



**Material  
Safety  
Datasheet**

CAS No  
Date Issued:  
19/03/2013  
LUBE FUSION BRAKE  
FLUID DOT 3 (not  
classified as hazardous  
for transport)

**Company Details**

<u>Name</u>	PACE OIL	<u>Emergency Tel</u>	0800202202
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**1. Product and Company Identification**

Trade / Commercial Name **LUBE FUSION BRAKE FLUID DOT 3 (not classified as hazardous for transport)**

Chemical Name liquid not classified as hazardous for transport

Formula

Chemical Family

Synonyms

Un No Hazchem Code 1[Z]

ERG No 0 EAC 0

**2. Hazards Identification**

Emergency overview:

Color: Colorless to yellow

Physical State: Liquid.

Odor: Ether

LOW HAZARD - Slippery Hazard, liquid

HARMFUL IF SWALLOWED.

INHALATION CAUSES HEADACHES, DIZZINESS, DROWSINESS, AND NAUSEA,  
AND MAY

LEAD TO UNCONSCIOUSNESS.

CAUSES EYE IRRITATION.

CAUSES SKIN IRRITATION.

MAY CAUSE RESPIRATORY TRACT IRRITATION.

Do not ingest. Avoid contact with eyes, skin and clothing. Do not breathe vapor or mist. Keep container closed. Use with adequate ventilation. Use only with adequate ventilation Wash thoroughly after handling.

Routes of entry: Dermal contact. Eye contact. Inhalation. Ingestion.

Potential health effects:

Eyes: Causes eye irritation.

Skin: Causes skin irritation.

Inhalation: May cause respiratory tract irritation. Inhalation causes headaches, dizziness, drowsiness, and

nausea, and may lead to unconsciousness.

Ingestion: Harmful if swallowed.

### **3. Composition**

#### Hazardous Components

Component CAS # Amount

Triethylene glycol monoethyl ether 112-50-5 > 15.0 - < 40.0 %

Polyethylene glycol monomethyl ether 9004-74-4 > 5.0 - < 50.0 %

Triethylene glycol monomethyl ether 112-35-6 > 1.0 - < 30.0 %

Triethylene glycol monobutyl ether 143-22-6 > 1.0 - < 25.0 %

Polyethylene glycol monobutyl ether 9004-77-7 > 1.0 - < 20.0 %

Tetraethylene glycol 112-60-7 > 1.0 - < 20.0 %

Triethylene glycol 112-27-6 > 1.0 - < 20.0 %

Pentaethylene glycol 4792-15-8 < 25.0 %

Diethylene glycol 111-46-6 < 5.0 %

Diethylene glycol monobutyl ether 112-34-5 < 5.0 %

Hexaethylene glycol 2615-15-8 < 5.0 %

Phosphoric acid, monosodium salt 7558-80-7 < 5.0 %

Poly(ethylene oxide) 25322-68-3 < 5.0 %

Potassium dihydrogen phosphate (KH<sub>2</sub>PO<sub>4</sub>) 7778-77-0 < 5.0 %

Sodium phosphate 7601-54-9 < 5.0 %

Tetraethylene glycol monoethyl ether 5650-20-4 < 5.0 %

Diisopropanolamine 110-97-4 < 3.0 %

Phosphoric acid 7664-38-2 < 1.0 %

Sodium hydroxide 1310-73-2 < 1.0 %

### **4. First Aid Measures**

#### First Aid Skin

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

#### First Aid Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

#### First Aid Ingested

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by

mouth to an unconscious person. Get medical attention immediately.

#### First Aid Inhalation

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

### **5. Fire Fighting Measures**

Flammability of the product: May be combustible at high temperature

Flash point >125 °C (Closed cup) Pensky-Martens.

Products of combustion These products are carbon oxides nitrogen oxides

Unusual fire/explosion hazards: This material is not explosive as defined by established regulatory criteria.

Fire-fighting media and instructions: In case of fire, use water fog, foam, dry chemicals, or carbon dioxide. Do not use water jet.

Protective clothing (fire) Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear

### **6. Accidental Release Measures**

Personal precautions:

Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (See Section: "Exposure controls/personal protection"). Follow all fire fighting procedures (See Section: "Fire-fighting measures").

Environmental precautions and clean-up methods:

If emergency personnel are unavailable, contain spilled material. For small spills add absorbent

(soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Avoid contact of spilled material with soil and prevent runoff

entering surface waterways. See Section 13 for Waste Disposal Information.

Personal protection in case of a large spill:

Chemical splash goggles. Chemical resistant protective suit. Boots. Chemical resistant gloves.

Vapor respirator or a self-contained breathing apparatus. Suggested protective clothing might not

be sufficient; consult a specialist BEFORE handling this product.

CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure

air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not

known, or if concentrations exceed the protection limits of air-purifying respirator.

## 7. Handling And Storage

### Handling:

Do not ingest. Avoid contact with skin and clothing. Avoid contact with eyes. Use only with adequate ventilation Avoid breathing vapor or mist. Wash thoroughly after handling.

### Storage:

Keep container tightly closed. Keep container in a cool, well-ventilated area. Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards.

## 8. Exposure Controls/Personal Protection

Occupational Exposure Limits Not established.

### Controls

#### Control Measures:

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the work-station location.

#### Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

### Personal Protection

#### Eyes:

Avoid contact with eyes. Chemical splash goggles.

#### Skin and body:

Avoid contact with skin and clothing. Wear suitable protective clothing.

#### Respiratory:

Use only with adequate ventilation In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable.

Hands Wear gloves that cannot be penetrated by chemicals or oil.

