



## Dot 5.1 Brake Fluid - JLD1 - Materials Safety Data Sheet

### Dot 5.1 Brake Fluid

#### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

**Product Code:** JLD1

**Issued Date** 26/09/2009

**Product Type/Use:** hydraulic fluid for bicycle hydraulic brake systems

**Supplier:**

Velobrands LLP

Unit 8

Flightway Business Park

Honiton

EX14 4RD

**Emergency Telephone Number**

01404 891 208

**Telephone/Fax Number**

01392 248 631

**Email**

[sales@juicelubes.co.uk](mailto:sales@juicelubes.co.uk)

#### 2. HAZARDS IDENTIFICATION

**EC Classification** Not classified as Dangerous under EC criteria.

**Human Health Hazards**

No specific hazards under normal use conditions. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. Used oil may contain harmful impurities. Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

**Safety Hazards**

Not classified as flammable, but will burn.

**Environmental Hazards**

Not classified as dangerous for the environment.



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### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Name	Concentration	R Phrase	CAS	EINECS
Butyl triglycerol	>20%	Xi R41	143-22-6	205-592-6
Di-ethyleneglycol	<20%	Xn R22	111-46-6	203-872-2
Methyl di-glycol	<5%	Xn R63	111-77-3	203-906-6

### 4. FIRST AID MEASURES

#### Symptoms and Effects

Not expected to be a health hazard when used under normal conditions.

#### Inhalation

No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

#### Skin

Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

#### Eye

Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

#### Ingestion

In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

#### Advice to Doctor

Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

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Clear fire area of all non-emergency personnel.

### **Specific Hazards**

Combustion is likely to give rise to a complex mixture of airborne solid and liquid particulates and gases, including carbon monoxide and unidentified organic and inorganic compounds.

### **Extinguishing Media**

Foam and dry chemical powder. Carbon dioxide, sand or earth may be used for small fires only.

### **Unsuitable Extinguishing Media**

Water in jet.

### **Protective Equipment**

Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

## **6. ACCIDENTAL RELEASE MEASURES**

### **Personal Precautions**

Avoid contact with skin and eyes. Wear PVC, Neoprene or nitrile rubber gloves. Wear rubber knee length safety boots and PVC Jacket and Trousers. Wear safety glasses or full face shield if splashes are likely to occur.

### **Environmental Precautions**

Prevent from spreading or entering into drains, ditches or rivers by using sand, earth, or other appropriate barriers. Inform local authorities if this cannot be prevented.

### **Clean-up Methods - Small Spillages**

Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.

### **Clean-up Methods - Large Spillages**

Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Dispose of as for small spills.

**Additional Advice** - Local authorities should be advised if significant spillages cannot be contained.



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### 7. HANDLING AND STORAGE

#### Handling

Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Avoid prolonged or repeated contact with skin. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Prevent spillages. Cloth, paper and other materials that are used to absorb spills present a fire hazard. Avoid their accumulation by disposing of them safely and immediately. In addition to any specific recommendations given for controls of risks to health, safety and the environment, an assessment of risks must be made to help determine controls appropriate to local circumstances. Exposure to this product should be reduced as low as reasonably practicable. Reference should be made to the Health and Safety Executive's publication 'COSHH Essentials'.

#### Storage

Keep in a cool, dry, well-ventilated place. Use properly labelled and closeable containers. Avoid direct sunlight, heat sources, and strong oxidizing agents. The storage of this product maybe subject to the Control of Pollution (Oil Storage) (England) Regulations. Further guidance maybe obtained from the local environmental agency office.

#### Storage Temperatures

0°C Minimum. 50°C Maximum.

#### Recommended Materials

For containers or container linings, use mild steel or high density polyethylene.

#### Unsuitable Materials

For containers or container linings, avoid PVC.

#### Other Information

Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

### 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

#### Occupational Exposure Limits:

#### Exposure Controls

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

#### Personal Protective Equipment

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Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

### **Respiratory Protection**

No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65 °C (149 °F)] meeting EN141.

### **Hand Protection**

Chemical protective gloves are made from a wide range of materials, but there is no single glove material ( or combination of materials) which gives unlimited resistance to any individual or combination of substances or preparations. The extent of the breakthrough time will be affected by a combination of factors which include permeation, penetration, degradation, use pattern ( full immersion, occasional contacts) and how the glove is stored when not in use.

Theoretical maximum levels of protection are seldom achieved in practice and the actual level of protection can be difficult to assess. Effective breakthrough time should be used with care and a margin of safety should be applied. HSE guidance on protective gloves recommends a 75% safety factor to be applied to any figures obtained in a laboratory test. Nitrile gloves may offer relatively long breakthrough times and slow permeation rates. Test data, e.g breakthrough data obtained through test standard EN374-3:1994 are available from reputable equipment suppliers.

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. A non perfumed moisturiser should be applied.

