



Chemical Name: Brake Fluid

Manufacturer: Napa

Container size: 1 gallon

Location: VLA

Disposal: Place empty container in trash.

MATERIAL SAFETY DATA SHEET

Trade Name: NAPA DOT 4 Brake Fluid
MSDS NO.
Revision Date:
Date Printed 10/07/2004

Deleted: 12 Oz

Deleted: 40-012

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: NAPA DOT 4 Brake Fluid
Chemical Family: Glycol Ethers and Alkyl Ethers
Synonyms: Dow 460 Brake Fluid
Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Deleted: 12 Oz

Supplier: NAPA, P. O. Box 421268, Indianapolis, IN 46241

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient/CAS No.	wt. %	OSHA PEL TWA	OSHA PEL Ceiling Limits	ACGIH TLV TWA	ACGIH TLV STEL
Alkyl Ester proprietary	30-50	Not Determined	Not Determined	Not Determined	Not Determined
Triethylene glycol monobutyl ether 143-22-6	10-40	None Known	None Known	None Known	None Known
Triethylene glycol monomethyl ether 112-35-6	0-20	None Known	None Known	None Known	None Known
Polyethylene glycol monomethyl ether 9004-74-4	0-20	Not Known	Not Known	Not Known	Not Known
Polyethylene glycol monobutyl ether 9004-77-7	0-20	None Known	None Known	None Known	None Known
Poly(ethylene oxide) 25322-68-3	5-15	2 mg/m3	Not Determined	2 mg/m3	Not Determined
Inhibitor Package proprietary	1-3	Not Determined	Not Determined	Not Determined	Not Determined

3. HAZARDS IDENTIFICATION

Emergency Overview: This material is irritating to skin, eyes and mucous membranes. Absorption through skin or inhalation of heated vapor and mist may result in central nervous system and adverse reproductive effects. Animal studies indicate high doses may cause adverse reproductive effects.

HMS Classification: Health: 2 Flammability: 1 Physical Hazard: 0
NFPA Rating: Health: 2 Flammability: 1 Reactivity: 0

4. FIRST AID MEASURES

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical attention if irritation persists.

Ingestion: If swallowed, induce vomiting immediately by giving two glasses of water and sticking fingers down throat; never give anything to an unconscious person. Get medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention. Vapors or mists from this material can irritate the nose, throat and lungs, and cause signs and symptoms of central nervous system depression, depending on the concentration and duration of exposure.

Skin Contact: Remove contaminated clothing and shoes, and launder before reuse. Flush with copious amounts of water. If irritation persists or signs of toxicity occur, seek medical attention.

5. FIRE FIGHTING MEASURES

Flammable Properties
Flash Point °F(°C): 135 C. (275 F.)
Flash Point Method: PMCC
Flammable Limits in Air - Lower (%): Not Determined
Flammable Limits in Air - Upper (%): Not Determined
Autoignition Temperature °F(°C): Not Determined
Extinguishing Media: Alcohol foam. Dry chemical. Halon. Carbon dioxide. Water fog. Water. Water fog and foam may cause frothing and spattering.

Protection Of Fire-Fighters:
Special Fire-Fighting Procedures: Wear approved positive-pressure self-contained breathing apparatus and protective clothing.
Hazardous Combustion Products: Carbon Dioxide. Carbon Monoxide.
Aerosol Comments: Not Applicable

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6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective clothing and equipment to prevent skin and eye contact.
Spill Procedures: Avoid all sources of ignition; heat, sparks and open flames. Contain any liquid from leaking containers. Wear protective equipment specified. Ventilate spill area. Soak up material with absorbent and place in chemical waste container.
 If clean-up is not immediate, cover spill with plastic or canvas to keep dry.
Environmental Precautions: Do not allow to enter sanitary drains, sewer or surface and subsurface waters.

