

**Material Safety Data Sheet:**

Engol Brake Fluid DOT 4

**1. Product and Company Identification**

Product Name : Engol Brake Fluid DOT 4  
Product Use: Brake and Clutch Fluid  
Supplier: Engol Group (Pty) Ltd  
4 Silicon Road,  
Pinetown,  
4147  
Health Emergency Telephone: 10111  
Contact Information: info@engolgroup.com  
Engol Website : http://www.engolgroup.com

**2. Hazards Identification**

Emergency response data: Light Straw Liquid. DOT ERG No. - Not applicable.

**Potential Health Effects**

Note: This product does not pose a health risk when used under normal conditions for its intended use.

**Precautionary Statements  
Response**

IN CASE OF FIRE: Use dry chemical, foam or carbon dioxide for extinction.  
IF IN EYES: Rinse cautiously with water for several minutes.  
IF SWALLOWED: Seek medical attention if you feel unwell.  
IF INHALED: Remove person to fresh air and keep up at a resting position for breathing.

**Disposal:**

Do not discharge into lakes, streams, ponds and ground water supply.  
See section 11 for further health effects/toxicological data.

**3. Composition / information on ingredients**

Chemical Name	CAS-No.	Weight%	Symbol Codes	R-Phrase No
Diethylene glycol monoethyl Ether	111-90-0	30-40	85W-140	Not Applicable
Triethyleneglycol methyl ether	112-35-6	30-40	435	Not Applicable
Additives		>2	29.7	Not Applicable

See section 8 for further exposure limits (if applicable)  
See section 15 European label information.

#### 4. First Aid Measures

Inhalation:	Not expected to be a problem. However, if respiratory irritation occurs due to excessive vapour or mist exposure, seek immediate medical assistance. If breathing has stopped, assist ventilation with mechanical device or use mouth-to-mouth resuscitation.
Skin Contact:	Remove contaminated clothing. Dry wipe exposed skin and cleanse with hand cleaner, soap and water. Launder contaminated clothing before reuse.
Eye Contact:	Flush thoroughly with water. If irritation occurs consult a doctor.
Ingestion:	If discomfort occurs, seek medical attention. Do not induce vomiting.
Self-protection of the First Aider:	When administering first aid, ensure that the appropriate personal protective equipment are worn, according to the incident, injury and surroundings.

#### 5. Fire-Fighting Measures

**Clear fire area of all non-emergency personnel.**

Extinguishing Media:	Foam, water fog, dry chemical powder and carbon dioxide.
Special firefighting procedure:	Use water spray to keep fire exposed containers cool and flush spills away from exposure. Prevent runoff from fire control or dilution from entering streams, municipal sewers, or drinking water supply.
Special protective equipment: for firefighters	Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.
Unusual fire and explosive: Hazard	Although not flammable, this product will burn.
Products of decomposition:	Fumes, carbon monoxide, sulphur dioxide, aldehydes and other decomposition products, In the case of incomplete combustion.
Flash Point:	154°C (ASTM D92)
NFPA Hazard ID:	Health: 0 ; Flammability: 1 ; Reactivity: 0
Advice for firefighters:	Proper protective equipment including chemical resistant gloves are to be worn; chemical Resistant suit is indicated if excessive contact with spilled product is expected. Self-Contained Breathing Apparatus must be worn when approaching a fire in a confined space. Select fire fighter's clothing approved to relevant standards.

#### 6. Accident Release Measures

Personal precautions:	See Section 8.
Procedure if material is released: or spilled	Report spills/releases as required to appropriate authorities.
Methods for cleaning up:	Absorb on fire retardant treated saw dust, diatomaceous earth, etc. Shovel up for later approved disposal.

Environmental precautions:	Prevent spill from entering municipal sewers, water sources or low lying areas. Advise the Relevant authorities if contaminations have occurred.
Additional advice:	Local authorities should be advised if significant spillages cannot be contained.

## 7. Handling & Storage

General precautions:	Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials in order to prevent fire. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.
Handling:	Avoid prolonged or repeated contact with skin. Avoid inhaling vapours and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used.
Storage:	Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable container. Do not store near heat sources, flames, sparks combustible material or strong oxidising agents.
Conditions for safe storage: including any incompatibilities	Store at ambient temperature.

## 8. Exposure Control / Personal Protection

Occupational Exposure Limits (OELs)

Components	CAS-No	Source	TWA	Value	Notation
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LTEL:	Long Term Exposure Limits - Time Weight Average (TWA) over 8 hours.
STEL:	Short Term Exposure Limits - Time Weight Average (TWA) over 15 minutes.
Note:	Limits Shown for guidance only. Follow applicable regulations.

### Personal Protection Equipment

Engineering controls:	If mists are generated, use ventilation, local exhaust or enclosures to control below exposure limits.
Respiratory protection:	Approved respiratory equipment must be used when mist concentrations exceed the recommended exposure limits.
Eye protection:	If splash with liquid is possible, chemical type goggles should be worn.
Skin and body protection:	No special equipment required. However, if frequent splashing or liquid contact is likely to occur, wear oil impervious gloves and clothing. Good personal hygiene practices should always be followed.

