MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CHAMPION® MSDS 1400 SERIES DOT 3 BRAKE FLUIDS

Synonyms:

2745 PENNZOIL DOT 3 BRAKE FLUID
2746 PENNZOIL DOT 3 BRAKE FLUID
2769 PENNZOIL DOT 3 BRAKE FLUID
4057 CHAMPION DOT 3 BRAKE FLUID
4613 SERVICE PRO DOT 3 BRAKE FLUID
4616 ZECOL DOT 3 BRAKE FLUID
4617 SUPER-X DOT 3 BRAKE FLUID
4618 POLY-GUARD DOT 3 BRAKE FLUID
4619 BLAIN'S FARM/FLEET DOT 3 BRK FLUID
4661 SUPREME DOT 3 BRAKE FLUID
4662 UNISOURCE DOT 3 BRAKE FLUID
4663 JET-GO DOT 3 BRAKE FLUID
4664 U-HAUL DOT 3 BRAKE FLUID
4665 BG PRODUCTS DOT 3 BRAKE FLUID
4673 ESSENTIALS DOT 3 BRAKE FLUID
4682 FINA DOT 3 BRAKE FLUID
6431 PENNZOIL DOT 3 BRAKE FLUID
8568 PENNZOIL DOT 3 BRAKE FLUID
8569 PENNZOIL DOT 3 BRAKE FLUID
8631 PENNZOIL DOT 3 BRAKE FLUID
RMA103/104 DOW 1000/DOT 3 BRAKE FLUID (FORMULA 436)

Company Identification
Champion Brands, L.L.C., 1001 Golden Drive, Clinton, MO 64735
PHONE: 800-821-5693 WEBSITE: www.championbrands.com

CAS Registry Number Not Applicable
Synonyms None
Generic/Chemical Name Mixture
Product Type Brake Fluid
Preparation Date March 20, 2007

Transportation Emergency Response
CHEMTREC: (800) 424-9300

Product Information
Product Information and MSDS Requests: (800) 821-5693 and www.championbrands.com

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Triethylene glycol monobutyl ether	143226	23.0 – 29.0 Wt./Mol%
Triethylene glycol monomethyl ether	112356	14.0 – 16.0 Wt./Mol%
Diethylene glycol	111466	14.0 – 15.0 Wt./Mol%
Tetraethylene glycol monobutyl ether	1559349	9.0 – 14.0 Wt./Mol%
Tetraethylene glycol	112607	8.0 – 11.0 Wt./Mol%
Triethylene glycol	112505	5.0 – 6.0 Wt./Mol%
Tetraethylene glycol monoethyl ether 3,6,9,12,15,18-Hexaoxaicosane	23601390	2.0 – 5.0 Wt./Mol%
Diethylene glycol monobutyl ether	112345	1.0 – 5.0 Wt./Mol%
Triethylene glycol	112276	2.0 – 4.0 Wt./Mol%
Polyethylene glycol monomethyl ether	9004744	0.0 – 4.0 Wt./Mol%
Diethylene glycol monomethyl ether	111900	1.0 – 2.0 Wt./Mol%

3. HAZARD IDENTIFICATION

Appearance: Amber color
Physical State: Liquid
Odor: Mild aromatic
Hazards of product: WARNING! CAUSES EYE IRRITATION.
Effects of Single Acute Overexposure
Inhalation: Short-term harmful health effects are not expected from vapor generated at ambient temperature.
Eye Contact: Causes moderate to severe irritation, experienced as discomfort or pain, excess blinking and tear production, with marked excess redness and swelling of the conjunctiva. Corneal injury may occur.
Skin Contact: May cause minor irritation with itching and possible slight local redness. A single prolonged exposure is not likely to result in the material being absorbed.
Effects of Repeated Overexposure: Drying and cracking of the skin may result from prolonged exposure to this material because of its defatting action.
Skin Absorption: Repeated prolonged contact may result in the absorption of potentially harmful amounts of material.
Ingestion: Single dose oral toxicity is considered to be low. May cause abdominal discomfort, nausea, and vomiting. Chronic, Prolonged or Repeated Overexposure may cause injury.
Other Effects of Overexposure: Skin contact may cause sensitization and an allergic skin reaction in a small proportion of individuals.
Medical Conditions Aggravated by Exposure: Any pre-existing disorders or deseases of the eye, skin, or central nervours system (CNS).
POTENTIAL ENVIRONMENTAL EFFECTS: See Section 12 for Ecological Information.

