



**BHARAT PETROLEUM CORPORATION LIMITED**  
**MATERIAL SAFETY DATA SHEET**  
**MAK BRAKE FLUID**

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**1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION**

TRADE NAME : MAK BRAKE FLUID

PRODUCT CODE : Not Applicable

SUPPLIER : Bharat Petroleum Corporation Limited  
4&6, Currimbhoy Road, Ballard Estate, Mumbai - 400 001, INDIA  
Tel. No. 091-22-24176354  
Fax No. 091-22-2416 6512 / 2418 2511

CHEMICAL DESCRIPTION: Glycol ethers containing additives

**2. COMPOSITION AND INFORMATION ON INGREDIENTS**

<u>CHEMICAL OR COMMON NAME</u>	<u>CAS NUMBER</u>	<u>RANGE IN PERCENT</u>
A) Glycol ethers		95 - 98
B) Additive containing antioxidants, corrosion inhibitors Metal deactivators Agents	Not Applicable for mixtures	3 - 5

**3. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW**

**CAUTION** : Avoid prolonged contact with brake fluid. In case with contact,  
wash area of contact thoroughly with soap and water.

**HEALTH EFFECTS:**

**EYES** : The irritation potential has not been determined. May cause slight irritation to eyes depending on the amount that gets into eye.

**ORAL** : Not expected to be acutely toxic by ingestion. However, if more than several mouthful swallowed, abdominal discomfort, nausea & diarrhea may occur.

INHALATION : The systemic toxicity of this product has not been determined. However, excessive inhalation of mist or vapour may cause respiratory irritation or discomfort.

SKIN : Not expected to cause prolonged or significant skin-irritation.

#### 4. FIRST AID MEASURES

EYES : Flush eyes immediately with fresh water for several minutes while holding eyelids open.

SKIN : Wash skin thoroughly with soap & water. Remove and wash contaminated clothing.

ORAL : If swallowed, give water or milk to drink in case person is conscious. Do not induce vomiting unless advised by medical personnel. If medical advice cannot be obtained, take the person to nearest medical emergency treatment centre or hospital.

INHALATION: If respiratory irritation or discomfort occurs, move the person to fresh air. If any of the effects continue, see doctor.

ADVICE TO DOCTOR : To treat symptomatically

#### 5. FIRE FIGHTING MEASURES

IGNITION TEMPERATURE DEGREE C : Not determined

FLASH POINT DEGREE C (METHOD) : 110 (PMCC)

FLAMMABLE LIMITS (%) LOWER : Not known UPPER: Not known

#### RECOMMENDED FIRE EXTINGUISHING AGENTS AND SPECIAL PROCEDURES:

In case of fire, use water spray, dry chemical, foam or Carbon di-oxide. Water or foam may cause frothing. Use water for cooling fire exposed containers.

#### UNUSUAL OR EXPLOSIVE HAZARDS:

For fire involving this material, do not enter any enclosed or confined space without self-content breathing apparatus and proper protective equipments.

#### COMBUSTION PRODUCTS

Normal combustion produces carbon di-oxide, water vapour and may produce oxides of sulphur, nitrogen & phosphorus. Incomplete combustion may produce carbon monoxide.

### 6. ACCIDENTAL RELEASE MEASURES

#### PROCEDURES IN CASE OF BREAKAGE OR LEAKAGE:

Stop the source of leak and ventilate the area. Use protective clothing and respirator. Cover spill with plenty of inert absorbent material. Sweep up and place in a disposable container. Scrub contaminated area with detergent and water. Prevent contamination with ground water or surface water.

### 7. HANDLING AND STORAGE

Keep containers closed when not in use. Do not heat, weld or drill containers. Water contamination should be avoided.

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**EYES :** No special eye protection is necessary, however suitable safety goggles are recommended.

**SKIN :** Exposed employees should exercise personal hygiene such as cleaning of exposed skin and clothing with soap and water. Suitable protective clothing and gloves should be used while handling used engine oil.

