



## SAFETY DATA SHEET

### CARQUEST PREMIUM DOT 4 BRAKE FLUID

#### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Issue Date: November 27, 2013

Revised: July 10, 2014

**Product Name:** CARQUEST PREMIUM DOT 4 BRAKE FLUID

**Synonyms:** Brake Fluid

**CAS Number:** Mixture, see Section 3

**Chemical Formula:** Mixture

**General Use:** Brake Fluid

**Manufacturer:** Warren Unilube, Inc., 915 E. Jefferson, West Memphis, AR 72301

**24-HOUR EMERGENCY NUMBER – CHEMTREC: 1-800-424-9300**

**WARREN UNILUBE PHONE:** (800) 428-9284

**FAX:** (870) 400-3070

#### Restrictions on Use:

**FOR LABELS FOR THE GENERAL PUBLIC:** If medical advice is needed, have product container or label at hand.

Keep out of reach of children.

Read label before use.

**FOR THE INDUSTRIAL WORKER:** Industrial use only.

#### SECTION 2: HAZARD(S) IDENTIFICATION

#### Hazard Classification:

**OSHA Hazards:** Irritant, Harmful by ingestion

**Target Organs:** Kidney, Liver, Central nervous system, Female reproductive system, Male reproductive system, Blood.

#### GHS Classification:

Acute toxicity, dermal (Category 5)

Acute toxicity, oral (Category 5)

Skin Irritation (Category 2)  
Serious eye damage (Category 1)  
Specific target organ toxicity – single exposure (Category 3)



**Signal Word: WARNING**

**Hazard Statements:**

H303	May be harmful if swallowed
H313	May be harmful in contact with skin
H315	Causes skin irritation
H318	Causes serious eye damage
H335	May cause respiratory irritation
H402	Harmful to aquatic life

**Precautionary Statements:**

P264	Wash thoroughly after handling.
P280	Wear protective gloves.
P280	Wear eye protection / face protection.
P273	Avoid release to the environment.
P312	Call a POISON CENTER or doctor / physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice / attention.
P362	Take off contaminated clothing and wash before reuse.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P310	IF IN EYES: Immediately call a POISON CENTER or doctor / physician.
P304 + P340	IF INHALED: Remove victim to fresh air and kept a rest in position comfortable for breathing.

**HMIS Classification**

Health hazard:	1
Chronic Health Hazard	
Flammability	1
Physical hazards	0

**NFPA Rating**

Health hazard: 1  
Fire: 1  
Reactivity 0

**Description of Any Other Hazards Not Otherwise Classified:** none known.

**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

<u>INGREDIENT Name:</u>	<u>CAS NUMBER</u>	<u>%wt. or %V</u>
Borate Ester	176022-80-3	30-50
Triethylene Glycol Butyl Ether	143-22-6	10-30
Diethylene Glycol	111-46-6	5-15
Triethylene Glycol	112-27-6	0-10
Polyethylene Glycol Methyl Ether	9004-74-4	0-15
Polyethylene Glycol Butyl Ether	9004-77-7	0-15
Triethylene Glycol Methyl Ether	112-35-6	5-25
Diisopropanolamine	110-97-4	0-1
Diethanolamine	111-42-2	0-1

**SECTION 4: FIRST AID MEASURE**

**EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation continues or persists, get medical advice / attention.

**SKIN:** Wash with plenty of soap and water. If skin irritation occurs, get medical advice / attention.

**INGESTION:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**INHALATION:** Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** Treatment should be directed at the control of symptoms and the clinical condition of the patient.

**SECTION 5: FIRE-FIGHTING MEASURES**

**SUITABLE EXTINGUISHING MEDIA:** Dry chemical, foam or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak, and disperse vapors.

**UNSUITABLE EXTINGUISHING MEDIA:** Direct water stream.

**SPECIAL FIRE FIGHTING PROCEDURES:** Evacuate area. Do not use direct water stream to extinguish fires. Do not release runoff from fire control methods to sewers or waterways.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known.