7. HANDLING AND STORAGE

Handling and Storage: Do Not Swallow. Store in a cool, dry place. Use only in a well ventilated area. Keep container closed when not in use to prevent contact with acidic, basic or oxidizing materials. Avoid open heating or agitation, this may generate vapors or mists.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Exhaust ventilation. Eyewash stations. Showers.
Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.
Skin Protection: Avoid skin contact. Wear protective clothing and gloves. Rubber, Neoprene or Vinyl. Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking and when leaving work.
Respiratory Protection: An approved respirator (i.e. NIOSH, etc.) should be worn when exposures are expected to exceed the applicable limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Transparent pale yellow
Odor: MILD, ETHEREAL
pH Value: Not Applicable
Vapor Pressure: <0.01 mm Hg @ 20C
Vapor Density (Air=1): 9
Boiling Point (°F): >200C (>392F)
Melting/Freezing Point: Pour Point -59C (-75F)
Solubility in Water: <0.5%
Bulk Density at 20°C: Not Determined
Molecular Weight: Mixture
Evaporation Rate: <0.01 (Butyl Acetate = 1)
Viscosity: Not Determined.
Specific Gravity (H20=1): 1.047 20C/20C
VOC Content(%): 0.5 wt%
Decomposition Temperature: Not Known

10. STABILITY AND REACTIVITY

Chemical Stability: STABLE.
Conditions to Avoid: Keep away from heat, sparks and flame. Avoid open heating or agitation, this may generate vapors or mists.
Materials to Avoid: Contact with oxidizing agents. May form peroxides if in contact with air for long periods and these can explode spontaneously or when heated.
Hazardous Decomposition Products: Oxides of carbon and nitrogen
Hazardous Polymerization: WILL NOT OCCUR

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Ingredient/CAS No.	wt. %	Route	Species	Dose
Alkyl Ester proprietary	30-50	Inhalation	Rats	Not known.
Triethylene glycol monobutyl ether 143-22-6	10-40	Oral	Rats	LD50 5300 mg/kg
Triethylene glycol monomethyl ether 112-35-6	0-20	Oral	Rats	LD50 11300 uL/kg
Polyethylene glycol monomethyl ether 9004-74-4	0-20	Oral	Rats	LD50 39800 uL/kg
Polyethylene glycol monobutyl ether 9004-77-7	0-20	NA	NA	NA
Poly(ethylene oxide) 25322-68-3	5-15	Inhalation	Rats	Not known.
Inhibitor Package proprietary	1-3	Inhalation	Rats	Not known.

Carcinogenicity:

Ingredient/CAS No.	wt. %	IARC	NTP	OSHA

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Alkyl Ester proprietary	30-50	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	10-40	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	0-20	Not Listed	Not Listed	Not Listed
Polyethylene glycol monomethyl ether 9004-74-4	0-20	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	0-20	Not Listed	Not Listed	Not Listed
Poly(ethylene oxide) 25322-68-3	5-15	Not Listed	Not Listed	Not Listed
Inhibitor Package proprietary	1-3	Not Listed	Not Listed	Not Listed

Some minor components have been shown not to interfere with reproduction, although slightly toxic to the offspring or decreased pup weights were observed in the animal studies. This substance 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 from occupational exposure.

12. ECOLOGICAL INFORMATION

Low to moderate toxicity is expected to aquatic and terrestrial organisms. There is limited information available on environmental fate and effects. Due caution should be exercised to avoid the accidental release of this material to aquatic and terrestrial environments. This mixture is not expected to bioconcentrate in significant amounts.

14. TRANSPORTATION INFORMATION

U.S. DOT:
 Proper Shipping Name: Not Applicable
 Hazard Class: Not Regulated
 UN/NA Number: Not Applicable
 DOT Packing Group: Not Applicable

IMDG:
 Proper Shipping Name: Not Applicable
 Hazard Class: Not Regulated
 Hazard Subclass: Not Applicable
 UN No.: Not Applicable
 Packing Group: Not Applicable
 Marine Pollutant: No

15. REGULATORY INFORMATION

US Federal Regulations:

