

# Health & Safety Data Sheet

Date

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XRB157D

Information on the safe handling and storage of the product named.  
This sheet supersedes and replaces XRB157C.

This Health & Safety Data Sheet is product specific & meets the current mandatory regulations.

## 1. Identification

- 1.1 Product Name: UNIVERSAL BRAKE FLUID  
DOT 3 All Grades  
DOT 4 Grades with wet boiling points less than 165 ° C.
- 1.2 Supplier: TRW KFZ Ausrüstung GmbH  
Rudolf-Diesel-Straße 7, D-56566 Neuwied  
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## 2. Composition/Information on ingredients

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

- 2.1 GENERAL: Blend of glycol ethers, glycol ether borate esters and polyglycols with added corrosion and oxidation inhibitors.

### 2.2 HAZARDOUS INGREDIENTS

Hazardous Ingredients	CAS-Number	Concentration In %	Hazard Classification	Risks (R-phrases)
Butyl tri glycol	143-22-6	> 20	XI	R 36
Di ethylene glycol	111-46-6	< 25	Xn	R 22
Methyl di glycol	111-77-3	< 5	Xn	R 63

## 3. Hazards identification

- 3.1 Physical Hazards: Not significant.
- 3.2 Health Hazards  
R 36: Irritating to eyes. Mildly irritating to skin. When ingested it may be absorbed and cause renal damage at high dosage.
- 3.3 Environmental Hazards: Low

## 4. First Aid measures

- 4.1 Inhalation: Remove to fresh air. If recovery is not rapid, seek medical attention.
- 4.2 Skin Contact: Remove contaminated clothing. Wash affected skin with soap and water. If irritation persists seek medical attention.
- 4.3 Eye Contact  
Flush eye with water for at least 10 mins. If irritation persists seek medical attention.
- 4.4 Ingestion  
Do not induce vomiting. Wash out mouth with water and give plenty of water to drink. Obtain medical advice immediately.
- 4.5 Note to Physicians  
Medical personnel seeking to administer first aid are referred to the services of the Poisons Information Centre 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.

The information and recommendations in this publication are the best of our knowledge, information and belief accurate at the time of publication. Nothing herein is to be construed as a warranty, express or implied. In all cases, it is the responsibility of users to determine the suitability of any products for their own particular purpose. Recommendations for use, handling, protection, etc., are advisory only.

**Lucas. Original Equipment. Global Service.**

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## 5. Fire fighting measures

- 5.1 Suitable Extinguishing Media  
Alcohol resistant foam, dry powder or water (fog or fine spray).
- 5.2 Unsuitable Extinguishing Media  
Water jets (although these may be used to cool adjacent containers).
- 5.3 Exposure Hazards  
No special risk – Combustion products may contain harmful or irritant fumes.
- 5.4 Special Protective Equipment  
In extreme conditions self-contained breathing apparatus should be worn.

## 6. Accidental release measures

- 6.1 Personal Precautions  
Avoid contact with eyes, skin and clothing. When cleaning up large spillages, suitable protective clothing should be worn including eye protection and impervious gloves.
- 6.2 Environmental Precaution  
Prevent from entering drains, ditches or rivers. If this happens inform relevant authorities. Prevent gross contamination of soil.
- 6.3 Methods for Cleaning up  
Contain spillage using sand or earth. Remove all material to a suitable container for subsequent disposal. Label „Salvage Container“ appropriately. Flush contaminated area with plenty of water.

## 7. Handling and storage

- 7.1 Storage  
Suitable bulk storage vessels are mild/stainless 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.
- 7.2 Handling  
No specific handling precautions are necessary.

## 8. Exposure controls and personal protection

- 8.1 Exposure Controls  
No official TLV/OEL figures available for the entire preparation. However, or atomised, use suitable engineering control measures.
- 8.3 Hand Protection  
Wear suitable impervious gloves to avoid prolonged or repeated contact.
- 8.4 Eye Protection  
Wear close-fitting goggles where there is a risk of splashing. Eye baths should be provided at locations where accidental exposure may occur.
- 8.5 Skin Protection  
Where significant exposure is possible wear impervious body covering.  
It is recommended that showers are provided at locations where accidental exposure may occur.

