



A Division of  
South West Lubricants, Inc.

Material Safety Data Sheet  
RACING DOT 4 HI-TEMP

Last updated: September 2009

### 1. Product and Company Identification

**Product Trade Name** Brake Fluid RACING DOT 4 HI-TEMP  
**CAS Number** Not applicable for mixtures  
**Synonyms** None  
**Generic Chemical Name** None  
**Product Type** Brake Fluid (Glycol Based)  
**Transportation Emergency** CHEMTREC 1-800-424-9300 (Outside USA 703-527-3887)  
**MSDS No.** 80-87912

### 2. Composition/Information on Ingredients

| Common Name   | Chemical Name | CAS No.     | Range (%) |
|---|---------------|-------------|-----------|
| 2,5,8,11-Tetraoxatridecan-13-ol, mixed esters with boric acid |               | 176022-80-3 | 65-75     |
| Triethylene glycol monoethyl ether                            |               | 112-35-6    | 15-30     |
| Monoethanolamine  |               | 141-43-5    | 0.5-1.5   |

### 3. Hazards Identification

#### EMERGENCY OVERVIEW

\*\*\*\*\*

**NFPA: Health: 1      Fire: 1      Reactivity: 0      Specific Hazard: N/A**

#### Miscellaneous:

This product does not contain any components above de minimus concentrations that are considered carcinogenic by OSHA, IARC or NTP.

#### POTENTIAL HEALTH EFFECTS

##### Target Organs/Primary Route(s) of Entry:

**Eye** May cause moderate irritation and moderate transient corneal injury depending upon concentration of the glycol ether.

**Skin** May cause irritation if left in contact with skin.

**Ingestion** Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury. Swallowing larger amounts may cause irritation of the GI tract and central nervous system disturbances.

**Inhalation** Inhalation of mists may cause respiratory tract irritation, and central nervous system effects including: headache, narcosis, weakness, slurred speech and blurred vision.

**Effects of Repeated Exposure** For the major component(s): In animals, effects have been reported on the following organs after ingestion: Testes

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**Birth Defects/Developmental Effects** For the major component(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

#### 4. First Aid Measures

|                   |  |
|-------------------|--|
| <b>Eye</b>        | If the product contacts the eyes, immediately wash the eyes with large quantities of room temperature water for at least 15 minutes, occasionally lifting the lower and upper lids. Get medical attention immediately. A Follow up visit to an ophthalmologist should be made. |
| <b>Skin</b>       | If the product contacts the skin, promptly wash the contaminated skin with soap and water for at least 15 minutes. If the product penetrates the clothing, promptly remove the clothing and wash the skin with soap and water.   |
| <b>Ingestion</b>  | If this product is ingested and the person is conscious, have patient drink several glasses of water. Induce vomiting by having patient tickle back of throat with finger, keep airway clear. GET IMMEDIATE MEDICAL ATTENTION.   |
| <b>Inhalation</b> | Move the exposed person to fresh air at once and call emergency medical care. If breathing has stopped, give artificial respiration. If breathing is difficult, give humidified oxygen.  |

**Notes to Physician** No data available.

#### 5. Fire Fighting Measures

|   |   |
|---|---|
| <b>Flash Point</b>                        | GT 250 F. (GT 121 C.) PMCC  |
| <b>Autolgnition Temperature</b>           | N/A   |
| <b>Flammable Limits</b>                   |   |
| <b>Lower Limit</b>                        | Explosive Limit (LEL): N/A  |
| <b>Upper Limit</b>                        | Explosive Limit (UEL): N/A  |
| <b>Extinguishing Media</b>                | Use water spray, alcohol foam, dry chemical, or carbon dioxide.                                     |
| <b>Unusual Fire and Explosion Hazards</b> | Water or foam may cause frothing.   |
| <b>Special Fire Fighting Procedures</b>   | Wear NIOSH approved SCBA respirator in the positive pressure mode and chemical protective clothing. |

#### 6. Accidental Release Measures

|                    |   |
|--------------------|---|
| <b>Small Spill</b> | Remove sources of heat or ignition, provide adequate ventilation, contain leak using absorbent, inert, non-combustible material.  |
| <b>Large Spill</b> | Contain spill, transfer to secure containers. In the event of an uncontrolled material release, the user should determine if release is reportable under applicable laws and regulations. |

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**Reporting** Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

## 7. Handling and Storage

**Handling** Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water. Wear recommended protective equipment. Practice good personal hygiene after handling.

