

**MATERIAL SAFETY DATA SHEET**

**1. Product And Company Identification**

MSDS ID: MSDS012

PRODUCT NAME: Prestone® High Performance DOT 4 Brake Fluid

PRODUCT NUMBER: AS800, AS801

FORMULA NUMBER: 13436-22, 2046-96, 2054-44

**MANUFACTURER:**

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EMERGENCY PHONE NUMBER: CHEMTREC (800)424-9300 (in the US) CANUTEC (613)996-6666 (in Canada)

MSDS DATE OF PREPARATION/REVISION: 03/06/09

PRODUCT USE: Automobile brake fluid – consumer product

**2. Hazards Identification**

Clear, amber liquid with a mild odor.

**EMERGENCY OVERVIEW**

May cause eye, skin or respiratory irritation. May be absorbed through the skin in harmful amounts. Accidental or deliberate ingestion of this material may cause central nervous system effects including headache, dizziness, narcosis, blurred vision, nausea, vomiting and diarrhea. May cause adverse chronic effects.

**3. Composition/Information On Ingredients**

| Component                                                                            | CAS No.     | Amount |
|--------------------------------------------------------------------------------------|-------------|--------|
| Mixture of glycol ethers, polyglycols, oxidation inhibitors and corrosion inhibitors | Proprietary | 100%   |
| Diethylene Glycol Butyl Ether                                                        | 112-34-5    | <10%   |
| Diethylene Glycol                                                                    | 111-46-6    | <5%    |

(See Section 8 for Exposure Limits)

**4. First Aid Measures**

**INHALATION:** Remove to fresh air if effects occur and seek medical attention.

**SKIN CONTACT:** Remove contaminated clothing. Wash all affected and exposed areas with soap and water. If irritation or redness develops or persists, seek medical attention.

**EYE CONTACT:** Exposed eyes should be immediately flushed with copious amounts of water using a steady stream for a minimum of 15 minutes. If irritation, pain, swelling or tearing develop, seek medical attention.

**INGESTION:** If swallowed, get immediate medical advice by calling a Poison Control Center or emergency room. If advice is not available, take victim and product container to the nearest emergency treatment center or hospital. Do not attempt to give anything by mouth to an unconscious person.

**NOTES TO PHYSICIAN:** This product contains a small amount of diethylene glycol. It is estimated that the lethal oral dose of diethylene glycol in adults is 1.0-1.2 ml/kg. Diethylene glycol may cause an elevated anion-gap metabolic acidosis and

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renal tubular injury. Liver injury may occur, but not as severe as kidney injury. The signs and symptoms in diethylene glycol poisoning are those of metabolic acidosis, CNS depression and kidney injury. Urinalysis may show albuminuria, hematuria and oxaluria. The current medical management of diethylene glycol poisoning includes elimination of diethylene glycol, correction of metabolic acidosis and prevention of kidney injury. It is essential to have immediate and follow-up urinalysis and clinical chemistry. There should be particular emphasis on acid-base balance, and liver and kidney function tests. For severe and/or deteriorating cases, hemodialysis may be required. Dialysis should be considered for patients who have severe metabolic acidosis, or compromise of renal function. There is no conclusive evidence that ethanol treatment will be beneficial. Consult your poison control center.

**5. Firefighting Measures**

**EXTINGUISHING MEDIA:** Use water fog, foam, alcohol foam, carbon dioxide or dry chemical. Cool fire exposed containers with water. A direct stream of water or foam may cause frothing.

**SPECIAL FIRE FIGHTING PROCEDURES:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

**UNUSUAL FIRE HAZARDS:** May form peroxides if in contact with air for long periods which can explode spontaneously or when heated.

**HAZARDOUS COMBUSTION PRODUCTS:** Burning may produce carbon monoxide, carbon dioxide, and nitrogen oxides.

**6: Accidental Release Measures**

Wear appropriate protective clothing and equipment (See Section 8). Collect material with absorbent material and place in appropriate, labeled container for disposal.

**7. Handling and Storage**

Avoid contact with eyes, skin and clothing.