4. FIRST AID MEASURES

Eye: Immediately flush eyes with water and continue washing for 15 minutes. Remove contact lenses, if worn. Obtain medical attention if discomfort persists.
Skin: Remove contaminated clothing. Wash skin with soap and water. Obtain medical attention if irritation persists. Wash clothing before reuse.
Ingestion: If a large quantity (several ounces) has been swallowed, and if patient is fully conscious, give two glasses of water. Seek medical attention immediately. Induce vomiting only if prescribed by a physician.
Inhalation: If any symptoms develop, remove to fresh air. Seek medical attention if symptoms continue.
Note to Physicians: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

FIRE CLASSIFICATION:
OSHA Classification (29 CFR 1910.1200): Not classified by OSHA as combustible.

NFPA RATINGS: Health: 1 Flammability: 1 Reactivity: 0

Flash Point - Closed Cup: Pensky-Martens Closed Cup ASTM D 93 121 °C 250 °F
Flammable Limits In Air: Lower Not determined. Upper Not determined.
Autoignition Temperature: 310 °C 590 °F
EXTINGUISHING MEDIA: Extinguish fires with water spray or apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques for large fires. Use carbon dioxide or dry chemical media for small fires.
EXTINGUISHING MEDIA TO AVOID: No information currently available.
SPECIAL FIRE FIGHTING PROCEDURES: Do not direct a solid stream of water or foam into hot, burning pools; this may cause frothing and increase fire intensity.
SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: Use self-contained breathing apparatus and protective clothing.
HAZARDOUS COMBUSTION PRODUCTS: Burning can produce the following products: Oxides of carbon and nitrogen. Carbon monoxide is highly toxic if inhaled. Carbon dioxide in sufficient concentrations can act as an asphyxiant. Acute overexposure to the products of combustion may result in irritation of the respiratory tract.

6. ACCIDENTAL RELEASE INFORMATION

Steps to be Taken if Material is Released or Spilled: Small spills should be flushed with large quantities of water. Large spills should be collected for disposal.

Protective Measures: Wear suitable protective equipment. Avoid contact with eyes.
Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, small spills should be flushed with large quantities of water. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.
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

Precautionary Measures: Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Wash thoroughly after handling. Do not breathe vapor or fumes. Keep out of the reach of children.
General Handling Information: Avoid contact with eyes. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Avoid contaminating soil or releasing this material into sewage and drainage systems and bodies of water.
Ventilation: General (mechanical) room ventilation is expected to be satisfactory.
General Storage Information: Glycol ethers as a family of solvents can be stored in carbon steel. Stainless steel or high baked, phenolic-lined tanks may be considered for critical applications sensitive to slight discoloration or trace iron contamination. Piping can be made of the same material as the storage tank. A centrifugal pump is suitable for transfer services. Butyl rubber or EPDM can be used for gaskets and packing. NOTE: UCC does not recommend using aluminum, copper, galvanized iron, galvanized steel, Viton, neoprene, nitrile or natural rubber with glycol ethers. Glycol ethers do not present a significant flammability hazard at normal storage temperatures. They have relatively low vapor pressures, viscosities and freezing points.

