## SECTION 1: Identification of the substance / mixture and of the company / undertaking

**1.1 Product identifier**

| | |
|---|---|
| **Product name:** | **Textar Brake fluid DOT4LV and DOT5.1** |
| **Article name:** | **95006000**<br>**95006100**<br>**95006200**<br>**95006300**<br>**95006600** |
| **Ingredients giving rise to classification** | Polyalkylene glycol ethers & polyglycols including diethylene glycol |

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

| | |
|---|---|
| **Use of the substance/ mixture:** | Hydraulic fluid for use in automotive brake and clutch systems |

**1.3 Details of the supplier of the safety data sheet:**

TMD Friction Services GmbH
Schlebuscher Str. 99
51381 Leverkusen / Germany
www.tmdfriction.com
E-mail: serviceline@tmdfriction.com
Kontakt: Tel. +49 (2171)703 2905

**1.4 Emergency telephone number**

Informationszentrale gegen Vergiftungen,
Universitätsklinikum Bonn
Adenauerallee 119
D-53113 Bonn
Tel: +49 (0)228-19240

## SECTION 2: Hazards identification

**2.1 Classification of the substance or mixture**

**Product definition:** **Mixture**

**Classification according to Regulation (EG) No. 1272/2008 [CLP/GHS]**

Not classified.

**2.2 Label elements**

**Hazards picrograms:**
**None**

| | |
|---|---|
| **Signal word:** | Not applicable |
| **Hazard statements:** | None |

**Precautionary statements**

| | |
|---|---|
| **Prevention:** | P102 – keep out of the reach of children |
| **Reaktion:** | 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**

**Other hazards which do not result in classification**

Product is not classified as flammable or combustible but will burn.
Product is not classified as PBT or vPvB according to Annex XIII.

## SECTION 3: Composition / Information on ingredients

**Substance / mixture:**

Mixture.
Blend of polyglycol ethers, glycol ether esters and polyglycols with added corrosion and oxidation inhibitors.

| Ingredient | EC-Nr. | CAS-No. | Registration No. | % | Classification (EC) Nr. 1272/2008 [CLP] |
|---|---|---|---|---|---|
| Butyl triglycol | 205-592-6 | 143-22-6 | 01-2119531322-53 | 0-20 | Eye Damage – Cat. 1; H318 |
| Diethylene glycol | 203-872-2 | 111-46-6 | 01-2119457857-21 | 0-10 | Acute Oral Toxicity Cat. 4 –H302. STOT-RE Cat. 2 –H373. |
| Methyl diglycol | 203-906-6 | 111-77-3 | 01-2119475100-52 | 0-3 | Reproductive toxicity – Cat. 2; H361d |
| Butyl diglycol | 203-961-6 | 112-34-5 | 01-2119475104-44 | 0-3 | Eye Irritant – Cat. 2 H 319 |

**See Section 16 for the full text of the H statements declared above.**

## SECTION 4: First aid measures

**4.1 Description of first aid measures**

**General Advice:** First Aid responders should pay attention to self-protection and use any recommended protective clothing –see section 8.

**Eye contact:** Flush eye with plenty of water for at least 10 minutes. If irritation persists seek medical attention.

**Skin contact:** Remove contaminated clothing. Wash affected skin with soap and water. If irritation persists seek medical attention.

**Inhalation:** Remove victim to fresh air –and keep at rest. If recovery is not rapid, seek medical attention.

**Ingestion:** Obtain medical advice immediately. If patient is fully conscious, wash out mouth with water and give plenty of water to drink. 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 proportionately 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 effect, both acute and delayed**

See sections 2 and 11 for more detailed information on health effects and symptoms.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** 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 directed at control of symptoms and the patient's clinical condition. Due to the diethylene glycol content this material may have a mechanism of intoxication similar to ethylene glycol and treatment similar to that for ethylene glycol poisoning may help.

## SECTION 5: Firefighting measures

**5.1 Extinguishing media**

**Suitable extinguishing media:** Alcohol resistant foam, dry powder, carbon dioxide or water (fog or fine spray).

**Unsuitable extinguishing media:** Water jets (although these may be used to cool adjacent containers).

**5.2 Special hazards arising from the subtance or mixture**

**Hazards from the subtance 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 firefighters**

**Special protective equipment for fire-fighters:** Eye protection should be worn. Keep containers cool with water spray. In extreme conditions self-contained breathing apparatus and protective suit should be worn.

## SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Prevent unnecessary personnel entering area of spillage. 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**

Prevent from entering drains, ditches or rivers. If this happens inform relevant authorities. Prevent gross contamination of soil.

**6.3 Methods and material for containment and cleaning up**

Contain spillage using sand earth or absorbent booms. Small spillages can be absorbed using rags or absorbent granules. Remove all material to a suitable container for subsequent disposal. Label Salvage Container appropriately. Flush contaminated area with plenty of water.

**6.4 Reference to other sections**

For personal protection see section 8. For disposal methods see section 13.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**

**Protective measures:** 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 lined 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) Recommendations**

Users are referred to the Specification SAE J1707 “Service Maintenance of Brake Fluids”.

## SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**

**Occupational exposure limits:**

Mixture – No official figures available. Due to the low vapour pressure of the preparation, vapour is not generally a problem at ambient temperature.

| **Individual ingredients** | **Country** | **8 hours** | **15 min** |
|---|---|---|---|
| Diethylene glycol | Australia | 23 ppm / 101 mg/m3 | |
| | Austria | 10 ppm / 44 mg/m3 | 40 ppm / 176 mg/m3 |
| | Denmark | 2,5 ppm / 11 mg/m3 | 5 ppm / 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 | 20 ppm / 90 mg/m3 |
| | Switzerland | 10 ppm / 44 mg/m3 | 40 ppm / 176 mg/m3 |
| | UK | 23 ppm / 101 mg/m3 | |
| Butyl diglycol | Austria | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| | Belgium | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| | Denmark | 100 mg/m3 | 200 mg/m3 |
| | EU | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| | France | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| | Germany | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| | Hungary | 67,5 mg/m3 | 101,2 mg/m3 |
| | Italy | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| | Latvia | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| | Poland | 67,5 mg/m3 | 100 mg/m3 |
| | Spain | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| | Sweden | 15 ppm / 100 mg/m3 | 30 ppm / 200 mg/m3 |
| | Switzerland | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| | The Netherlands | 50 mg/m3 | 100 mg/m3 |
| | UK | 10 ppm / 67,5 mg/m3 | 15 ppm / 101,2 mg/m3 |
| Methyl diglycol | Austria | 10 ppm / 50,1 mg/m3 | |
| | Belgium | 10 ppm / 50,1 mg/m3 | |
| | Denmark | 25 ppm (provisorisch) | |
| | 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 / 100 mg/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 | |

| | | |
|---|---|---|
| **Derived No Effect Levels (DNEL)** | Worker; Long term exposure –systemic effects, dermal | 50mg/kg/day |
| | Worker; Long term exposure –systemic effects, inhalation | 195mg/ m3 |
| **Butyl triglycol** | 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 |
| **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 |

**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) | 200 mg/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/Erde dw |
| | Oral | 0,9 mg/kg/Lebensmittel |

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

**8.2 Exposure controls**

| | |
|---|---|
| **General** | 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 |

**Individual protection measures**

| | |
|---|---|
| **Respiratory protection** | Not needed under normal conditions. 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. |
| **Eye/face protection** | Wear close-fitting goggles (EN 166) or face shield where there is a risk of splashing (acrylic or PVC preferred to polycarbonate which may be attacked by brake fluid). Eye baths should be provided at locations where accidental exposure may occur |
| **Skin protection** | |
| **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 6 of 9 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. |
| **Skin and body** | Where significant exposure is possible wear impervious body covering. It is recommended that showers are provided at locations where accidental exposure may occur. |
| **Environmental exposure controls** | No special measures required |

