



MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT INFORMATION

Product Name:
Performance Friction RH665 Racing Brake Fluid – 325°C DOT 4

Intended Use:
As a hydraulic fluid in automotive brake and clutch systems.

Manufacturer:
Performance Friction Corporation
Address: 83 Carbon Metallic Highway
Telephone: (803) 222-2141
Emergency Telephone: (CHEMTREC) 1-800-424-9300
Revision Date: 07/19/12
Original Date: 07/19/12

SECTION 2: HAZARDS IDENTIFICATIONS

HMIS Listing: Health – 1; Flammability – 1; Reactivity - 0

Potential Acute Health Effects:
Inhalation: Mildly irritating to the respiratory system.
Ingestion: May be harmful if swallowed.
Skin: Brief contact causes slight irritation to the skin. Avoid prolonged contact.
Eyes: Irritating to the eyes.

Overexposure Effects:
May cause target organ damage to the following organs: upper respiratory tract, skin, central nervous system, eye, lens, and cornea.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

General:
Blend of polyglycol ethers and glycol ether borate esters with added corrosion and oxidation inhibitors.

Ingredient	CAS #	Concentration %
Triethylene glycol methyl ether borate	30989-05-0	60-90%
Triethylene glycol methyl ether	112-35-6	5-15%
Other ingredients	N/A	Confidential

SECTION 4: FIRST AID MEASURES

Inhalation: Remove to fresh air. If recovery is not rapid, seek medical attention.
Ingestion: Obtain medical advice immediately. If patient is conscious, wash out mouth with water and give plenty of water to drink. Induce vomiting only under medical supervision.
Skin: Remove contaminated clothing. Wash affected skin with soap and water. If irritation persists, seek medical attention.
Eyes: Flush eyes with water for at least 10 minutes. If irritation persists, seek medical attention.

Note to physicians: Medical personnel seeking to administer first aid are referred to the services of the Poisons Information Service who can advise in such instances. There is no specific antidote and treatment of overexposure should be directed at control of symptoms and the patient's clinical condition.



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SECTION 5: FIRE FIGHTING MEASURES

Flammability of the Product: No specific fire or explosion hazard.

Extinguishing media: Foam, Dry, Chemical, CO₂.

Unusual Fire and Explosion Hazards: Pressure may develop in closed containers if overheated.

Fire Fighting Equipment: Use SCBA. Water is not suitable as an extinguishing media, but may be used for cooling nearby containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Other Precautions: Avoid breathing vapors or mists; prolonged or repeated skin contact.

Spill or Leak Procedures: Remove ignition sources. Dike and take up absorbent material, such as earth and floor dry. Ensure adequate ventilation.

Waste Disposal Methods: Comply with all applicable regulations.

SECTION 7: HANDLING AND STORAGE

Storage: Suitable storage vessels are mild/stainless steel tanks fitted with a dry air breathing system or tight head steel drums. Do not store in lined tanks or drums. Brake fluid absorbs water from the atmosphere – always keep containers tightly closed. Avoid contamination with any other substances and in particular with mineral oils which are incompatible.

Handling: No specific handling precautions are necessary.

Specific Use: Users are referred to the SAE J1707 “Service Maintenance of Brake Fluids”. Racing brake fluid should not be used in high magnesium alloy components and should not be mixed with other brake fluids.

SECTION 8: EXPOSURE CONTROLS

Respiratory Protection: None required in normal use.

Ventilation Type Required: Adequate to maintain level below established standards.

Local Exhaust: Yes Rate: > 60 fpm (general) Mech. (General) No

Gloves: Chemical Resistant

Eye Protection: Face shield or safety glasses recommended

Other Clothing or Equipment: None required in normal use conditions.

Work Hygienic Practices: Basic good housekeeping. Wash hands before eating or smoking. Smoke only in designated areas.



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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	liquid – colorless to amber	Test Method Visual
Odor:	Bland	
pH:	7.0 – 8.0	SAE J 1703
Boiling Point:	>300°C	SAE J 1703
Melting Point:	<-50°C	SAE J 1703
Flash Point:	>100°C	IP 35
Autoignition Temp:	>300°C	ASTM D 286
Density @ 20°C:	1.060-1.090 g/mL	DIN 51757
Solubility In Water:	Approx 97%	
In Ethanol:	Miscible in any ratio	
Partition Coefficient n-Octanol/Water	<2.0	OECD 117
Viscosity @ 20°C:	Approx 5-10 cSt	ASTM D 445
Evaporation Rate:	Negligible	

SECTION 10: STABILITY AND REACTIVITY

Conditions to Avoid: Product is stable under normal conditions. Glycol Ethers can form peroxide on storage – do not distil to dryness.

