



## Ultramax Brake Fluid Dot 4

Product Code: H053

### SECTION 1 IDENTIFICATION OF SUBSTANCE/MIXTURE AND OF COMPANY/UNDERTAKING

1.1 Product Identifier	Ultramax Brake Fluid Dot 4
Product Code	H053
1.2 Relevant identified uses of the substance or mixture and uses advised against	Hydraulic and brake fluid. Do not use in any other application.
1.3 Company	Exol Lubricants Limited All Saints Road Wednesbury, West Midlands, WS10 9TS
1.4 Emergency Telephone Number	+44 (0) 121 568 6800 (Monday – Friday 08.30 – 17.00 hrs GMT)
1.5 Other Information	Preparation Date: 27/09/18

### SECTION 2 HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture <i>See section 16 for full text of H Statements</i>	<b>CLP/GHS Classification:</b> Specific target organ toxicity – repeated exposure – category 2. H 373 – May cause damage to Organs (Kidneys) through prolonged or repeated exposure if swallowed. Eye Irritant-category 2; H319 Causes serious eye irritation.
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2.2 Label Elements	Labelling in accordance with CLP
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#### WARNING

H319 Causes serious eye irritation;  
H373 May cause damage to kidneys through prolonged or repeated exposure if swallowed.  
P102 keep out of the reach of children.  
P305+P351+P338 – If in eyes rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.  
P337+313 – If eye irritation persists, get medical advice.  
P301+311 – If swallowed, call a poison centre or doctor/physician and have container or label at hand.

2.3 Other Hazards	Product is not classified as flammable or combustible but will burn. Product is not classified as PBT or vPvB according to Annex XIII.
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### SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

#### 3.1 Substances

Not applicable.

#### 3.2 Mixtures

Component	EC No.	REACH Reg. No.	GHS Classification	Conc. %
Butyl triglycol	205-592-6	01-2119531322-53	Eye Damage – Cat 1; H318	20-45
Diethylene glycol	203-872-2	01-2119457857-21	Acute oral Toxicity Cat 4 – H302. STOT-RE Cat 2 – H373.	10-25
Methyl diglycol	203-906-6	01-2119475100-52	Reproductive toxicity – Cat 2; H361d	0-3
Butyl diglycol	203-961-6	01-2119475104-44	Eye Irritant – Cat 2; H319	0-3



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## SECTION 4 FIRST AID MEASURES

### 4.1 Description of first aid measures

- Inhalation** If inhalation of mists, fumes or vapour causes irritation to the nose or throat, or coughing, remove to fresh air and keep rest. If symptoms persist obtain medical advice.
- Eyes** Wash eye thoroughly with copious quantities of water for at least 10 minutes, ensuring eyelids are held open. Obtain medical advice if any pain or redness develops or persists.
- Skin** Wash skin thoroughly with soap and water as soon as reasonably practicable. Remove heavily contaminated clothing and wash underlying skin. If irritation persists seek medical advice
- Ingestion** If contamination of the mouth occurs, wash out thoroughly with water. Give plenty water to drink. Obtain medical advice. If medical attention is delayed and an adult has swallowed several ounces, give 90-120ml of hard liquor such as 40% v/v spirits. For Children give proportionally less at a rate of 2ml/kg body-weight. Never give anything by mouth to an unconscious person. Induce vomiting only under medical supervision.

**4.2 Most important symptoms and effects, both acute and delayed** The most important symptoms and effects are described in sections 2 and 11.

**4.3 Indication of immediate medical attention and special treatment needed, if necessary** Medical personnel seeking to administer first aid are referred to the services of the Poisons Information Service, who can advise in such instances. There is no specific antidote and treatment of over exposure should be material may have a mechanism of intoxication similar to ethylene glycol and treatment similar to that for ethylene glycol poisoning may help.