**Storage** Store in closed containers of proper construction. Store away from sources of ignition and in areas of good ventilation. Empty containers retain product residue (solid, liquid, and/or vapor) and can be dangerous. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

## 8. Exposure Controls/Personal Protection

### EXPOSURE LIMITS

| Component               | List           | Type                       | Value                     |
|-------------------------|----------------|----------------------------|---------------------------|
| Triethylene glycol      | ACGIH          | TWA                        | 2 mg/m <sup>3</sup>       |
| Monomethyl ether borate | ACGIH          | Inhalable fraction<br>STEL | 6 mg/m <sup>3</sup>       |
| Monoethanolamine        | ACGIH          | TWA                        | 3 ppm                     |
|                         | ACGIH          | STEL                       | 6 ppm                     |
|                         | OSHA Table Z-1 | PEL                        | 6 mg/m <sup>3</sup> 3 ppm |

**GENERAL HYGIENE CONSIDERATIONS** Use normal hygiene practices.

**OTHER PRECAUTIONS** None

### ENGINEERING CONTROLS

|                      |  |
|----------------------|--|
| Local Exhaust        | Provide local ventilation to maintain exposure levels below recommended exposure limits. |
| Mechanical (General) | In confined spaces, mechanical ventilation may be required.                              |
| Special Ventilation  | N/A  |
| Other Ventilation    | N/A  |

### PERSONAL PROTECTIVE EQUIPMENT

**Eyes/face** Use splash proof chemical, safety glasses or appropriate full-face respirator.

**Skin** Use chemical resistant gloves such as butyl rubber or PVC coated as required.

**Respirators** If high vapor or mist concentrations are expected, use appropriate NIOSH approved respirator for organic vapors and mists. Respirators must be selected based on airborne levels found in workplace and must not exceed the working limits of the respirator.

**Other Protective Clothing/Equipment** If there is a possibility of exposure of an individual's body to the product, wear body covering work clothes to avoid prolonged or repeated exposure.

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## 9. Physical and Chemical Properties

|  |  |
|--|--|
| <b>Physical State</b>                                      | Liquid   |
| <b>Color</b>   | Colorless to Amber   |
| <b>Odor</b>  | Ether  |
| <b>Flash Point – Closed Cup</b>                            | 146.1°C (295.0°F)  |
| <b>Flash Point – Open Cup</b>                              | 415°F  |
| <b>Flammable Limits in Air</b>                             | Lower: N/A<br>Upper: N/A   |
| <b>Autoignition Temperature</b>                            | ND   |
| <b>Vapor Pressure</b>                                      | <0.01 mmHg @ 20°C  |
| <b>Boiling Point (760 mmHg)</b>                            | 304°C (579°F) <i>ASTM E1719</i> Equilibrium Reflux Boiling Point, Dry<br>210°C (410°F) <i>FMVSS 116</i> Equilibrium Reflux Boiling Point, Wet<br>361.8°C (683.2°F) <i>Literature</i> |
| <b>Vapor Density(Air = 1)</b>                              | 10   |
| <b>Specific Gravity (H2O = 1)</b>                          | 1.080  |
| <b>Freezing Point</b>                                      | < -59°C (< -74°F)  |
| <b>Melting Point</b>                                       | N/A  |
| <b>Solubility in Water by Wt.</b>                          | 100% @ 20°C  |
| <b>pH</b>  | 7.2  |
| <b>Temperature Evaporation<br/>Rate Butyl Acetate = 1)</b> | 0.01   |
| <b>Kinematic Viscosity</b>                                 | 2 mm <sup>2</sup> /s @ 100°C   |

## 10. Stability and Reactivity Data

### Chemical Stability:

Stable Yes

**Conditions to Avoid** Store in a cool, dry, well ventilated area. Keep away from heat, sparks, and flame. Avoid open heating or agitation; keep container tightly closed when not in use.

