

MATERIAL SAFETY DATA SHEET

PENNZOIL® DOT 4 AND DOT 3 SUPER HEAVY DUTY BRAKE FLUID

1. PRODUCT AND COMPANY IDENTIFICATION

MSDS Number: 6445

Version Date: 8/15/2001

Product Name: PENNZOIL® DOT 4 AND DOT 3 SUPER HEAVY DUTY BRAKE FLUID

Product Use: Brake fluid

Synonyms: DOT 4 AND DOT 3 SUPER HEAVY DUTY BRAKE FLUID

Company Information

SOPUS Products
P.O. Box 4427
Houston, TX 77210-4427
USA

Phone Numbers

Medical Emergency: 1-800-546-6040
Transportation Emergency (USA): 1-800-424-9300
Transportation Emergency (International):
1-703-527-3887 (Call Collect)
MSDS Assistance: 1-800-546-6227
Fax On Demand: 1-800-546-6227
Technical Assistance: 1-800-458-4998
Customer Service: 1-800-468-8397
Fax Number: 713-217-3181
Internet Address: www.MSDS.PZLQS.com

2. COMPONENT INFORMATION

Component	CAS No.	Weight Percent Range	Hazardous in Blend
GLYCOL ETHERS	NONE	< 80	No
GLYCOLS	MIXTURE	< 10	No
CORROSION INHIBITOR	MIXTURE	< 1	No
OXIDATION INHIBITOR	MIXTURE	< 1	No
POLYGLYCOLS	MIXTURE	< 10	No

Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Other: This product contains a maximum of 1.0% of diethylene glycol monomethyl ether (DGME).

3. HAZARDS IDENTIFICATION

Emergency and Hazards Overview

CAUTION: Contains glycols, glycol ethers and polyglycols.

NFPA Ratings: Health 1 Flammability 1 Reactivity 0

Primary Route of Exposure: Skin X Inhalation -- Eye --

Health Effect Information

Eye Contact: Avoid eye contact. This product is practically non-irritating to the eyes upon direct contact. This product has a low vapor pressure and is not expected to present a hazard to the eyes at ambient conditions. Exposure to vapors generated under unusual conditions may be mildly irritating to the eyes. See Section 11 - Toxicological Information.

Skin Contact: Avoid prolonged and repeated skin contact. This product may cause slight skin irritation upon direct contact. May be absorbed through skin. However, no probable hazard exist from skin absorption. See Section 11 - Toxicological Information.

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Inhalation: This product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent aerosolization or misting of this product. This product may be considered a low health hazard unless inhaled in very high concentrations. Acute and chronic overexposures may be irritating to the respiratory tract. Severe intoxication may lead to drowsiness, dullness, numbness, and headache followed by dizziness, weakness, and nausea. See Section 11 - Toxicological Information.

Ingestion: Do not ingest. Ingestion of large quantities may be harmful. See Section 11 - Toxicological Information. Small amounts swallowed incidental to normal handling are not likely to cause injury; swallowing large amounts may be harmful.

Medical Conditions Aggravated by Exposure: No information available

Other: No information available

4. FIRST AID INFORMATION

Eye Contact: Immediately flush eyes with large amounts of water and continue flushing until irritation subsides.

Skin Contact: Wash contaminated area thoroughly with soap and water. If redness or irritation occurs, seek medical attention.

Inhalation: This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions. If vapor or mist is generated when the material is heated or handled, remove victim from exposure.

Ingestion: If person is conscious, give large quantities of water immediately. Induce vomiting. Seek immediate medical attention.

Notes to Physician: No information available

Other: No information available

5. FIRE AND EXPLOSION INFORMATION

Flammable Properties

Flash Point: 250 F, 121.1 C

Test Method: ASTM D-93 (P.M.C.C.)

Flammable Limits in Air

Upper Percent: No data available

Lower Percent: No data available

Autoignition Temperature: No data available

Test Method: No information available

NFPA Classification: Class III-B combustible liquid

Extinguishing Media: Use water spray (fog), dry chemical, foam, or carbon dioxide.

