

Safety Data Sheet 91/155/EEC

DOT 4

Revised: 23.12.2002
Date printed: 17.01.2003

Publication No.
XRB236(EN)

01. Identification of the substance / preparation and of the company

Product: DOT 4
Use: Lucas Brake Fluid
Company: TRW KFZ Ausrüstung GmbH, Rudolf-Diesel-Str. 7, D-56566 Neuwied
Phone: (+49) 02631-912 0
Fax: (+49) 02631-912 110
Emergency phone: (+44) NHS 0845 46 47

02. Composition / Information on ingredients

<u>Substance</u>	<u>EINECS</u>	<u>CAS</u>	<u>Range [%]</u>	<u>Symbol / R-phr.</u>
2-(2-(2-Butoxyethoxy)ethoxy)ethanol	205-592-6	143-22-6	20-<40	Xi 36
2-(2-Methoxyethoxy)ethanol	203-906-6	111-77-3	< = 1	Xn 63
2-2'-Oxydiethanole	203-872-2	111-46-6	1-<25	Xn 22
Tributylamine	203-058-7	102-82-9	0,1-<1	T 22-23/24-38

03. Hazards identification

R36: Irritating to eyes.

04. First aid measures

General information Change soaked clothing.
Inhalation Ensure supply of fresh air. In the event of symptoms refer for medical treatment.
Skin contact When in contact with the skin, clean with soap and water. Consult a doctor if skin irritation persists.
Eye contact In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.
Ingestion Do not induce vomiting. Rinse out mouth and give plenty of water to drink. Refer for medical treatment.
Advice to doctor If swallowed or in the event of vomiting, risk of product entering the lungs.

05. Fire-fighting measures

Suitable extinguishing media Water spray jet. Dry powder. Foam. Carbon dioxide.
Extinguishing media that must not be used Full water jet.
Special exposure hazards arising from the substance or preparation itself or combustion products Risk of formation of toxic pyrolysis products.
Special protective equipment for firefighters Use self-contained breathing apparatus.
Additional information Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

06. Accidental release measures

Personal precautions High risk of slipping due to leakage/spillage of product. Keep away sources of ignition.
Environmental precautions Do not discharge into the drains/ surface waters/ groundwater.
Methods for cleaning up/taking up Take up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with the regulations.

07. Handling and storage

Advice on safe handling Use only in well-ventilated areas.
Advice on protection against fire and explosion Keep away from sources of ignition.
Requirements for storage rooms and vessels Prevent penetration into the ground.

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TRW - Original Equipment. Global Service.

TRW KFZ Ausrüstung GmbH, Postfach 2342, 56513 Neuwied, Rudolf-Diesel-Straße 7, 56566 Neuwied
Tel: (02631) 912-0. Fax: (02631) 912-110



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08. Exposure controls / personal protection

Additional advice on system design

Ensure adequate ventilation on workstation.

Ingredients with occupational exposure limits to be monitored

<u>Substance</u>	<u>CAS</u>	<u>Value:</u>
2-2'-Oxydiethanole	111-46-6	MAK: 10 ppm Y, 2000

Respiratory protection Breathing apparatus in the event of high concentrations. Short term: filter apparatus, Filter A.

Hand protection Suitable protective gloves: Butyl rubber, >480 min (EN 374)

Eye protection Safety glasses.

Skin protection Not applicable.

General protective measures Avoid contact with eyes and skin. Do not inhale gases/vapours/aerosols.

Hygiene measures Wash hands before breaks and after work. Use barrier skin cream. At work do not eat, drink, smoke or take drugs.

Limitation and controlling of the environment pollution Not determined.

09. Physical and chemical properties

Form:	Liquid.	Vapour pressure [kPa]:	< 2 mbar (20°C)
Colour:	Clear.	Density [g/ml]:	1,05
Odour:	Perceptible.	Solubility in water:	Partially miscible.
pH-value:	7-10,5	Partition coefficient: n-octanol / water:	-
Boiling point [°C]:	260	Viscosity:	5 - 10 cSt (20°C)
Flash point [°C]:	>80	Relative vapour density determined in air	Not determined.
Flammability:	-	Speed of evaporation:	Not determined.
Lower explosion limit:	-	Melting point [°C]:	<-50
Upper explosion limit:	-	Autoignition temperature:	>300
Combustible properties:	No		

10. Stability and reactivity

Hazardous reactions Reactions with strong oxidizing agents.