## 9. Physical and Chemical Properties

Appearance:	Liquid
Colour:	Light Straw
Odour:	Characteristic
Solubility:	Miscible
Solubility in other solvents:	No data available.
Flash point:	153°C
Vapour Pressure:	> 150 hPa
Density:	1.079 g/cm <sup>3</sup> @ 20°C (ASTM D4025)
Viscosity, Kinematic :	2.3mm <sup>2</sup> /s @ 100°C (ASTM D-445)

## 10. Stability & Reactivity

Stability:	Stable.
Conditions to avoid:	Exposure to water vapour.
Materials to avoid:	Mineral oils. Water.
Hazardous decomposition products:	Fumes, smoke, carbon monoxide, sulphur oxides, aldehydes and other decomposition products, in the case of incomplete combustion.

## 11. Toxicological Information

Acute oral toxicity:	(Rats): Practically non-toxic (LD50: greater than 2000 mg/kg). Based on testing of similar products and/or components.
Acute dermal toxicity testing:	(Rabbits): Practically non-toxic (LD50: greater than 2000 mg/kg). Based on a single dose at 2000 mg/kg.
Acute inhalation toxicity:	(Rats): Practically non-toxic (LD50: greater than 5mg/l or less). Based on testing products and/or components.
Skin Irritation:	(Rabbits): Practically non-irritating. (Primary Irritation Index: greater than 0.5 but less than 3. Based on testing of similar products and/or components.
Eye irritation:	(Rabbits): Slightly irritant. (Draize score: average 15.1-25.0). Based on testing of similar products and/or components.
Sensitization:	Not expected to be sensitizing based on tests of this product, components, or similar products.
Repeated dose toxicity:	Absorption of high doses may cause kidney injury.

## 12. Ecological Information

### Ecotoxicity Effects

Biodegradability:	This product is expected to be inherently biodegradable.
Physico-chemical:	This product is soluble in water. Evaporation occurs from the surface of the soil, however substantial proportions remain and may contaminate groundwater through absorption into soil.
Bioaccumulation:	Does not bio-accumulate significantly.
Other adverse effects:	This product is not expected to have short-term harmful effects on aquatic organisms (LL50 or EL50 > 100 mg/L), however there may be long term adverse effects.

### 13. Disposal Considerations

<b>Waste Disposal:</b>	Product is suitable for burning in an enclosed, controlled burner for fuel value or disposal by incineration. Such burning may be limited pursuant to the Resource Conservation and Recovery Act. In addition, the product is suitable for processing by an approved recycling facility or can be disposed at any government approved waste disposal facility. The use of these methods are subject to user compliance with applicable laws, regulations and considerations of the product characteristics at the time of disposal.
<b>Contaminated Packaging:</b>	Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not Pressurize, cut, weld, braze, solder etc. or expose such containers to heat, flames, sparks, static electricity, or other sources of ignition. They may explode and cause injury or death. Do not attempt to reuse clean containers, since residue is difficult to remove. Empty drums should be completely drained, bunged and returned to a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.
<b>Local Legislation:</b>	Disposal should be in accordance with applicable regional, national and local law regulations.
<b>Flash Point:</b>	153°C

### 14. Transportation Information

This product is not regulated by the following: U.S. DOT (CFR) ADR, IATA, and IMDG.

### 15. Regulatory Information

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

<b>US OSHA Hazard: Communication Standard</b>	Product assessed in accordance with OSHA 29 CFR 1910.1200 and determined to be hazardous.
<b>Governmental Inventory Status:</b>	All components comply with TSCA, EINECS/ELINCS, AICS, METI, DSL KECI, ENCS, PICCS and IECSC.
<b>EU Labelling:</b>	Product is not defined dangerous by the European Union Dangerous Substances/Preparations Directives. EU labelling is not required.
<b>S - Phrases:</b>	S2, S24, S46. Keep out of the reach of children. Avoid skin contact. If ingested, seek immediate medical advice and present this container or label.
<b>SARA U.S. Superfund : Amendments and Reauthorization ACT SARA Title III</b>	This product contains no "EXTREMELY HAZARDOUS SUBSTANCES".
<b>SARA (31/312) Reportable: Hazard Categories</b>	Chronic Acute

The following product ingredients are cited on the list below:

Chemical Name	CAS-No.	Weight%	Symbol Codes	List Citations
Diethylene glycol monoethyl Ether	111-90-0	30-40	None	Not Listed
Triethyleneglycol methyl ether	112-35-6	30-40	None	Not Listed
Additives		>2	None	Not Listed

Regulatory List Searched:

1 = ACGIH ALL	6 = IARC 1	11 = TSCA 4	17 = CA P65	22 = MI 293
2 = ACGIH A1	7 = IARC 2A	12 = TSCA 5a2	18 = CA RTK	23 = MN RTK
3 = ACGIH A2	8 = IARC 2B	13 = TSCA 5e	19 = FL RTK	24 = NJ RTK
4 = NTP CARC	9 = OSHA CARC	14 = TSCA 6	20 = IL RTK	25 = PA RTK
5 = NTP SUS	10 = OSHA Z	15 = TSCA 12b	21 = LA RTK	26 = RI RTK

### 16. Other Information

MSDS Version Number:	1.0
MSDS Effective Date:	01.05.2017
INJECTION INJURY WARNING:	If product is injected into or under the skin, or into and part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a doctor as a surgical emergency.
SAFETY:	Under normal conditions of intended use, this product does not pose a health risk. Excessive exposure may result in skin, eye and respiratory irritation. Always observe good hygiene practices.
FIRST AID:	Wash skin with soap and water. Flush eyes with copious amounts of water for several minutes. If overcome by fumes or vapours, remove person(s) to fresh air. If swallowed, do not induce vomiting. Seek medical assistance if symptoms persist. Before using this product, read and understand the MSDS.