Safety Data Sheet

according to Regulation (EC) No 1907/2006

HIGHTEC Brake Fluid Super DOT 4

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

1.1. Product identifier

HIGHTEC Brake Fluid Super DOT 4

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

Use of the substance/mixture

Hydraulic fluids

1.3. Details of the supplier of the safety data sheet

Company name:	ROWE MINERALOELWERK GMBH	
Street:	Langgewann 101	
Place:	D-67547 Worms	
Telephone:	+49 (0)6241 5906-0	Telefax: +49 (0)6241 5906-999
e-mail:	info@rowe-mineraloel.com	
Internet:	www.rowe-mineraloel.com	
Responsible Department:	Kundenservice	

1.4. Emergency telephone number:

Giftnotruf Mainz (DE; E) +49 (0)6131-19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2. Label elements

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
111-46-6	2,2' -oxybisethanol, diethylene glycol			<10 %
	203-872-2	603-140-00-6		
	Acute Tox. 4; H302			
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine			<10 %
	203-820-9	603-083-00-7		
	Eye Irrit. 2; H319			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Self-protection of the first aider

Change contaminated clothing.
Do not put any product-impregnated cleaning rags into your trouser pockets.

After inhalation

Avoid breathing dust/fume/gas/mist/vapours/spray. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

After contact with skin

After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water and soap.
If skin irritation or rash occurs: Get medical advice/attention.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.
Consult an ophthalmologist.

After ingestion

Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No known symptoms to date.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2). Dry extinguishing powder. alcohol resistant foam. Water spray.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance itself, combustion products, resulting gases:
CO, NOx

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation.
Wear suitable protective clothing.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

No special handling instructions are necessary.

Advice on protection against fire and explosion

Keep away from combustible material.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed and dry.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
111-46-6	2,2'-Oxydiethanol	23	101		TWA (8 h)	WEL

8.2. Exposure controls

Protective and hygiene measures

Change contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink. Avoid contact with skin and eyes.

Eye/face protection

Wear eye/face protection.

Hand protection

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.
NBR (Nitrile rubber).; 0,4mm; 30min
Butyl rubber.; 0,7mm; 480min

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient , respiratory protection must be worn. full mask (DIN EN 136).
Further regulations, limitations and legal requirements:
National regulations, Regulatory information, EU legislation

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	yellow
Odour:	characteristic

		Test method
pH-Value (at 20 °C):	7-8,5	FMVSS 116
Changes in the physical state		
Initial boiling point and boiling range:	>260 °C	FMVSS 116
Setting point::	<-70 °C	DIN 51583
Flash point:	>134 °C	DIN EN ISO 2719
Lower explosion limits:	1,5 vol. %	
Upper explosion limits:	not determined	
Auto-ignition temperature		
Gas:	>200 °C	
Decomposition temperature:	360 °C	
Vapour pressure: (at 20 °C)	<1 hPa	
Density (at 20 °C):	1,065-1,085 g/cm³	DIN 51757
Water solubility: (at 20 °C)	completely miscible	

Solubility in other solvents
not determined

Partition coefficient:	not applicable	
Viscosity / kinematic: (at 20 °C)	15-17 mm²/s	FMVSS 116
Vapour density:	not determined	
Evaporation rate:	not determined	

9.2. Other information

The product is hygroscopic.

SECTION 10: Stability and reactivity

10.1. Reactivity

This product is stable under normal conditions. Hazardous reactions are unlikely.

10.2. Chemical stability

This product is stable under normal conditions. Hazardous reactions are unlikely.

10.3. Possibility of hazardous reactions

This product is stable under normal conditions. Hazardous reactions are unlikely.

10.4. Conditions to avoid

not determined

10.5. Incompatible materials

not determined

10.6. Hazardous decomposition products

No special measures required when used in accordance with the instructions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity
not determined

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
111-46-6	2,2' -oxybisethanol, diethylene glycol				
	oral	ATE 500 mg/kg			
	dermal	LD50 11890 mg/kg	Rabbit		
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine				
	oral	LD50 4765 mg/kg	Rat		

Irritation and corrosivity
not determined

Sensitising effects
not determined

Carcinogenic/mutagenic/toxic effects for reproduction
not determined

Additional information on tests

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
111-46-6	2,2' -oxybisethanol, diethylene glycol					
	Acute fish toxicity	LC50 > 32000 mg/l	96 h	Gambusia affinis		
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine					
	Acute fish toxicity	LC50 > 1000-2200 mg/l	96 h	Leuciscus idus		

12.2. Persistence and degradability

Product is biodegradable. (96% / 4d)

12.3. Bioaccumulative potential

not determined

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
111-46-6	2,2' -oxybisethanol, diethylene glycol	-1,98 (25°C)
110-97-4	1,1'-iminodipropan-2-ol, di-isopropanolamine	-0,82

Further information

The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Send to a hazardous waste incinerator facility under observation of official regulations.

Waste disposal number of waste from residues/unused products

160113 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); brake fluids; hazardous waste

Waste disposal number of used product

160113 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08); brake fluids; hazardous waste

SECTION 14: Transport information

Land transport (ADR/RID)

Other applicable information (land transport)

No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

Other applicable information (marine transport)

No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

Other applicable information (air transport)

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3: 2,2' -oxybisethanol, diethylene glycol

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 15.

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H319	Causes serious eye irritation.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)