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INHALATION	:	Though respiratory protection normally not required, approved respirator is recommended in case of air-borne concentration exceeding the normal exposure limit standards due to operating condition.
VENTILATION	:	Use adequate ventilation to minimise the concentration of mineral oil mist.
EXPOSURE LIMITS	:	ACGIH TLV for mineral oil mist is 5 mg/m <sup>3</sup> for a daily 8 hrs. exposure.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT °C	:	215
VAPOUR PRESSURE (mmHg @ 25 °C)	:	Not determined
DENSITY kg/litre AT 20°C	:	1.115
VAPOUR DENSITY	:	Not determined
APPEARANCE AND ODOUR	:	Pink Liquid
pH OF UNDILUTED PRODUCT	:	Not determined
SOLUBILITY IN WATER	:	Fully soluble
PERCENT VOLATILE BY VOLUME	:	Unknown
EVAPORATION	:	Not determined
VISCOSITY	:	2 cSt @ 100°C

#### 10. STABILITY & REACTIVITY

HAZARDOUS POLYMERISATIONS : Will not occur

THE MATERIAL REACTS VIOLENTLY WITH : (If others is checked below, see additional comments in Section 5)

--	Air	--	Water
--	Heat	--	Strong oxidizers
--	Others	<u>xxx</u>	None of these

PRODUCTS EVOLVED WHEN SUBJECTED TO HEAT OR COMBUSTION:

Carbon di-oxide, water vapour, oxides of sulphur, nitrogen & phosphorus, aldehydes and ketones. Incomplete combustion may evolve carbon monoxide.

## 11. TOXICOLOGICAL INFORMATION

### EYE IRRITATION

No product toxicology data is available. The hazard evaluation was based on data from similar materials

### SKIN IRRITATION

No product toxicology data is available. The hazard evaluation was based on data from similar materials.

### DERMAL TOXICITY

No product toxicology data is available. The hazard evaluation was based on data from similar materials.

### RESPIRATORY/INHALATION

No product toxicology data is available. The hazard evaluation was based on data from similar materials

### INGESTION

No product toxicology data is available. The hazard evaluation was based on data from similar materials.

## 12. ECOLOGICAL INFORMATION

No specific ecotoxicity data on this product are available. This material may pose environmental risks common to oil spills.

## 13. DISPOSAL CONSIDERATIONS

### WASTE DISPOSAL METHOD:

Place contaminated material in disposable containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material

### REMARKS:

This material may pose environmental risks common to oil spills.

#### 14. TRANSPORT INFORMATION

UN NUMBER : Not available  
HAZCHEM CODE : Not available  
DANGEROUS GOODS CLASS : Not available

SPECIFIC PRECAUTIONARY TRANSPORT MEASURES AND CONDITIONS:  
Not available

#### 15. REGULATORY INFORMATION

##### REGULATIONS SPECIFICALLY APPLICABLE TO THE CHEMICAL PRODUCT

##### COMMONWEALTH OF AUSTRALIA

Respirators must follow AS1715/1716 standard for approved respirators

##### NEW ZEALAND

Respiratory must follow NZSS 2209/2266 standard for approved respirators

##### INTERNATIONAL (ALL COUNTRIES)

In the absence of local approved authorities follow U.S. NIOSH/MSHA, U.K BSI, Australian AS1715/1716 or New Zealand NZSS 2209/2206 standards.

AUSTRALIA POISON SCHEDULE : No data available  
NZ DANGEROUS GOODS CLASS : No data available  
NZ TOXIC SUBSTANCES SCHEDULE : No data available

#### 16. OTHER INFORMATION

No specific notes on this product

Information contained in this material data sheet is believed to be reliable but no representation, guarantee or warranties of any kind are made as to its accuracy, suitability for a particular application or results to be obtained from them. It is upto the manufacturer/seller to ensure that the information contained in the material safety data sheet is relevant to the product manufactured / handled or sold by him as the case may be. The B.P.C.L. makes no warranties expressed or implied in respect of the adequacy of this document for any particular purpose.