## SECTION 5 FIRE-FIGHTING MEASURES

- 5.1 Extinguishing media** Foam, dry powder, water fog and carbon dioxide. Water can be used to cool and protect exposed material.  
**Unsuitable Extinguishing Media:** Water jets.
- 5.2 Specific hazards arising from the substance or mixture** No special risk – combustion products may contain harmful or irritant fumes. Containers may rupture from gas generation if exposed to fire.
- 5.3 Advice for fire-fighters** Eye protection should be worn. Keep containers cool with water spray. Wear self-contained breathing apparatus and protective suit.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures** Immediately evacuate all personnel from danger area. Wear Personal Protective Equipment. Avoid contact with eyes, skin and clothing. When cleaning up large spills, appropriate protective clothing should be worn including eye protection and impervious gloves – see section 8 for details.
- 6.2 Environmental precautions** Protect drains from potential spills to minimise contamination. Do not wash product into drainage system.  
In the case of large spills contact the appropriate authorities. In the case of spillage on water, prevent the spread of product by the use of suitable barrier equipment. Recover product from the surface. Protect environmentally sensitive areas and water supplies.
- 6.3 Methods and material for containment and cleaning up** Absorb into dry earth or sand. Protect drains using drain covers. Small spillages can be absorbed using rags or absorbent granules. Remove all material to a suitable container for subsequent disposal. Label Salvage Container appropriately. Dispose of as hazardous waste. Flash contaminated area with plenty of water.
- 6.4 Reference to other sections** Personal protective equipment: See section 8. For disposal methods see section 13.

## SECTION 7 HANDLING AND STORAGE

- 7.1 Precautions for safe handling** Avoid any method of handling that generates mists or aerosols. Do not eat, drink or smoke when handling this product. Wash hands thoroughly after use.
- 7.2 Conditions for safe storage, including any incompatibilities** Suitable bulk storage vessels are mild/stainless steel tanks fitted with a dry air breathing system or tight head steel drums. Do not store in linked tanks or drums. Brake fluid absorbs water from the atmosphere – always keep containers tightly closed. Avoid contamination with any other substances and in particular with mineral oils which are incompatible.
- 7.3 Specific end use(s)** Users are referred to the Specification SAE J1707 "Service Maintenance of Brake Fluids"



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## SECTION 8 | EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Substance	Country	Long Term (8 Hours TWA)	Short Term (15 Mins)	
<b>Diethylene glycol</b>	Australia	23 ppm / 101 mg/m3		
	Austria	10 ppm / 44 mg/m3	40ppm / 176 mg/m3	
	Denmark	2.5 ppm / 11 mg/m3	5ppm / 22 mg/m3	
	Germany	10 ppm / 44 mg/m3	40 ppm / 176 mg/m3	
	Latvia	10 mg/m3		
	New Zealand	23 ppm / 101 mg/m3		
	Sweden	10 ppm / 45 mg/m3	20ppm / 90 mg/m3	
	Switzerland	10 ppm / 44 mg/m3	40ppm / 176 mg/m3	
	UK	23 ppm / 101 mg/m3		
	<b>Butyl diglycol</b>	Austria	10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3
		Belgium	10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3
Denmark		100 mg/m3	200 mg/m3	
EU		10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3	
France		10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3	
Germany		10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3	
Hungary		67.5 mg/m3	101.2 mg/m3	
Italy		10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3	
Latvia		10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3	
Poland		67.5 mg/m3	100 mg/m3	
Spain		10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3	
Sweden		15 ppm / 100 mg/m3	30ppm / 200 mg/m3	
Switzerland		10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3	
The Netherlands		50 mg/m3	100 mg/m3	
UK		10 ppm / 67.5 mg/m3	15ppm / 101.2 mg/m3	
<b>Methyl diglycol</b>	Austria	10 ppm / 50.1 mg/m3		
	Belgium	10 ppm / 50.1 mg/m3		
	Denmark	25 ppm (provisional)		
	EU	10 ppm / 50.1 mg/m3		
	France	10 ppm / 50.1 mg/m3		
	Germany	10 ppm / 50.1 mg/m3		
	Hungary	50.1 mg/m3		
	Italy	10 ppm / 50.1 mg/m3		
	Latvia	20 ppm / 100mg/m3		
	Poland	50.0 mg/m3		
	Spain	10 ppm / 50.1 mg/m3		
	The Netherlands	45 mg/m3		
UK	10 ppm / 50.1 mg/m3			