**HAZARDOUS COMBUSTION PRODUCTS:** Carbon monoxide, carbon dioxide, and unidentified organic compounds.

**SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE FIGHTERS:** Wear full protective clothing and NIOSH – approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive breathing mode.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS:** Use appropriate personal protective equipment. Avoid breathing vapors, mist or gas. Avoid contact with spilled material. Insure adequate ventilation. Remove all sources of ignition. Use non-sparking tools and equipment.

**PROTECTIVE CLOTHING:** Standard work uniform. Impervious gloves. Safety glasses. Personnel should increase PPE level as deemed appropriate in any given situation.

### **EMERGENCY PROCEDURES:**

**SMALL SPILLS:** Contain and recover liquid when possible. Collect liquid in appropriate container or absorb with an inert material (such as vermiculite or dry sand) and place in chemical waste container. Do not use combustible materials such as sawdust for the cleanup.

### **LARGE SPILLS:**

**Containment:** Shut off source of leak if safe to do so. Dike far ahead of liquid spill for later disposal. Do not allow material to enter sewers or waterways.

**Cleanup:** Contain and recover liquid when possible. Collect liquid in appropriate container. Absorb residue with an inert material (such as vermiculite or dry sand) and place in chemical waster container. Do not use combustible materials such as sawdust for the cleanup.

## **SECTION 7: HANDLING AND STORAGE**

**HANDLING PRECAUTIONS:** May be harmful or fatal if swallowed.

**STORAGE REQUIREMENTS:** Store in a cool dry, ventilated area. Separate from acids, bases and oxidizing materials.

## **SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Controls should be such that adequate ventilation is provided.

**VENTILATION:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work place by controlling it at its source.

**RESPIRATORY PROTECTION:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFT 1910.134) and, if necessary, wear a MSHA / NIOSH approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (e.g. cleaning spills, reactor vessels, or storage tanks), wear an SCBA. **Warning!** *Air purifying respirators do not protect workers in oxygen-deficient atmospheres.* If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**EYE PROTECTION:** Wear protective eyeglasses or chemical safety goggles, per OSHA eye- and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with, contact lenses.

**SKIN PROTECTION:** Wear chemically protective gloves, boots, aprons and gauntlets to prevent prolonged or repeated skin contact.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Make emergency eyewash stations, safety / quick drench showers and washing facilities available in work areas.

**WORK HYGIENIC PRACTICES:** Never eat, drink or smoke in work areas. Practice good personal hygiene after using this material especially before eating, drinking or smoking, using the toilet, or applying cosmetics. Separate contaminate work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment. Discard belts and shoes that cannot be cleaned.

**EXPOSURE GUIDELINES:**

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		USA WEEL
	TWA	STEL	TWA	STEL	TWA	STEL	
Borate Ester	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
Triethylene Glycol Butyl Ether	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
Diethylene Glycol	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	10 mg/m3
Triethylene Glycol	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.
Polyethylene Glycol Methyl Ether	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	10 mg/m3
Polyethylene Glycol Butyl Ether	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.

Triethylene Glycol Methyl Ether	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	10 mg/m3
Diisopropanol	none estab.	none estab.	none estab.	none estab.	none estab.	none estab.	25 ppm
Diethanolamine	3 ppm	none estab.	2 mg/m3	none estab.	3 ppm	none estab.	none estab.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Liquid

**APPEARANCE AND COLOR:** Yellow to amber

**ODOR:** Mild

**FLASH POINT:** >275°F (>135°C)

**UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:** not available

**AUTO IGNITION TEMPERATURE:** not available

**DECOMPOSITION TEMPERATURE:** not available

**ODOR THRESHOLD:** not available

**VAPOR DENSITY (air = 1):** >1

**pH:** 10.0 – 11.5

**RELATIVE DENSITY:** 8.33 – 9.02 lb/gal

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1 AT 4 C):** 1.000 – 1.070

**MELTING POINT / FREEZING POINT:** not available

**WATER SOLUBILITY:** soluble

**OTHER SOLUBILITIES:** not available

**INITIAL BOILING POINT AND BOILING RANGE:** 480°F (248.9°C), boiling range not available

**EVAPORATION RATE (BuAc = 1):** <0.01

**PARTITION COEFFICIENT: n-OCTANOL/WATER:** not available

**VISCOSITY:** not available

**REFRACTIVE INDEX:** not available

**FORMULA WEIGHT:** mixture

## SECTION 10: STABILITY AND REACTIVITY

**REACTIVITY:** none under normal handling.

**STABILITY:** stable at room temperature in closed containers under normal storage and handling conditions.

**CONDITIONS TO AVOID (STABILITY):** none known.

**INCOMPATIBILITY (MATERIAL TO AVOID):** none known.

**HAZARDOUS DECOMPOSITION BY-PRODUCTS:** Thermal oxidative decomposition can produce carbon monoxide, carbon dioxide and unknown organic compounds.