8. EXPOSURE CONTROL/PERSONAL PROTECTIVE EQUIPMENT

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Further information is available in a technical bulletin entitled "Ignition Hazards of Organic Chemical Vapors." Standard (ASTM) test values do not predict many real life situations. Autoignition is the result of a gas-phase runaway reaction which occurs when the heat generation rate inside a given volume of reactant exceeds that of heat loss rate. The heat balance determining autoignition is therefore dependent on factors such as the reactant pressure plus the volume and geometry of any container. The ASTM standard AIT test uses a small (500 ml), heated, open-necked glass flask in which autoignition always occurs at atmospheric pressure. The AITs determined using this test can be appreciably greater than those that might be experienced in large commercial equipment, especially if elevated pressures are involved. Any operation at temperatures close to or above the flash point should be reviewed by the appropriate expert (e.g., safety engineer, chemist).

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: Wear protective equipment to prevent eye contact. Selection of protective equipment may include safety glasses, chemical goggles, face shields, or a combination depending on the work operations conducted.
Skin Protection: Wear protective clothing to prevent skin contact. Selection of protective clothing may include gloves, apron, boots, and complete facial protection depending on operations conducted. Suggested materials for protective gloves include: Polyvinyl chloride coated.
Respiratory Protection: None expected to be needed. General (mechanical) room ventilation is expected to be satisfactory. Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
None Listed					

9. PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Appearance: Transparent light yellow or orange-brown
Physical State: Liquid
Odor: Slight
pH: 7.0 to 11.5
Vapor Pressure at 20°C: No data
Vapor Density (Air = 1): 1.05
Boiling Point: 232°C (450°F) @ 760mmHg
Flash Point - Closed Cup: Pensky-Martens Closed Cup ASTM D 93 156 °C 312 °F
Solubility: Soluble in Water
Specific Gravity: 1.035 @ 20/20°C
Viscosity: <1500 cSt @ -40°C
Viscosity: >1.5 cSt @ 100°C
Equil. Ref. Boil Pt.: 205°C 401°F
Wet Equil. Ref. Boil Pt.: 140°C 284°F
Specification: Conforms to FMVSS No. 116, DOT 3, & SAE J1703 requirements.

10. STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: Avoid contact with acetaldehyde, acids, chlorine, ethylene oxide, isocyanates, strong oxidizing agents, calcium hypochlorite, zinc. Do not use with aluminum equipment > 120°F.
Hazardous Decomposition Products: May for carbon dioxide and carbon monoxide
Hazardous Polymerization: Hazardous polymerization will not occur.

11. TOXILOGICAL INFORMATION

Product Summary
The product appears to be of low toxicity, except for possible mild irritant effects in humans. A high dose may produce central nervous system depression, but there are no reports of adverse health effects form occupational exposue.
Component Information:

COMPONENTS	CAS NUMBER	LD50	CARCINOGENICITY
Triethylene glycol monomethyl borate ester	71243-41-9	INHL RAT 200 MG/L 1 HR ORAL RAT >5G/KG SKIN RABBIT >2G/KG	No Data
Triethylene glycol monobutyl ether	143-22-26	ORAL RAT 5,300 MG/KG SKIN RABBIT 3,540 UL/KG	Not Listed By IARC, NTP, or OSHA
Triethylene glycol monomethyl ether	112-35-6	ORAL RAT 11.8 G/KG SKIN RABBIT 7.4 G/KG	Not Listed By IARC, NTP, or OSHA
Polyethylene glycol methyl ether	9004-74-4	ORAL RAT 22 - 40 G/KG SKIN RABBIT >20.0 G/KG	Not Listed By IARC, NTP, or OSHA
Tetraethylene glycol	112-60-7	ORAL RAT 29 G/KG SKIN RABBIT >20.0 G/KG	Not Listed By IARC, NTP, or OSHA
Tetraethylene glycol monobutyl ether	1559-34-8	No Data Available	Not Listed By IARC, NTP, or OSHA

Diethylene glycol	111-46-6	ORAL RAT 12,600 MG/KG BWT ORAL MOUSE 23,700 MG/KG BWT SKIN RABBIT 11,900 MG/KG	Not Listed By IARC, NTP, or OSHA
Dethylene glycol monobutyl ether	112-34-5	ORAL RAT 5,080 MG/KG ORAL MOUSE 2,406 MG/KG SKIN RABBIT 2,764 MG/KG	Not Listed By IARC, NTP, or OSHA

IMMEDIATE HEALTH EFFECTS
Eye Irritation: Expected to be a mild to moderate eye irritation hazard.
Skin Irritation: Expected to be a mild skin irritation hazard.