### 8.1.2 Derived No Effect Levels (DNEL)

#### Butyl Triglycol

Worker; Long term exposure –systemic effects, dermal	50mg/kg/day
Worker; Long term exposure –systemic effects, inhalation	195mg/ m3
Consumer Long term exposure –systemic effects, dermal	25mg/kg/day
Consumer Long term exposure –systemic effects, inhalation	117mg/ m3
Consumer Long term exposure –systemic effects, oral	2.5mg/kg/day



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## Butyl Diglycol

Worker; Short term exposure –local effects, inhalation	101.2mg/ m3
Worker; Long term exposure –systemic effects, dermal	20mg/kg/day
Worker; Long term exposure –systemic effects, inhalation	67mg/ m3
Consumer; Short term exposure –local effects, inhalation	50.6mg/ m3
Consumer Long term exposure –systemic effects, dermal	10mg/kg/day
Consumer Long term exposure –systemic effects, inhalation	34mg/ m3
Consumer Long term exposure –systemic effects, oral	1.25mg/kg/day

## Diethylene glycol

Worker; Long term exposure –systemic effects, dermal	106mg/kg/day
Worker; Long term exposure –systemic effects, inhalation	60mg/ m3
Consumer Long term exposure –systemic effects, dermal	53mg/kg/day
Consumer Long term exposure –systemic effects, inhalation	12mg/ m3

## Methyl Diglycol

Worker; Long term exposure –systemic effects, dermal	0.53mg/kg/day
Worker; Long term exposure –systemic effects, inhalation	50.1mg/ m3
Consumer Long term exposure –systemic effects, dermal	0.27mg/kg/day
Consumer Long term exposure –systemic effects, inhalation	25mg/ m3
Consumer Long term exposure –systemic effects, oral	1.5mg/kg/day

### 8.1.3 Predicted No Effect Concentrations (PNEC) Butyl Triglycol

Aqua (freshwater)	1.5 mg/L
Aqua (marine water)	0.25 mg/L
Aqua (intermittent releases)	5.0 mg/L
Sewage Treatment Plant (STP)	200 mg/ L
Sediment (freshwater)	5.77 mg/kg/sediment dw
Sediment (marine water)	0.13 mg/kg/sediment dw
Soil	0.45 mg/kg/soil dw
Oral	111 mg/kg/food

### Butyl Diglycol

Aqua (freshwater)	1.0 mg/L
Aqua (marine water)	0.1 mg/L
Aqua (intermittent releases)	3.9 mg/L
Sewage Treatment Plant (STP)	200mg/ L
Sediment (freshwater)	4.0 mg/kg/sediment dw
Sediment (marine water)	0.4 mg/kg/sediment dw
Soil	0.4 mg/kg/soil dw
Oral	56 mg/kg/food

### Diethylene glycol

Aqua (freshwater)	10 mg/L
Aqua (marine water)	1 mg/L
Aqua (intermittent releases)	10 mg/L
Sewage Treatment Plant (STP)	199.5 mg/ L
Sediment (freshwater)	20.9 mg/kg/sediment dw
Soil	1.53 mg/kg/soil dw

### Methyl Diglycol

Aqua (freshwater)	12 mg/L
Aqua (marine water)	1.2 mg/L
Aqua (intermittent releases)	12 mg/L
Sewage Treatment Plant (STP)	10000 mg/ L
Sediment (freshwater)	44.4 mg/kg/sediment dw
Sediment (marine water)	0.44 mg/kg/sediment dw
Soil	2.44 mg/kg/soil dw
Oral	0.9 mg/kg/food

**Recommended monitoring techniques:-** Personal air monitoring. An applicable standard is BS EN 14042.



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## 8.2 Exposure controls

Employ good industrial hygiene practice as part of a control banding approach.

