxicity.

**Effects on or via Lactation**

No information was located.

**Germ Cell Mutagenicity**

Not mutagenic.

**Interactive Effects**

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS.
This section is not required by OSHA HCS 2012.

**Ecotoxicity**

**Acute Aquatic Toxicity**

| Chemical Name | LC50 Fish | EC50 Crustacea | ErC50 Aquatic Plants | ErC50 Algae |
|---|---|---|---|---|
| Triethylene glycol butyl ether | 2400 mg/L (Pimephales promelas (fathead minnow); 96-hour; static) | | | |
| Diethylene glycol monomethyl ether | 5741 mg/L (Pimephales promelas (fathead minnow); 96-hour) | 1191 mg/L (Daphnia magna (water flea); 48-hour) | | |
| Ethanol, 2-[2-(2-methoxyethoxy) ethoxy]-, triester with boric acid (H3BO3) | Not available | Not available | | |
| TRIETHYLENE GLYCOL MONOMETHYL ETHER | > 10000 mg/L (Pimephales promelas (fathead minnow); 96-hour) | Not available | | |
| Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy- | 10000 mg/L (Pimephales promelas (fathead minnow); 96-hour) | Not available | | |
| Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy- | Not available | | | |
| TETRAETHYLENE GLYCOL | Not available | Not available | | |
| Pentaethylene glycol | Not available | Not available | | |
| Triethylene glycol | > 100 mg/L (Pimephales promelas (fathead minnow); 96-hour) | 46500 mg/L (Daphnia magna (water flea); 48-hour) | | |
| Diisopropanolamine | > 1000-2200 mg/L (Zebra Fish; 96-hour; static) | Not available | | |

**Chronic Aquatic Toxicity**

| Chemical Name | NOEC Fish | EC50 Fish | NOEC Crustacea | EC50 Crustacea |
|---|---|---|---|---|
| Triethylene glycol butyl ether | Not available | | Not available | |

| | | | | |
|---|---|---|---|---|
| Diethylene glycol monomethyl ether | Not available | | Not available | |
| Ethanol, 2-[2-(2-methoxyethoxy) ethoxy]-, triester with boric acid (H3BO3) | Not available | | Not available | |
| TRIETHYLENE GLYCOL MONOMETHYL ETHER | Not available | | Not available | |
| Poly(oxy-1,2-ethanediyl), alpha-methyl-omega-hydroxy- | Not available | | Not available | |
| Poly(oxy-1,2-ethanediyl), alpha-butyl- omega -hydroxy- | Not available | | Not available | |
| TETRAETHYLENE GLYCOL | Not available | | Not available | |
| Pentaethylene glycol | Not available | | Not available | |
| Triethylene glycol | Not available | | Not available | |
| Diisopropanolamine | Not available | | Not available | |

**Persistence and Degradability**

No information was located.

**Bioaccumulative Potential**

No information was located.

**Mobility in Soil**

No information was located.

**Other Adverse Effects**

There is no information available.

## SECTION 13. DISPOSAL CONSIDERATIONS

**Disposal Methods**

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14. TRANSPORT INFORMATION

Not regulated under Canadian TDG regulations. Not regulated under US DOT Regulations.

**Environmental Hazards** Not applicable

**Special Precautions** Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**Proof of Dangerous Goods Classification**

**Date of Classification** February 01, 2017

**Technical Name** Not Regulated

**Classification** Not Regulated

## SECTION 15. REGULATORY INFORMATION

**Safety, Health and Environmental Regulations**

**Canada**

**Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

All ingredients are listed on the DSL/NDSL.

**CEPA - National Pollutant Release Inventory (NPRI)**

Part 1A. (Diethylene glycol monomethyl ether)

**USA**

**Toxic Substances Control Act (TSCA) Section 8(b)**

All ingredients are listed on the TSCA Inventory.

**Custom Regulatory 1**

Consumer Product Safety Improvement Act of 2008 General Conformity Certification
The Supplier identified in Section 1 of this MSDS has evaluated this product and certifies it to be labeled and packaged in compliance with the applicable provisions of the Federal Hazardous Substance Act as stated in 16 CFR 1500 and enforced by the Consumer Product Safety Commission, and where applicable the products that require Child Resistant Closures are packaged in accordance with the Poison Prevention Packaging Act as stated in 16 CFR 1700 and enforced by the Consumer Product Safety Commission. All closures have been tested in accordance with the latest protocols. No other testing is required to certify compliance with the above. The date of manufacture is stamped on the product container.

## SECTION 16. OTHER INFORMATION

| | |
|---|---|
| **SDS Prepared By** | Compliance and Regulatory Department |
| **Phone No.** | 905-878-5544 |
| **Date of Preparation** | May 04, 2017 |
| **References** | CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS). |
| **Additional Information** | We are committed to uphold the Industry Consumer Ingredient Communication Voluntary Initiative.<br>Please send us your request by visiting our website at www.recochem.com.<br><br>Ingredients present (intentionally added ingredients) at a concentration of greater than one percent (1%) shall be listed in descending order of predominance. Ingredients present at a concentration of not more than one percent shall be listed but may be disclosed without respect to order of predominance. |
| **Disclaimer** | Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. 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. |