Hazardous decomposition products No hazardous decomposition products known.

11. Toxicological information

Acute oral toxicity LD50 Rat : >5000 mg/kg

Acute dermal toxicity LD50 Rabbit :

Acute inhalational toxicity LC50 Rat :

Irritant effect on eye Not determined.

Sensitization / Validation Not determined.

Chronic toxicity / Validation Not determined.

Mutagenicity / validation Not determined.

Reproduction toxicity / Validation Not determined.

Carcinogenicity / Validation Not determined.

Experiences made in practice None.

General remarks The product was classified on the basis of the calculation procedure of the preparation directive.

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12. Ecological information

Biodegradable	Not determined.
Fish toxicity	Not determined.
Behaviour in environment compartments	Not determined.
Behaviour in sewage plant	Not applicable.
AOX-advice	No dangerous components.
General information	Do not allow to enter soil, waterways or waste water.
Contains compounds of 76/464/EC	Not applicable.

13. Disposal considerations

Disposal / Product	Dispose of as hazardous waste. Disposal in an incineration plant in accordance with the regulations of the local authorities.
Waste no. (recommended)	070601*
Disposal / Contaminated packaging	Uncontaminated packaging may be taken for recycling. Packaging that cannot be cleaned should be disposed of as for product.

14. Transport information

14.1 Classification according to ADR:

ADR:	not classified as Dangerous Goods	ADR-Conditions for limited quantities(LQ): -
Dangerous Goods Declaration:		Dangerous Goods Declaration: not classified as Dangerous Goods
Labelling		Labelling
Factor, ADR 1.1.3.6.3:		Label:
Hazard-no:	-	Inner packing, max.:
Label:		Total gross mass of a package:

14.2 Classification according to IMDG:

IMDG-Code:	not classified as Dangerous Goods	IMDG-Conditions for limited quantities(LQ):
Dangerous Goods Declaration:		Dangerous Goods Declaration: not classified as Dangerous Goods
Inscriptions:		Inscriptions:
Label:		Label:
		Inner packing, max.:
		Total gross mass of a package:

14.3 Classification according to IATA:

IATA-DGR:	not classified as Dangerous Goods
Dangerous Goods Declaration:	
Inscriptions:	
Label:	

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15. Regulatory information

Labelling

The product is classified and labelled in accordance with EC directives

Hazard symbols



Irritant -

R36: Irritating to eyes.

S2: Keep out of the reach of children.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S46: If swallowed, seek medical advice immediately and show this container or label.

Special labelling for certain preparations

Not applicable.

National regulations

Not applicable.

16. Other informations

R phrases (Substance)

R22: Harmful if swallowed.

R23/24: Toxic by inhalation and in contact with skin.

R36: Irritating to eyes.

R38: Irritating to skin.

R63: Possible risk of harm to the unborn child.

- * 91/155 (2001/58)
- * 67/548 (2001/59)
- * 1999/45 (2001/60)
- * 91/689 (2001/118)
- * 89/542
- * ADR (23.07.01)
- * IMDG-Code (30.Amdt.)
- * IATA-DGR (2002)
- * Classification according to VbF
- * Water hazard class

Modified position:

Not applicable.

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Irritant

R36: Irritating to eyes.

S2: Keep out of the reach of children. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S46: If swallowed, seek medical advice immediately and show this container or label.

[Verpackungsgröße(n)]

TRW KFZ Ausrüstung GmbH D-56566 Neuwied Rudolf-Diesel-Str. 7
Telefon: (+49) 02631-912 0

Ausführungshinweise zur Kennzeichnung gem. EU RL

Verpackungs- Größe	mindest Kennzeichnungsformat	Symbolgröße	kinderges. Verschluss	ertastbarer Warnhinweis
	74mm x 105mm	nicht relevant	keiner	keiner
	Ausnahmen: Nicht relevant.			
5l(XRB236D(D))	74mm x 105mm	27,9mm x 27,9mm (777mm ²)	keiner	keiner
	Ausnahmen: Nicht relevant.			
5l(XRB236D(EN))	74mm x 105mm	27,9mm x 27,9mm (777mm ²)	keiner	keiner
	Ausnahmen: Nicht relevant.			

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