Fire Fighting Measures

Special Fire Fighting Procedures and Equipment: Water may be ineffective but can be used to cool containers exposed to heat or flame to prevent vapor pressure buildup and possible container rupture. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Unusual Fire and Explosion Conditions: Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.

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Hazardous Combustion By-Products: No information available

Other: No information available

6. ACCIDENTAL RELEASE MEASURES

Personnel Safeguards: Consult Health Effect Information in Section 3, Personal Protection Information in Section 8, Fire and Explosion Information in Section 5, and Stability and Reactivity Information in Section 10. Remove all sources of ignition.

Regulatory Notifications: Notify appropriate authorities of spill.

Containment and Clean up: Contain spill immediately. Do not allow spill to enter sewers or watercourses. Absorb with appropriate inert material such as sand, clay, etc. Large spills may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers.

Other: No information available

7. HANDLING AND STORAGE INFORMATION

Handling: Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106-- Flammable and Combustible Liquids.

Storage: Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame, or oxidizing materials.

Empty Container Warnings

Drums: No information available

Plastic: No information available

Other: No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure Limits and Guidelines

This product does not contain any components with OSHA or ACGIH exposure limits.

Personal Protective Equipment

Eye/Face Protection: Eye protection is not required under conditions of normal use.

Skin Protection: No skin protection is required for single, short duration exposures. For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure.

Respiratory Protection: Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified. Do not use compressed oxygen in hydrocarbon atmospheres.

Personal Hygiene: Consumption of food and beverage should be avoided in work areas where hydrocarbons are present. Always wash hands and face with soap and water before eating, drinking, or smoking.

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Engineering Controls / Work Practices

Ventilation: General room ventilation is normally sufficient to prevent buildup of hazardous concentrations. If vapor or mist is generated when the material is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure or flammable limits.

Other: No information available

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear to amber	
Odor: No information available	Vapor Pressure: < 1 mm Hg @ 68 F
Physical state: Liquid	Vapor Density (air=1): No data available
pH: No data available	Percent Volatile by Volume: 100
Boiling Point: 478 F, 247.8 C	Volatile Organic Content: No data available
Melting Point: Not applicable	Molecular Weight: No data available
Specific Gravity: 1.06	Average Carbon Number: No data available
Pour Point: No data available	Viscosity @ 100 F: No data available
	Viscosity @ 40 C: No data available
Solubility in Water: Soluble in water	
Octanol / Water Coefficient: Log K_{ow} = No data available	

10. STABILITY AND REACTIVITY INFORMATION

Chemical Stability: Stable

Conditions to Avoid: None

Incompatible Materials to Avoid: May react with strong oxidizing agents.

Other: No information available

11. TOXICOLOGICAL INFORMATION

Primary Eye Irritation: Animal testing has shown this product is practically non-irritating to the eyes upon direct contact (rabbit).

Primary Skin Irritation: No information available

Acute Dermal Toxicity: No information available

Subacute Dermal Toxicity: No information available

Dermal Sensitization: No information available

Inhalation Toxicity: No information available

Inhalation Sensitization: No information available

Oral Toxicity: No information available

Mutagenicity: No information available

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Carcinogenicity: No information available

Reproductive and Developmental Toxicity: Topical application of DGME at a high dose (750 mg/kg/day) produced slight embryotoxicity, fetotoxicity and maternal toxicity in rabbits. No adverse maternal, embryonic or fetal effects were observed at the low dose tested (50 mg/kg/day).

Teratogenicity: No information available

Immunotoxicity: No information available

Neurotoxicity: No information available

Other: Animal testing has shown this product to be non-toxic upon acute ingestion (oral LD50 > 5,000 mg/kg in rats), and non-toxic upon acute dermal exposure (dermal LD50 > 2,000 mg/kg in rabbits).

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: Practically non-toxic to aquatic organisms; LC50 > 100 mg/L (fish).

Terrestrial Toxicity: No information available

Chemical Fate and Transport: Bioconcentration potential is low; Log Pow < 3.

Other: No information available

13. DISPOSAL INFORMATION

Regulatory Information: All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste. Refer to state and local regulations. Department of Transportation (DOT) regulations may apply for transporting this material when spilled.