**Incompatibilities with Other Materials** Materials to avoid): Avoid contact with strong oxidizers and high oxygen concentrations.

**Hazardous Decomposition Products** Incomplete combustion can generate carbon monoxide and/or oxygenated hydrocarbons.

**Hazardous Polymerization** Hazardous Polymerization May Occur: No

## 11. Toxicological Information

### Acute Toxicity

#### Ingestion

For the major component(s): LD50, Rat 11,000 mg/kg

#### Skin Absorption

For the major component(s): LD50, Rabbit 7,400 - 10,500 mg/kg



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### Repeated Dose Toxicity

For the major component(s): In animals, effects have been reported on the following organs after ingestion: Testes.

### Chronic Toxicity and Carcinogenicity

No relevant information found.

### Developmental Toxicity

For the major component(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

### Reproductive Toxicity

For the minor component(s): monoethanolamine In animal studies, did not interfere with reproduction.

### Genetic Toxicology

In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity studies in Animals were negative for component(s) tested.

## 12. Ecological Information

### ENVIRONMENTAL FATE

#### Movement & Partitioning

Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50).

#### Persistence and Degradability

Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

### ECOTOXICITY

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

## 13. Disposal Considerations

Dispose of recovered non-usable product in a manner approved for this material. Discarded material is not a RCRA hazardous waste. Before attempting clean up, refer to other sections of the MSDS and dispose of product in accordance with local, state, and federal regulations.

## 14. Transport Information

### DOT Non-Bulk

NOT REGULATED

### DOT Bulk

NOT REGULATED

### IMDG

NOT REGULATED



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## ICAO/IATA

NOT REGULATED

*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*

## 15. Regulatory Information

### OSHA Hazard Communication Standard

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

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard Yes

Delayed (Chronic) Health Hazard Yes

Fire Hazard No

Reactive Hazard No

Sudden Release of Pressure Hazard No

### Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

#### Component CAS # Amount

|                                     |          |                   |
|-------------------------------------|----------|-------------------|
| Triethylene glycol monomethyl ether | 112-35-6 | > 15.0 - < 30.0 % |
| Monoethanolamine                    | 141-43-5 | > 0.5 - < 1.0 %   |

### Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

#### Component CAS # Amount

|                                     |          |                   |
|-------------------------------------|----------|-------------------|
| Monoethanolamine                    | 141-43-5 | > 0.5 - < 1.0 %   |
| Triethylene glycol monomethyl ether | 112-35-6 | > 15.0 - < 30.0 % |

### Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

### US. New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

#### Component CAS # Amount

|                                     |          |                   |
|-------------------------------------|----------|-------------------|
| Triethylene glycol monomethyl ether | 112-35-6 | > 15.0 - < 30.0 % |
| Monoethanolamine                    | 141-43-5 | > 0.5 - < 1.0 %   |



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**US. New Jersey Community Right-To-Know Survey, Table A: NJ Environmental Hazardous Substances [EHS] List (N.J. Admin. Code Title 7 Section 1G-2.1)**

**Component CAS # Amount**

|                                     |          |                   |
|-------------------------------------|----------|-------------------|
| Triethylene glycol monomethyl ether | 112-35-6 | > 15.0 - < 30.0 % |
|-------------------------------------|----------|-------------------|

**Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103**

To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.

**California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)**

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

**US. Toxic Substances Control Act**

All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

**16. Other Information**

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.