**Appropriate engineering controls:** Not necessary under normal conditions. If fluid is being heated or atomised, local exhaust ventilation with filter/scrubber is recommended.

**Hand Protection:** Wear chemically resistant impervious gloves (EN 374) to avoid prolonged or repeated contact. Butyl rubber, Natural rubber, Nitrile rubber and PVC are suitable materials. Because of great variety of types of gloves see manufacturer's figures for breakthrough times. In the case of prolonged contact a glove with a protection class of 6 (breakthrough time of >480 min) is recommended.

**Eye Protection:** Safety glasses or face shield. Eye bath should be provided at locations where accidental exposure may occur.

**Skin Protection:** Protective clothing. It is recommended that showers are provided at locations where accidental exposure may occur.

**Hygiene Measures:** Wash thoroughly after handling this product

**Respiratory Protection:** Self-contained breathing apparatus or Organic vapour respirators (A-P2) may be used where product is being heated or atomised and engineering control measures are not practical.

**Environmental Exposure Controls:** No special measures required.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties Does not constitute a specification

### Typical Values

Grades:	Units	Ultramax Brake Fluid Dot 4
Appearance		Clear Liquid – colourless to amber
Odour		Bland
Odour Threshold		Very low odour
pH		7.0 to 11.50
Melting point		<-50°C
Pour point/range	°C	No data available
Initial boiling point and range	°C	>205°C
Flash point (COC)	°C	>93°C
Flammability		Not establish as non-volatile
Upper/lower flammability or explosive limits		Not applicable
Vapour pressure	kPa (0.1 mm Hg)	No data available
Solubility - water		Miscible in any ratio
- Fat/solvents		Soluble
Partition coefficient n-octanol/water	Log Pow	<2.0 (all main ingredients)
Autoignition temperature		>300°C
Decomposition temperature		>300°C
Viscosity		5-10cSt @ 20°C
Evaporation rate		Negligible
Density		1.010-1.060 g/ml
Explosive properties		Not explosive
Oxidising properties		Not oxidising

9.2 Other Information None



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## SECTION 10 | STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	No dangerous reactions known
<b>10.2 Chemical stability</b>	Stable under normal conditions of use
<b>10.3 Possibility of hazardous reactions</b>	Glycol Ethers can form peroxides on storage Glycol Ethers can react with light metals with the evolution of hydrogen.
<b>10.4 Conditions to avoid</b>	Do not distil to dryness without testing for peroxide formation.
<b>10.5 Incompatible materials</b>	Avoid contact with strong oxidising agents. Brake fluid should never be contaminated with any other substances.
<b>10.6 Hazardous decomposition products</b>	Note known.

## SECTION 11 | TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute Toxicity

<b>Ingestion</b>	Product is of low acute oral toxicity – LD50 (oral) Rat = > 5000 mg/kg. (Sparse experience indicates lethal dose in man could be less). However, if any significant amount is ingested, there is a risk of renal damage which in extreme cases could lead to kidney failure, coma or death. Other symptoms of overexposure include Central Nervous System effects, abdominal discomfort, metabolic acidosis, headache and nausea.
<b>Inhalation</b>	Unlikely to be hazardous by inhalation at ambient temperatures due to low vapour pressure. If product is inhaled at elevated temperatures or as an aerosol it may irritate respiratory tract and may cause systemic effects similar to ingestion (see above).
<b>Dermal</b>	Acute percutaneous toxicity is low LD50 (sk) Rabbit = > 3000 mg/kg. Massive contact with damaged skin could result in the absorption of harmful amounts.
<b>Aspiration</b>	No aspiration hazard expected.

#### Corrosivity/Irritation

- <b>Eye</b>	Causes serious eye irritation. (Test Method OECD 405).
- <b>Skin</b>	Based on available data the classification criteria are not met -Test Method OECD 404. Repeated contact may de-fat the skin and cause dermatitis.
- <b>Respiratory Tract</b>	Based on available data the classification criteria are not met. Based on available data the classification criteria are not met.