Ingredient/CAS No.	wt. %	SARA 313	SARA 302	RQ	TPQ
Alkyl Ester proprietary	30-50	Not Listed	Not Listed	Not Listed	Not Determined
Triethylene glycol monobutyl ether 143-22-6	10-40	Listed	Not Listed	NA	NA
Triethylene glycol monomethyl ether 112-35-6	0-20	Listed	Not Listed	NA	NA
Polyethylene glycol monomethyl ether 9004-74-4	0-20	Not Listed	Not Listed	NA	NA
Polyethylene glycol monobutyl ether 9004-77-7	0-20	Not Listed	Not Listed	NA	NA
Poly(ethylene oxide)	5-15	Not Listed	Not Listed	Not Listed	Not Listed

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Ingredient/CAS No.	wt. %	SARA 313	SARA 302	RQ	TPQ
25322-68-3					
Inhibitor Package proprietary	1-3	Not Listed	Not Listed	Not Listed	Not Determined

No specific component of this material is listed as a Hazardous Substance CERCLA (40 CFR 261). However, this product contains various ethylene glycols and glycol ethers which are each included as a broad category on the CERCLA Hazardous substances list.

SARA 311/312 Hazard Categories: Immediate Health: Yes, Delayed Health: Yes, Fire: No, Reactive: No, Pressure: No.

State Regulations:

Ingredient/CAS No.	wt. %	California Prop. 65 Cancer list	California Prop. 65 Developmental Toxicity	California Prop. 65 Reproductive Female	California Prop. 65 Reproductive Male
Alkyl Ester proprietary	30-50	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monobutyl ether 143-22-6	10-40	Not Listed	Not Listed	Not Listed	Not Listed
Triethylene glycol monomethyl ether 112-35-6	0-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyethylene glycol monomethyl ether 9004-74-4	0-20	Not Listed	Not Listed	Not Listed	Not Listed
Polyethylene glycol monobutyl ether 9004-77-7	0-20	Not Listed	Not Listed	Not Listed	Not Listed
Poly(ethylene oxide) 25322-68-3	5-15	Not Listed	Not Listed	Not Listed	Not Listed
Inhibitor Package proprietary	1-3	Not Listed	Not Listed	Not Listed	Not Listed

U.S. TSCA: The components of this product are listed on the TSCA Inventory.

This product contains the following chemical known to the State of California to cause birth defects and/or other reproductive harm: Ethylene glycol monomethyl ether (cas#109-86-4; Present at less than 0.01%).

16. OTHER INFORMATION

General Notes: Do not allow undiluted material or large quantities to reach groundwater, bodies of water or sewer system.

Disclaimer:

The information and recommendations contained herein are based upon tests believed to be reliable. However, the manufacturer/distributor of this product does not guarantee their accuracy or completeness NOR SHALL ANY OF THIS INFORMATION CONSTITUTE A WARRANTY, WHETHER EXPRESSED OR IMPLIED, AS TO THE SAFETY OF THE GOODS, THE MERCHANTABILITY OF THE GOODS, OR THE FITNESS OF THE GOODS FOR A PARTICULAR PURPOSE. Adjustment to conform to actual conditions of usage may be required. The manufacturer/distributor assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. **1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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Chemical Family: Glycol Ethers and Alkyl Ethers
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Supplier: Zak Products, 3006 Skyway Circle South, Irving, TX 75038

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Supplier: Conoco Phillips, Houston, TX 77079

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Supplier: The Heartland, P.O. Box 1520, Wheaton, IL 60189

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Supplier: Santech, 2450 Handley Ederville Rd., Fort Worth, TX 76118

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Supplier: Cyclo Industries, 10190 Riverside Drive, Palm Beach Gardens, FL 33410-4881

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Supplier: Warren Oil Co., Highway 301 N, Dunn, NC 28334

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Supplier: Bowes Seal Fast, Indianapolis, IN 46218

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Supplier: Master Corporation, Memphis, TN 38138

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Emergency Telephone (24 hr.): CHEMTREC 1-800-424-9300 During normal business hours CST 817-645-6088.

Supplier: AGCO Parts, 1500 North Raddant Road, Batavia, IL 60510

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Supplier: Kar Products, P.O. Box 6908, Cleveland, OH 44101