Wash exposed skin with soap and water after use.

Avoid breathing vapors and mists.

Use with adequate ventilation.

Keep away from excessive heat and open flames.

Keep containers closed when not in use.

Do not add nitrites. This product contains amines which can combine with nitrites to form nitrosamines. Many nitrosamines have been found to cause cancer in laboratory animals.

Store in a cool, dry area.

Empty containers retain product residue and may be hazardous. Do not cut, weld, drill, etc. containers, even empty. Do not reuse empty containers unless properly cleaned.

NFPA CLASSIFICATION: Not Applicable

**8. Exposure Controls / Personal Protection****EXPOSURE LIMITS**

| CHEMICAL                                                                             | EXPOSURE LIMIT                     |
|--------------------------------------------------------------------------------------|------------------------------------|
| Mixture of glycol ethers, polyglycols, oxidation inhibitors and corrosion inhibitors | None Established                   |
| Diethylene Glycol Butyl Ether                                                        | 35 ppm TWA Manufacturer            |
| Diethylene Glycol                                                                    | 10 mg/m <sup>3</sup> TWA AIHA WEEL |

**VENTILATION:** General ventilation should be adequate for normal use. For operations where the product is heated or



misted and exposures may be excessive, mechanical ventilation such as local exhaust may be needed to minimize exposure.

**RESPIRATORY PROTECTION:** None under normal use conditions. For operations where exposures may be excessive, a NIOSH/MSHA approved respirator with an organic vapor cartridge and a dust/mist prefilter or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

**GLOVES:** Impervious gloves such as PVC coated are recommended to prevent prolonged/repeated skin contact.

**EYE PROTECTION:** Chemical goggles are recommended to prevent eye contact.

**OTHER PROTECTIVE EQUIPMENT/CLOTHING:** Protective clothing if needed to avoid prolonged/repeated skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be removed and laundered or dry cleaned before re-use.

### 9. Physical and Chemical Properties

**APPEARANCE AND ODOR:** Clear light amber liquid, mild odor.

|                                                              |                                          |
|--------------------------------------------------------------|------------------------------------------|
| pH: Not determined                                           | SPECIFIC GRAVITY: 1.05-1.06              |
| BOILING POINT: >392°F (200°C)                                | VAPOR PRESSURE: Not determined           |
| FREEZING POINT: Not determined                               | VAPOR DENSITY: Not determined            |
| SOLUBILITY IN WATER: <0.5%                                   | PERCENT VOLATILE: 100%                   |
| VISCOSITY: Not determined                                    | EVAPORATION RATE: Not determined         |
| COEFFICIENT OF WATER/OIL DISTRIBUTION: Not determined        |                                          |
| FLASH POINT: >250°F (121.1°C) PMCC                           | AUTOIGNITION TEMPERATURE: Not determined |
| FLAMMABILITY LIMITS: LEL: Not determined UEL: Not determined |                                          |

### 10. Stability and Reactivity

**STABILITY:** Stable

**CONDITIONS TO AVOID:** None known.

**INCOMPATIBILITY:** Avoid strong oxidizing agents and strong acids. This product may contain amines which can combine with nitrites to form nitrosamines. Many nitrosamines have been found to cause cancer in laboratory animals.

**DECOMPOSITION PRODUCTS:** Combustion will product carbon monoxide, carbon dioxide and nitrogen oxides. May form peroxides if in contact with air for long periods and can explode spontaneously when heated.

**HAZARDOUS POLYMERIZATION:** Will not occur.

### 11. Toxicological Information

#### POTENTIAL HEALTH EFFECTS:

##### ACUTE HAZARDS:

**INHALATION:** High concentrations of vapors or mists may cause respiratory irritation experienced as nasal discomfort and discharge.

**SKIN CONTACT:** Contact may cause minor irritation with redness and itching. Prolonged or repeated exposure may cause drying and peeling of the skin. May cause skin sensitization in some individuals. A single prolonged exposure is not likely to result in material being absorbed in harmful amounts. Prolonged or repeated skin exposure to very large amounts may cause central nervous system effects.