#### Sensitisation

- <b>Skin</b>	No evidence of sensitisation effects.
- <b>Respiratory</b>	No evidence of sensitisation effects.

#### Repeated-dose Toxicity

There are no reports of long term adverse effects in man. For one ingredient—diethylene glycol -human STOT effects on the Kidney and gastrointestinal tract have been reported.

#### Mutagenicity

No evidence of mutagenicity.

#### Carcinogenicity

No evidence of carcinogenicity.

#### Reproductive Toxicity

Major ingredients have not been shown to cause significant fertility or development problems at levels which are not themselves toxic to the animal concerned. One minor ingredient – Methyl diglycol – has been shown to affect foetus development in some studies and is classified as R63 / H361d.

## SECTION 12 | ECOLOGICAL INFORMATION

### 12.1 Toxicity

#### Product is of low acute Eco toxicity.

Fish	96h	LC50 = > 100 mg/l (Oncorhynchus Mykiss)
Daphnia	48h	EC50 = Not Determined but expected to be virtually non-toxic.
Algae	72h	EC50 = Not Determined but expected to be virtually non-toxic.

### 12.2 Persistence and Degradability

Product is inherently biodegradable and is expected to be readily biodegradable based on ingredients. OECD 302B (Zahn Wellans/EMPA) = 100% elimination at 21 days. If admitted into adapted biological water treatment plants, no adverse effects on the degrading action of the live sludge are expected.

### 12.3 Bioaccumulative Potential

Not expected to bio accumulate. Log POW for all main ingredients = < 2.0

### 12.4 Mobility in Soil

Soluble in water and will partition to aqueous phase. Volatilisation from water to air not expected. Mobile in soil until degraded.

### 12.5 Results of PBT and vPvB Assessment

Product is considered to be neither “persistent, bio-accumulating and toxic” nor “very persistent and very bio- accumulating” according to Annex XIII of Regulation EC 1907/2006.

### 12.6 Other Adverse Effects

None known.



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## SECTION 13 DISPOSAL CONSIDERATIONS

### 13.1 Waste Treatment Methods

Dispose of in accordance with local and national regulations. In the E.U. used brake fluids are classified as Hazardous Waste. EWC number: 16.01.13.

Controlled incineration or recycling is recommended. Do not dispose of to landfill or drains. It is recommended that contaminated packaging is either incinerated or cleaned and sent for recycling.

## SECTION 14 TRANSPORT INFORMATION

Not classified as hazardous for transport (ADR, RID, UN , IMO, IATA/ICAO).

## SECTION 15 REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

All ingredients are registered on the following inventories;  
E.U. (EINECS / EILINCS), USA (TSCA), Canada (DSL/NDSL), Australia (AICS), Japan (ENCS), China (IECSC), Korea (ECL), Philippine (PICCS), New Zealand (NZLoC) Taiwan.

**WGK Hazard class:** Assessed as WGK 1 (self-assessment). Slight hazard to water.

#### Other

Usage should be in accord with all local and national regulations. In the U.K. this would include the Health and Safety at Work Act and the Control of Substances Hazardous to Health regulations (COSHH.)

#### Chemical safety assessment.

A chemical safety assessment has not been carried out for this product by the supplier.

### 15.2 Chemical Safety Assessment

A chemical safety assessment has not been carried out for this product by the supplier.

## SECTION 16 OTHER INFORMATION

Fifth Issue

Fourth Issue May 2017: Changed name

Third Issue May 2015: Added to label information

Second Issue August 2011: Changed to Reach version 2 format

### Full text of classification data in sections 2 and 3

H318 – Causes serious eye damage

H319 – Causes serious eye irritation

H361d –Suspected of damaging fertility or the unborn child.

H373 –May cause damage to organs through prolonged or repeated exposure.