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**

**Appearance:**

| | | Test method |
|---|---|---|
| **Appearnce** | Clear liquid – colourless to amber (although some brake fluids may be dyed). | Visual |
| **Odour** | Bland | N/A. |
| **Odour threshold** | N/A. – very low odour | |
| **pH** | 7,0 to 11,50 | SAE J 1703 |
| **Melting point** | < -50°C. | SAE J 1703 |
| **Boiling point** | > 260°C. | SAE J 1703 |
| **Flash point** | >120°C | IP35 |
| **Flammability limits in air** | Not established as non-volatile | |
| **Auto ignition temp.** | > 300°C | ASTM D 286 |
| **Decomposition Temperature** | > 300°C | |
| **Evaporation Rate** | Negligible | |
| **Density @ 20°C** | 1,030 – 1,090 g/ml | DIN51757 |

| | | |
|---|---|---|
| **Solubility** | In water: miscible in any ratio<br>In ethanol: miscible in any ration | |
| **Partition Coefficient: n-Octanol/Water** | < 2.0 (all main ingridients) | OECD 117 |
| **Viscosity @ 20°C** | Approx. 5-10 cSt | ASTM D 445 |
| **Vapour pressure 20°C** | < 2 Milibar | Reid |
| **Vapour Density** | Not established as non-volatile | |
| **Explosive properties** | Not explosive | |
| **Oxidising Properties** | Not oxidising | |

**9.2 Other information**

No other relevant data

## SECTION 10: Stability and reactivity

| | |
|---|---|
| **10.1 Reactivity** | No hazardous reactions if stored and handled as indicated. |
| **10.2 Chemical stability** | Product is stable under normal conditions. |
| **10.3 Possibility of hazardous reactions** | Glycol Ethers can form peroxides on storage<br>Glycol ethers can react with light metals with the evolution of hydrogen. |
| **10.4 Conditions to avoid** | Do not distil to dryness without testing for peroxide formation |
| **10.5 Incompatible materials** | Strong oxidising agents. For user safety, brake fluid should never be contaminated with any other substance. |
| **10.6 Hazardous decomposition products** | None known. |

## SECTION 11: Toxiciligical information

Kommentare können auf einer Analogie mit ähnlichen Produkten basiert sein

**11.1 Information on toxicological effects**

**Acute toxicity estimates**

**Potential acute health effects**

| | |
|---|---|
| **Inhalation** | 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). |
| **Ingestion** | 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. |
| **Aspiration** | No aspiration hazard expected |
| **Dermal** | Acute percutaneous toxicity is low LD50 (sk) Rabbit = > 3000 mg/kg. Massive contact with damaged skin could result in the absorption of harmful amounts. |
| **Irritation** | |
| **Eye Contact** | Causes serious eye irritation. (Test Method OECD 405). |
| **Skin Contact** | Based on available data the classification criteria are not met -Test Method OECD 404. Repeated contact may de-fat the skin and cause dermatitis. |
| **Corrosivity** | Based on available data the classification criteria are not met. |
| **Sensitisation** | Based on available data the classification criteria are not met |
| **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.

**Carcinogenicity** Not known to be carcinogenic.

**Mutagenicity** Not known to be mutagenic.

**Toxicity for reproduction** 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 ecotoxicity.
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

Not relevant

## 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

| | ADR/RID | ADN | IMGD | IATA |
|---|---|---|---|---|
| **14.1 UN-number** | None | None | None | None |
| **14.2 UN proper shipping name** | - | - | - | - |
| **14.3 Transport hazard class(es)** | - | - | - | - |
| **14.4 Packing group** | - | - | - | - |
| **14.5 Environmental hazards** | no | no | no | no |

| | | | | |
|---|---|---|---|---|
| **Additional information** | - | - | - | - |

**14.6 Special precautions for user** None relevant

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not classsified

## SECTION 15: Regulatory information

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

**Chemical 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

**Sonstiges** 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.)

**15.2 Chemical Safety Assessment** A chemical safety assessment has not been carried out for this product by the supplier.

## SECTION 16: Other information

**Abbreviations and acronyms**

CLP –Classification, labelling and packaging of substances and mixtures regulation**,**
GHS –UN Globally Harmonised system of classification and labelling of chemicals
STOT –RE Specific Target Organ Toxicity –Repeated Exposure.
H302 –Harmful if swallowed
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.

| | |
|---|---|
| **Revisions** | Changes to this issue of the data sheet are indicated by a bar in the left margin |
| **Date of issue/ Date of revision** | 26.07.2017 |
| **Date of previous issue** | 27.03.2013 |
| **Version** | 2 |

**Notice to reader**
All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and

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