**HAZARDOUS POLYMERIZATION:** Hazardous polymerization will not occur.

**CONDITIONS TO AVOID (POLYMERIZATION):** Hazardous polymerization will not occur.

**HAZARDOUS POLYMERIZATION BY-PRODUCTS:** Hazardous polymerization will not occur.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

**SIGNS AND SYMPTOMS OF OVEREXPOSURE:** Swallowing larger amounts may cause nausea and vomiting, abdominal discomfort or diarrhea. May cause dizziness and drowsiness.

### **ACUTE EFFECTS:**

**EYE CONTACT:** Causes serious eye damage.

**SKIN CONTACT:** Causes skin irritation.

**INHALATION:** At room temperature, exposure to vapor is minimal due to low volatility. Mist may cause irritation of the upper respiratory tract.

**INGESTION:** Toxic or fatal if ingested. For diethylene glycol, a component of this mixture, a lethal dose can be as little as two ounces. Symptoms of diethylene glycol poisoning include severe abdominal cramping, diarrhea, vomiting, sweating, confusion, cardiac abnormalities, neurological abnormalities, infrequent urination, intoxication or CNS depression. If left untreated, product will metabolize to cause metabolic acidosis, renal failure, hyperkalemia, hyponatremia, paralysis, cardiac failure or death. Seek medical attention immediately for poisoning. If ingested, DO NOT wait for symptoms to develop before getting treatment.

**TARGET ORGAN EFFECTS:** May cause respiratory irritation, drowsiness or dizziness.

**CHRONIC EFFECTS:** No data available

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Pre-existing skin, eye and respiratory disorders may be aggravated by exposure to this product. Impaired kidney function from pre-existing disorders may be aggravated by exposure to this product.

### **ACUTE TOXICITY VALUES**

#### **Borate Ester**

**ORAL LD50 (state animal):** data unavailable

**DERMAL LD50 (state animal):** data unavailable

**INHALATION LC50 (state animal):** data unavailable

#### **Triethylene Glycol Butyl Ether**

**ORAL LD50 (rat):** 5,300 mg/kg

**DERMAL LD50 (rabbit):** 3,505 mg/kg

**INHALATION LC50 (state animal):** data unavailable

#### **Diethylene Glycol**

**ORAL LD50 (rat):** 12,565 mg/kg

**DERMAL LD50 (rabbit):** 11,890 mg/kg

**INHALATION LC50 (state animal):** data unavailable

**Triethylene Glycol**

**ORAL LD50 (rat):** 17,000 mg/kg

**DERMAL LD50 (rabbit):** 22,500 mg/kg

**INHALATION LC50 (state animal):** data unavailable

**Polyethylene Glycol Butyl Ether**

**ORAL LD50 (rat):** 2,000 mg/kg

**DERMAL LD50 (rabbit):** 2,000 mg/kg

**INHALATION LC50 (state animal):** data unavailable

**Triethylene Glycol Methyl Ether**

**ORAL LD50 (rat):** 11,842 mg/kg

**DERMAL LD50 (rabbit):** 7,441 mg/kg

**INHALATION LC50 (state animal):** data unavailable

**Diisopropanolamine**

**ORAL LD50 (rat):** 4,765 mg/kg

**DERMAL LD50 (state animal):** 12,000 mg/kg

**INHALATION LC50 (state animal):** data unavailable

**Diethanolamine**

**ORAL LD50 (rat):** 710 mg/kg

**DERMAL LD50 (rabbit):** 12,000 mg/kg

**INHALATION LC50 (state animal):** data unavailable

**LISTED CARCINOGEN:**

**NATIONAL TOXICOLOGY PROGRAM REPORT ON CARCINOGENS:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**IARC LISTED AS POTENTIAL CARCINOGEN:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA LISTED AS POTENTIAL CARCINOGEN:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**SECTION 12: ECOLOGICAL INFORMATION**