## 9. Physical and chemical properties

		Tested in accordance with
9.1 Appearance	Clear liquid – usually colourless to amber although some grades of brake fluid may be highly dyed.	-
9.2 Odour	Bland	
9.3 pH	7.0 to 10.50	SAE J 1703
9.4 Boiling point	> 205 ° C	SAE J 1703
9.5 Melting point	< -50 ° C	SAE J 1703

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9.6 Flash point	> 80 ° C DOT 3, > 90 ° C DOT 4	IP 35
9.7 Ignition temp.	> 300 ° C	ASTM D 286
9.8 Density @ 20 ° C	1.030 – 1.070 g/ml	-
9.9 Solubility in water	Miscible in any ratio	-
9.10 Viscosity @ 20 ° C	Approx. 5 – 10 cSt.	ASTM D 445
9.11 Vapour pressure 20 ° C	< 2 milibars	Reid

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## 10. Stability and reactivity

- 10.1 Conditions to Avoid  
Product is stable under normal conditions.
- 10.2 Materials to Avoid  
Strong oxidising agents. For user safety, brake fluid should never be contaminated with any other substance.
- 10.3 Hazardous Decomposition Products  
None know.
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## 11. Toxicological information

- 11.1 Inhalation  
Unlikely to be hazardous by inhalation at ambient due to low vapour pressure.  
If product is inhaled at elevated temperatures it may irritate respiratory tract and may cause systemic effects similar to ingestion (see below).
- 11.2 Skin Contact  
Mild skin irritant – can cause dermatitis in sensitive individuals.
- 11.3 Eye Contact  
Product is irritating to the eye.
- 11.4 Ingestion  
Product is of relatively low oral toxicity – however, if any significant amount is ingested there is a risk of renal damage which in extreme cases could lead to kidney failure, coma and death. There are no reports of long term adverse effects in man.
- LD 50 Rat = > 5000 mg/kg. Sparse experience indicates lethal dose in man could be considerably less.
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## 12. Ecological information

- 12.1 Mobility  
Soluble in water and will partition to aqueous phase. Volatilisation from water to air not expected.  
Mobile in soil until degraded.
- 12.2 Persistence / Degradability  
Product is moderately biodegradable. 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 bioaccumulate. Log POW = < 2.0
- 12.4 Eco-Toxicity  
Acute aquatic toxicity is low. LC 50 > 100 mg/l Rainbow Trout 96 hours.
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## 13. Disposal considerations

- 13.1 Disposal Dangers  
As for spillages – avoid liquid entering drains, rivers etc.
- 13.2 Disposal Methods  
Controlled incineration or recycling is recommended.
- 13.3 Regulations  
Dispose of in accordance with local and national regulations. In the E.U.
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#### 14. Transport information

14.1 IMO Class	Not classified as hazardous
14.2 UN No.	None
14.3 IATA / IACO Class	Not classified as hazardous
14.4 ADR / RID	Not classified as hazardous
14.5 U.K. / E.U. Regulations	Not classified as hazardous

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#### 15. Regulatory information

15.1 E.U. Classification	XI – Irritant
Risk Phrases	R36 – Irritation to eyes.
Safety Phrases	S2 – Keep out of reach of children S26 (Modified) In case of contact with eyes, rinse immediately with water for 10 min. If irritation persists seek medical advice. S46 – If swallowed seek medical advice immediately and show this container or label.
15.2 Restrictions on use or Exposure	To be in accord with local and national regulations. In the U.K. this would include the HSWA and COSHH.

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#### 16. Other information

##### 16.1 Legal Disclaimer

The information contained here in is based on the present knowledge and experience of TRW KFZ Ausrüstung GmbH. It in no way constitutes the users own assessment of work place risk as required by other health and safety legislation.

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