Recommended: Nitrile gloves.

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures).

Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended

application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Consult your supervisor or S.O.P. for special handling directions

## **9. Physical & Chemical Properties**

Physical State Liquid.

Color Colorless to yellow

Odor Ether

Odor Threshold No test data available

pH 9.5 Estimated.

Melting Point No test data available

Freezing Point No test data available

Boiling Point (760 mmHg) 262 °C (504 °F) Literature Equilibrium Reflux Boiling Point, dry. 150

°C (302 °F) FMVSS 116 Equilibrium Reflux Boiling Point, wet.

Flash Point - Closed Cup 135 °C (275 °F) Pensky-Martens Closed Cup ASTM D 93

Evaporation Rate (Butyl Acetate = 1) No test data available

Flammability (solid, gas) No

Flammable Limits In Air Lower: No test data available

Upper: No test data available

Vapor Pressure No test data available

Vapor Density (air = 1) 6 Estimated.

Specific Gravity (H<sub>2</sub>O = 1) 1.04 Estimated.

Solubility in water (by weight) No test data available

Partition coefficient, noctanol/water (log Pow) No data available for this product. See Section 12 for individual component data.

Autoignition Temperature No test data available

Decomposition Temperature No test data available

Kinematic Viscosity 930 mm<sup>2</sup>/s @ -40 °C Estimated.

Explosive properties no data available

Oxidizing properties no data available

Molecular Weight No test data available

Volatile Organic

Compounds

No test data available

Physical State Liquid.

Color Colorless to brown

Odor Mild

pH 8.2 Estimated.

Heat of combustion: Not available.

Boiling point / Range: >260°C (>500°F)

Density: 1000 kg/m<sup>3</sup> (1 g/cm<sup>3</sup>) at 20°C

Viscosity Kinematic: 15 to 17 mm<sup>2</sup>/s (15 to 17 cSt) at 20°C

Melting Point Not applicable to liquids

Freezing Point -60 °C Literature

Boiling Point (760 mmHg):261 °C FMVSS 116 Equilibrium Reflux Boiling Point, dry. 162 °C

FMVSS 116 Equilibrium Reflux Boiling Point, wet.

Flash Point Closed Cup 132 °C Estimated.

Flammable Limits In Air Lower: No test data available

Upper: No test data available

Vapor Pressure < 0.01 kPa @ 20 °C Estimated.

Vapor Density (air = 1) No test data available

Specific Gravity (H2O = 1) 1.061 Estimated.

Solubility in water (by weight) 100 % Estimated.

Partition coefficient, noctanol/water (log Pow)

No data available for this product. See Section 12 for individual component data.

Autoignition Temperature No test data available

Decomposition Temperature No test data available

Kinematic Viscosity 1,460 mm<sup>2</sup>/s @ -40 °C Estimated.

Explosive properties no data available

Oxidizing properties no data available

## **10. Stability And Reactivity**

### Conditions to Avoid

Stable.

### Incompatible Materials

Reactive or incompatible with the following materials:  
oxidizing materials.

### Other

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Hazardous polymerization will not occur.

## **11. Toxicological Information**

### Acute toxicity:

Ethylene glycol: Ingestion of ethylene glycol can cause metabolic acidosis, kidney damage, central nervous system depression, convulsions and death. The estimated human lethal dose is approximately 1 ml/kg (about 1/2 cup for an adult). Vapor from hot operations or an aerosol can cause eye and respiratory irritation. Birth defects were reported in laboratory animals fed ethylene glycol repeatedly in large amounts. Based on these studies, there may be a potential for birth defects following ingestion of ethylene glycol by pregnant women.

### Chronic toxicity:

#### Carcinogenic effects:

No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH or the International Agency for Research on Cancer (IARC). No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program (NTP) or the U.S. Occupational Safety and Health Act (OSHA).

#### Mutagenic effects:

No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen

#### Reproductive effects:

No component of this product at levels greater than or equal to 0.1% is classified by established regulatory criteria as a reproductive toxin.

Teratogenic effects:

No component of this product at levels greater than 0.1% is classified by established regulatory criteria as teratogenic or embryotoxic.

## 12. Ecological Information

Ecotoxicity

No testing has been performed by the manufacturer.

## 13. Disposal Considerations

Disposal Method Product Waste information: Avoid contact of spilled material and runoff with soil and surface waterways. Consult an environmental professional to determine if local, regional or national regulations would classify spilled or contaminated materials as hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities. Dispose of in accordance with all applicable local and national regulations.

Consult your local or regional authorities.

Disposal Method Packaging

## 14. Transport Information

<u>ERG No</u>	0	<u>Hazchem Code</u>	1[Z]
		<u>EAC</u>	0
<u>IMDG-Shipping Name</u>	LUBRICATING OIL, Not Regulated		
<u>IMDG Code</u>	N/A	<u>IMDG-Packaging Group</u>	N/A
<u>Marine Pollutant</u>	No		
<u>Class</u>	LOW HAZARD - Slippery Hazard, liquid		
<u>Subsidiary Risks</u>	None		

## 15. Regulatory Information

<u>EEC Hazard Classification</u>	LOW HAZARD
<u>Risk Phases</u>	NONE
<u>Safety Phases</u>	NONE
<u>National Legislation</u>	Not classified as hazardous for transport (DOT, TDG, IMO/IMDG)

## 16. Other Information

Reason for Alteration: General update.

The information contained herein is based on the present state of our knowledge.  
It characterizes the product with regard to the appropriate safety precautions.  
It does not represent a guarantee of the properness of the product.

Disclaimer:

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