**DATA FROM TOXICITY TESTS ON AQUATIC AND/OR TERRESTRIAL ORGANISMS:**

**Borate Ester:** data unavailable

**Triethylene Glycol Butyl Ether:** data unavailable



**Diethylene Glycol**

Fish: LC50 – Pimephales promelas (fathead minnow) – 75,200 mg/l – 96h

LC50 – Carassius auratus (goldfish) – 5,000 mg/l – 24h

Daphnia: EC50 – Daphnia magna (Water flea) - >10,000 mg/l – 24h

**Triethylene Glycol**

Fish: LC50 – Leuciscus idus (Golden orfe) - >100 mg/l – 96h

Daphnia: EC50 – Daphnia magna (Water flea) – 46,500 mg/l – 48h

**Polyethylene Glycol Methyl Ether**

Fish: LC50 – Pimephales promelas (fathead minnow) – 10,000 mg/l – 9<sup>th</sup>

**Polyethylene Glycol Butyl Ether:** data unavailable

**Triethylene Glycol Methyl Ether:** data unavailable

**Diisopropanolamine:**

Fish: LC50 – Carassius auratus (goldfish) – 1,100 mg/l – 24h

**Diethanolamine**

Fish: LC50 – Pimephales promelas (fathead minnow) – 1,460 mg/l – 96h

Daphnia: EC50 – Daphnia magna (Water flea) – 55 mg/l – 48h

**ENVIRONMENTAL FATE:** data unavailable

**BIOACCUMULATION POTENTIAL:** data unavailable

**POTENTIAL TO MOVE FROM SOIL TO GROUNDWATER:** data unavailable

**OTHER ADVERS ENVIRONMENTAL EFFECTS:** Harmful to aquatic life.

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**SECTION 13: DISPOSAL CONSIDERATIONS**

**CONTAINERS TO USE:** No specific recommendations

**RECOMMENDED DISPOSAL METHODS:** Whatever cannot be saved for recovery or recycling should be disposed of in an approved waste facility in accordance with Federal, State/Provincial and Local requirements.

**PHYSICAL AND CHEMICAL PROPERTIES THAT MAY AFFECT DISPOSAL ACTIVITIES:**

No specific information available.

**WHENEVER POSSIBLE, MATERIAL SHOULD NOT BE ALLOWED TO ENTER SEWAGE DISPOSAL SYSTEMS.**

**SPECIAL PRECAUTIONS FOR LANDFILL OR INCINERATION ACTIVITIES:** No specific information available.

## SECTION 14: TRANSPORT INFORMATION

### U.S. DEPARTMENT OF TRANSPORTATION (49 CFR 172.101)

**PROPER SHIPPING NAME:** DOT 4 Brake Fluid  
**SHIPPING SYMBOLS:** Not Applicable  
**HAZARD CLASS:** Non-hazardous liquid  
**UN/NA NUMBER:** Not Determined  
**PACKING GROUP:** Not Applicable  
**LABELS REQUIRED:** Not Applicable  
**SPECIAL PROVISIONS (172.102):** Not Applicable

#### PACKAGING AUTHORIZATIONS

- A) **EXCEPTIONS:** Not Applicable
- B) **NON-BULK PACKAGING:** Not Applicable
- C) **BULK PACKAGING:** Not Applicable

#### QUANTITY LIMITATIONS

- A) **PASSENGER, AIRCRAFT OR RAILCAR:** No limit
- B) **CARGO AIRCRAFT ONLY:** No limit

#### VESSEL STOWAGE REQUIREMENTS

- A) **VESSEL STORAGE:** None
- B) **OTHER:** None

## SECTION 15: REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS

**TSCA (TOXIC SUBSTANCE CONTROL ACT):** all components are listed on the TSCA Inventory

**CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):** None. 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 TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### 311/312 HAZARD CATEGORIES:

**Immediate Hazard:** yes / no  
**Delayed Hazard:** yes / no  
**Fire Hazard:** yes / no  
**Pressure Hazard:** yes / no  
**Reactivity Hazard:** yes / no

#### 313 REPORTABLE INGREDIENTS:

Diethanolamine

CAS Number: 111-42-1

**CLEAN WATER ACT (CWA):** None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**CLEAN AIR ACT (CAA):** None of the chemicals in the product are listed as Hazardous Air Pollutants.