Waste Disposal Methods: Waste material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

Other: No information available

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)

Highway / Rail (Bulk): Not Regulated

Highway / Rail (Non-Bulk): Not Regulated

For US shipments, US DOT law requires the shipper to determine the proper shipping description of the material that is being shipped. The shipping information and description contained in this section may not be suitable for all shipments of this material, but may help the shipper determine the proper shipping description for a particular shipment.

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International Information

Vessel: IMDG Regulated: -- IMDG Not Regulated: X
Air: ICAO Regulated: -- ICAO Not Regulated: X

Other: No information available

15. Regulatory Information

Regulatory Lists Searched: The components listed in Section 2 of this MSDS were compared to substances that appear on the following regulatory lists. Each list is numerically identified. See Regulatory Search Results below.

Health & Safety: 10 - IARC carcinogen, 11 - NTP carcinogen, 12 - OSHA carcinogen, 15 - ACGIH TLV, 16 - OSHA PEL, 17 - NIOSH exposure limit, 20 - US DOT Appendix A, Hazardous substances, 22 - FDA 21 CFR Total food additives, 23 - NFPA 49 or 325

Environmental: 30 - CAA 1990 Hazardous air pollutants, 31 - CAA Ozone depletors, 33 - CAA HON rule, 34 - CAA Toxic substance for accidental release prevention, 35 - CAA Volatile organic compounds (VOC's) in SOCOMI, 41 - CERCLA / SARA Section 302 extremely hazardous substances, 42 - CERCLA / SARA Section 313 emissions reporting, 43 - CWA Hazardous substances, 44 - CWA Priority pollutants, 45 - CWA Toxic pollutants, 46 - EPA Proposed test rule for hazardous air pollutants, 47 - RCRA Basis for listing - Appendix VII, 48 - RCRA waste, 49 - SDWA - (S)MCLs

International: 50 - Canada - WHMIS Classification of substance, 54 - Mexico - Drinking water - ecological criteria, 55 - Mexico - Wastewater discharges, 56 - US -TSCA Section (12)(b) - export notification

State Lists: 60 - CA - Proposition 65, 61 - FL - Substances, 62 - MI - Critical materials, 63 - MA - RTK, 64 - MA - Extraordinarily hazardous substances, 65 - MN - Hazardous substances, 66 - PA - RTK, 67 - NJ - RTK, 68 - NJ - Environmental hazardous substances, 69 - NJ - Special hazardous substances

Inventories: 80 - Canada - Domestic substances , 81 - European - EINECS, 82 - Japan - ENCS, 83 - Korea - Existing and evaluated chemical substances, 84 - US - TSCA , 85 - China Inventory

Regulatory Search Results:

No components appear on any of the regulatory lists searched.

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory.

SARA Section 313:

<u>Chemical</u>	<u>CAS Number</u>	<u>Percent in Product</u>
GLYCOL ETHERS	NONE	< 65

IARC: No information available

SARA 311 / 312 Categories

Acute: -- Chronic: -- Fire: -- Pressure: -- Reactive: --
Not Regulated: X

Canadian WHMIS Classification

Not a controlled substance under WHMIS

European Union Classification

Hazard Symbols:

No information available

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Risk Phrases:

No information available

Safety Phrases:

No information available

Other: No information available

16. OTHER INFORMATION**Health and Environmental Label Language**

WARNING: HARMFUL IF SWALLOWED. EYE IRRITANT.
Contains glycols, glycol ethers and polyglycols.

PRECAUTIONARY MEASURES: Do not ingest. Avoid contact with eyes. Avoid repeated & prolonged skin contact. Wash thoroughly after handling.

FIRST AID: Ingestion: If swallowed, contact a poison control center or physician. Eye contact: Flush with water for 15 minutes. If irritation persists, call physician.

INSTRUCTIONS IN CASE OF SPILL: Soak up with absorbent material.

MSDS Revisions

Previous Version Date: 9/25/1992

Previous Version Information

Revised -

- Section 1 - Product and Company Identification.
- Section 2 - Hazards Identification.
- Section 5 - Fire and Explosion Information.

Other

No information available

Prepared By:

SOPUS Products
P.O. Box 4427
Houston, TX 77210-4427 USA

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