ADDITIONAL TOXICOLOGY INFORMATION: No Data.

12. ECOLOGICAL INFORMATION

ECOTOXICITY
The toxicity of this material to aquatic organisms has not been evaluated. Consequently, this material should be kept out of sewage and drainage systems and all bodies of water.
ENVIRONMENTAL FATE
No bioconcentration is expected because of the relatively high water solubility. Potential for mobility id very high (Koc 0-50). Soil organic carbon/water partition coefficient (Koc) is estimated <50.

13. DISPOSAL INFORMATION

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

14. TRANSPORTATION INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.
U.S. D.O.T.
DOT Shipping Name: NOT REGULATED
DOT Hazard Class: NOT REGULATED
DOT Identification Number: NOT REGULATED
DOT Packing Group: NOT REGULATED
IMO/IMDG Shipping Name: NOT REGULATED
IMO/IMDG Hazard Class: NOT REGULATED
IMO/IMDG Identification Number: NOT REGULATED
IMO/IMDG Packing Group: NOT REGULATED

15. REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:
1. Immediate (Acute) Health Effects: YES
2. Delayed (Chronic) Health Effects: YES
3. Fire Hazard: NO
4. Sudden Release of Pressure Hazard: NO
5. Reactivity Hazard: NO

SARA 302 - 40 CFR 355 APPENDIX A and 313 - 40 CFR 372.65 COMPONENTS:
None.
SARA 313 - 40 CFR 372.65 COMPONENTS:
The following components of this product are listed as toxic chemicals in 40 CFR 372.65 and are present at levels which could require reporting and customer notification under Section 313 and 40 CFR Part 372:

COMPONENTS	CAS NUMBER	Reporting Threshold
Triethylene glycol monobutyl ether	143226	1.0 %
Triethylene glycol monomethyl ether	112356	1.0 %

Diethylene glycol	111466	1.0 %
Tetraethylene glycol monobutyl ether	1559349	1.0 %
Tetraethylene glycol	112607	1.0 %
Triethylene glycol	112505	1.0 %
Tetraethylene glycol monoethyl ether 3,6,9,12,15,18-Hexaoxaicosane	23601390	1.0 %
Diethylene glycol monobutyl ether	112345	1.0 %
Triethylene glycol	112276	1.0 %
Polyethylene glycol monomethyl ether	9004744	1.0 %
Diethylene glycol monomethyl ether	111900	1.0 %

EPA ACCIDENTAL RELEASE PREVENTION 40 CFR 68:
None**.**
OSHA PROCESS SAFETY MANAGEMENT 29 CFR 1910:
None.
TSCA: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.
CALIFORNIA PROPOSITION 65:
This product contains the following chemical(s) known to the State of California to cause birth defects and/or other reproductive harm.
Component Diethylene glycol CAS # 111-46-6 Amount 14.0 – 15.0 Wt./Mol%
CALIFORNIA SCAQMD RULE 443.1 (SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 443.1, LABELINGOF MATERIALS CONTAINING ORGANIC SOLVENTS):
VOC : Not determined.
WHMIS CLASSIFICATION:
Class D, Division 2, Subdivision B: Toxic Material
-Skin or Eye Irritation

16. DISCLAIMER

NFPA RATINGS: Health: 1 Flammability: 1 Reactivity: 0
HMIS RATINGS: Health: 1 Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).
REVISION STATEMENT: Revision updates many sections and the MSDS should be read in its entirety.
ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Government Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	MSDS - Material Safety Data Sheet
CHA - Champion LLC	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration

Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by Champion LLC, 1001 Golden Drive, Clinton, Missouri 64735.