Materials to Avoid: Strong oxidizing agents, acids, alkalis. For user safety, brake fluid should never be contaminated with any other substance.

Hazardous Decomposition Products: None known.

SECTION 11: TOXICOLOGICAL INFORMATION

(comments may be based on analogy to similar products)

Eye Contact: Product is expected to have an irritating effect on the eye (OECD Test Method 405).

Skin Contact: Not classified as irritant (Test Method OECD 404) although some sensitive individuals may be affected. Repeated contact may de-fat the skin and cause dermatitis. Product is not expected to cause sensitization. Acute percutaneous toxicity is expected to be low LD50 (sk) Rat = > 2000 mg/kg.

Ingestion: Product is of relatively low acute oral toxicity – however, if any significant amount is ingested there is a risk of renal damage which in extreme cases could lead to kidney failure, coma and death. LD50 (oral) Rat = > 5000 mg/kg. Sparse experience indicates lethal dose in man could be considerably less.

Inhalation: Unlikely to be hazardous by inhalation at ambient due to low vapour pressure.

If product is inhaled at elevated temperatures or as an aerosol it may irritate respiratory tract and may cause systemic effects similar to ingestion (see above).

Chronic or Long Term Toxicity:

General: There are no reports of long term adverse affects in man.

Carcinogenicity: Not known to be carcinogenic.

Mutagenicity: Not known to be mutagenic.

Reproductive Toxicity: Major ingredients have not been shown to cause significant fertility or development problems at levels which are not themselves toxic to the animal concerned.



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SECTION 12: ECOLOGICAL INFORMATION

(comments may be based on analogy to similar products)

Ecotoxicity: Product is of low to medium ecotoxicity.

Fish 96h LC50 = > 10 - 100 mg/l (Oncorhynchus Mykiss)

Daphnia 48h EC50 = Not Determined.

Algae 72h EC50 = Not Determined.

Mobility: Soluble in water and will partition to aqueous phase. Volatilisation from water to air not expected.
Mobile in soil until degraded.

Persistence/Degradability: Product is inherently biodegradable and is expected to be readily biodegradable.
If admitted into adapted biological water treatment plants, no significant adverse effects on the degrading action of the live sludge are expected.

Bio accumulative Potential: Not expected to be generally bio accumulative - overall Log POW < 2.0 although some minor ingredients > 3.0.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Dangers: Not significant. As for spillages - avoid liquid entering drains, rivers etc.

Disposal Methods: Controlled incineration or recycling is recommended.

Regulations: Dispose of in accordance with local and national laws and regulations.

SECTION 14: TRANSPORT INFORMATION

DOT/TDG/IMDG/IATA: Not Regulated.

SECTION 15: REGULATORY INFORMATION

EPA Regulations:

RCRA Hazardous Waste Number: Not Listed 40 CFR 261.33

RCRA Hazardous Waste Classification: Not Listed 40 CFR 261

CERCLA Hazardous Substance: Unlisted* 40 CFR 302.4

CERCLA Reportable Quantity: None 40 CFR 302.4

SARA 311/312 Codes: None 40 CFR 370

SARA 313 Toxic Chemicals: Glycol Ethers 40 CFR 372.65

SARA 304 EHS: Not Listed 40 CFR 355

OSHA Regulations:

Air Contaminant: Not Listed 29 CFR 1910.1000

OSHA Specifically Regulated Substance: Not Listed 29 CFR 1910

California Proposition 65 Ingredients: None

* Unlisted per RCRA Section 3001, CWA Section 311(b)(4), CWA Section 307(a), CAA Section 112.



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SECTION 16: OTHER INFORMATION

Legal Disclaimer:

The information contained herein is based on the present knowledge and experience of the manufacturer. It in no way constitutes the users own assessment of work place risk as required by other Health and Safety legislation. Performance Friction does not, by supplying this information, guarantee or warrant any specific properties or qualities of goods supplied. It is the responsibility of the purchaser to determine whether the goods ordered are fit for any purpose for which they may be required. This information is provided subject to Performance Friction's Conditions of Sale.

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1 (800) 424-9300*