**EYE CONTACT:** May cause eye irritation with pain, tearing and inflammation.

**INGESTION:** Accidental ingestion of a small amount may cause gastrointestinal discomfort with nausea, vomiting and

diarrhea. Large amounts may cause central nervous system effects including headache, dizziness, narcosis, slurred speech and blurred vision.

CHRONIC EFFECTS: Prolonged or repeated skin contact with this product may possibly lead to irritation and dermatitis. Prolonged or repeated inhalation, ingestion or skin absorption may lead to central nervous system effects, gastrointestinal disturbances and possible adverse blood, kidney, liver and reproductive effects.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: May aggravate pre-existing skin, blood, kidney or liver disorders.

CARCINOGEN: None of the components is listed as a carcinogen or potential carcinogen by ACGIH, IARC, NTP or OSHA.

**Acute Toxicity Values:**

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| Product:                       | Oral Rat LD50: >5,000 mg/kg<br>Dermal Rabbit LD50: >2,000 mg/kg |
| Diethylene Glycol:             | Oral rat LD50: 12565 mg/kg<br>Skin rabbit LD50: 11890 mg/kg     |
| Diethylene Glycol Butyl Ether: | Oral rat LD50: 5080 mg/kg<br>Skin rabbit LD50: 2764 mg/kg       |

**12. Ecological Information**

No ecotoxicity data is available for this product or its components at this time.

**13. Disposal Considerations**

Recycle, incinerate, treat or landfill in accordance with all local, state/provincial and federal regulations.

**14. Transport Information**

**U.S. DOT HAZARD CLASSIFICATION**

PROPER SHIPPING NAME: Not regulated  
TECHNICAL NAME: N/A  
UN NUMBER: N/A  
HAZARD CLASS/PACKING GROUP: N/A  
LABELS REQUIRED: N/A

DOT MARINE POLLUTANTS: This product does not contain Marine Pollutants as defined in 49 CFR 171.8.

**IMDG CODE SHIPPING CLASSIFICATION**

DESCRIPTION: Not Regulated  
ID NUMBER: N/A  
HAZARD CLASS: N/A  
PACKING GROUP: N/A  
LABELS REQUIRED: N/A  
PLACARDS REQUIRED: N/A

**CANADIAN TDG CLASSIFICATION**

SHIPPING DESCRIPTION: Not Regulated

ID NUMBER: N/A  
HAZARD CLASS: N/A  
PACKING GROUP: N/A  
LABELS REQUIRED: N/A  
PLACARDS REQUIRED: N/A

**15. Regulatory Information**

EPA SARA 311/312 HAZARD CLASSIFICATION: Acute health, chronic health

EPA SARA 313 This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

| Chemical Name | CAS# | Weight% |
|---------------|------|---------|
| Glycol Ethers | N/A  | <60%    |

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: This product is not subject to CERCLA reporting requirements, however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: One or more of the ingredients of this product is not listed on the Canadian Domestic Substances List.

CANADIAN WHMIS CLASSIFICATION: Class D - Division 2 - Subdivision B - (Toxic material causing other chronic effects)



CANADIAN WHMIS HAZARD SYMBOLS:

This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): One or more of the ingredients of this product is not listed on the EINECS inventory.

AUSTRALIA: One or more of the ingredients of this product is not listed on the Australian Inventory of Chemical Substances.

JAPAN: One or more of the ingredients of this product is not listed on the Japanese Existing and New Chemical Substances (MITI) List.

KOREA: One or more of the ingredients of this product is not listed on the Korean Existing Chemicals List (KECL).

CHINA. All of the ingredients of this product are listed on the Inventory of Existing Chemical Substances in China (IECSC).

PHILIPPINES One or more of the ingredients of this product is not listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS).



**16. Other Information**

NFPA RATING (NFPA 704) - FIRE: 1      HEALTH: 2      REACTIVITY: 0

REVISION SUMMARY: Section 1: Update US information phone numbers.

This MSDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of the tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

If more information is needed, please contact:

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