### **Eye Protection**

Goggles conforming to a minimum standard of EN 166 345B should be considered if there is a possibility of eye contact with the product through splashing. Higher rated eye protection must be considered for highly hazardous operations or work areas. For example, employees involved in metalworking operations such as chipping, grinding or cutting may require additional protection to avert injury from fast moving particles or broken tools.

### **Body Protection**

Skin protection not ordinarily required beyond standard issue work clothes.

### **Monitoring Methods**

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Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate.

### Environmental Exposure Controls

Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Colour** Pale amber liquid

**Odour** Perceptible

**pH** 7.0-10.5

**Vapour Pressure @20°C** 2 K Pa

**Initial Boiling Point** Up to >260°C.

**Melting Point** <-50°C

**Solubility in Water** Soluble.

**Relative density** 1.040 – 1.090 at 15°C.

**Flash Point** >100°C. (COC).

**Viscosity** 5-10 cSt at 40°C.

## 10. STABILITY AND REACTIVITY

**Stability** Stable.

**Conditions to Avoid** Extremes of temperature and direct sunlight.

**Materials to Avoid** Strong oxidizing agents.

**Hazardous Decomposition Products** Hazardous decomposition products are not expected to form during normal storage.

## 11. TOXICOLOGICAL INFORMATION

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**Basis for Assessment** Toxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the toxicology of similar products.

**Acute Toxicity – Oral** Expected to be of low toxicity: LD50 > 5000 mg/kg , Rat

**Acute Toxicity – Dermal** Expected to be of low toxicity: LD50 > 5000 mg/kg , Rabbit

**Acute Toxicity – Inhalation** Not considered to be an inhalation hazard under normal conditions of use.

**Eye Irritation** Expected to be slightly irritating.

**Skin Irritation** Expected to be slightly irritating.

**Respiratory Irritation** If mists are inhaled, slight irritation of the respiratory tract may occur.

**Skin Sensitisation** Not expected to be a skin sensitizer.

**Repeated Dose Toxicity** : Not expected to be a hazard.

**Carcinogenicity** Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

**Mutagenicity** Not considered to be a mutagenic hazard.

**Reproductive Toxicity** Not considered to be toxic to reproduction.

**Other Information** Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

## 12. ECOLOGICAL INFORMATION

### **Basis for Assessment**

Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products.

**Acute Toxicity** : Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) (LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract). Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

### **Mobility**

Liquid under most environmental conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.

### **Persistence / Degradability**

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Not expected to be readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

### **Bioaccumulation**

Contains components with the potential to bioaccumulate.

### **Other Adverse Effects**

Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential. Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities.

## **13. DISPOSAL CONSIDERATIONS**

### **Waste Disposal**

Recycle or dispose of in accordance with prevailing regulations, by a recognised collector or contractor. The competence of the contractor to deal satisfactorily with this type of product should be established beforehand. Do not pollute the soil, water or environment with the waste product.

### **Product Disposal**

As for waste disposal.

### **Container Disposal**

Recycle or dispose of in accordance with the legislation in force with a recognised collector or contractor.

EU Waste Disposal Code (EWC): 13 08 99 oil waste not otherwise specified. Classification of waste is always the responsibility of the end user.

## **14. TRANSPORT INFORMATION**

**Transport Information** Not dangerous for transport under ADR/RID, IMO and IATA/ICAO regulations.

**ADR/RID Class** None Allocated

**ADR/RID Packing Group** None Allocated

**IMDG Hazard Class** None Allocated

**IMDG Packing Group** None Allocated

**IATA Hazard Class** None Allocated

**IATA Packing Group** None Allocated





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### 15. REGULATORY INFORMATION

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

**EC Classification** Not classified as dangerous under EC criteria.

**EC Symbols** None required.

**EC Risk Phrase** Not classified.

**EC Safety Phrase** Not classified.

**EINECS** All components listed or polymer exempt.

**TSCA (USA)** All components listed.

#### **National Legislation**

Environmental Protection Act 1990 (as amended).

Health and Safety at Work Act 1974

Consumers Protection Act 1987

Control of Pollution Act 1974

Environmental Act 1995

Factories Act 1961

Carriage of Dangerous Goods by Road and Rail (Classification, Packaging and Labelling) Regulations

Chemicals (Hazard Information and Packaging for Supply) Regulations 2002.

Control of Substances Hazardous to Health Regulations 1994 (as amended).

Road Traffic (Carriage of Dangerous Substances in Packages) Regulations

Merchant Shipping (Dangerous Goods and Marine Pollutants) Regulations

Road Traffic (Carriage of Dangerous Substances in Road Tankers in Tank Containers) Regulations

Road Traffic (Training of Drivers of Vehicles Carrying Dangerous Goods) Regulations

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations

Health and Safety (First Aid) Regulations 1981

Personal Protective Equipment (EC Directive) Regulations 1992

Personal Protective Equipment at Work Regulations 1992

#### **Packaging & labeling**

Safety data sheet available for professional user on request.



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### 16. OTHER INFORMATION

#### Revisions Highlighted

Revised according to REACh Legislation

#### Further Information

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It does not constitute a guarantee for any specific property of the product.