**STATE REGULATIONS:**

**California:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**Massachusetts:**

1,1'-Iminodipropan-2-ol	CAS Number: 110-97-4
Diethanolamine	CAS Number: 111-42-2

**New Jersey**

Triethylene glycol monobutyl ether	CAS Number: 143-22-6
Diethylene glycol	CAS Number: 111-46-6
2,2'-(Ethylenedioxy) diethanol	CAS Number: 112-27-6
Methoxypolyethylene glycol	CAS Number: 9004-74-4
1,1'-Iminodipropan-2-ol	CAS Number: 110-97-4
Diethanolamine	CAS Number: 111-42-2

**Pennsylvania**

Triethylene glycol monobutyl ether	CAS Number: 143-22-6
Diethylene glycol	CAS Number: 111-46-6
2,2'-(Ethylenedioxy) diethanol	CAS Number: 112-27-6
1,1'-Iminodipropan-2-ol	CAS Number: 110-97-4
Diethanolamine	CAS Number: 111-42-2

**INTERNAL REGULATIONS:**

**Persistent Organic Pollutants (United Nations):** not listed

**Initial List of Prior Informed Consent Chemicals (United Nations):** not listed

**Ozone Depleting Substances (Montreal Protocol):** not listed

**Greenhouse Gases (Intergovernmental Panel on Climate Change):** not listed

**AUSTRALIAN INVENTORY OF CHEMICAL SUBSTANCES:** This material contains components not listed on the Australian Inventory of Chemical Substances: Borate Ester, CAS Number 176022-80-3; Polyethylene Glycol Butyl Ether, CAS Number 9044-77-7.

**CANADA: DOMESTIC SUBSTANCES LIST:** This material contains components not listed on the Canadian Domestic Substances List: Borate Ester, CAS Number 176022-80-3; Polyethylene Glycol Butyl Ether, CAS Number 9044-77-7.

**CANADA WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS):** Class 2B: Toxic Material at >1%.

**CANADIAN ENVIRONMENTAL PROTECTION AGENCY TOXICS LIST:** None of the components of this mixture are listed.

**EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES:** This material contains components not listed on the Canadian Domestic Substances List: Borate Ester; CAS Number 176022-80-3; Polyethylene Glycol Methyl Ether, CAS Number 9004-74-4; Polyethylene Glycol Butyl Ether, CAS Number 9044-77-7.

**NEW ZEALAND:** This material contains components not listed on the New Zealand Chemical Inventory: Borate Ester, CAS Number 176022-80-3; Polyethylene Glycol Butyl Ether, CAS Number 9044-77-7.

**PHILIPPINE INVENTORY OF CHEMICALS AND CHEMICAL SUBSTANCES:** This material contains components not listed on the Philippine Inventory of Chemicals and Chemical Substances: Borate Ester, CAS Number 176022-80-3; Polyethylene Glycol Methyl Ether, CAS Number 9004-74-4; Polyethylene Glycol Butyl Ether, CAS Number 9044-77-7.

## **SECTION 16: REGULATORY INFORMATION**

**Disclaimer: This product is FOR INDUSTRIAL USE ONLY. KEEP OUT OF REACH CHILDREN AND PETS. DO NOT TAKE INTERNALLY.**

Warren Unilube, Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. No warranty of fitness for any particular purpose, warranty of merchantability, or any other warranty expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specific product designated and may not be valid where such products is used in combination with any other materials or in any process. Further, since the conditions and methods of use of the product and of the information referred to herein are beyond the control of Warren Unilube, Warren Unilube expressly disclaims any and all liability as to any results obtained or arising from any of the product or reliance on such information.

For additional product information, please contact Warren Unilube, Inc. at (800) 428-9284.