

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**HIGHTEC BRAKE FLUID SUPER DOT 5.1**

Revision date: 11.01.2018

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**
**1.1. Product identifier**

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**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                          |              |          | <5 %     |
|          | 203-872-2   | 603-140-00-6 |          |          |
|          | Acute Tox. 4; H302  |              |          |          |

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**

In case of inhalation of aerosols/spray mist/splash spots: Consult physician. Provide fresh air.

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.

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**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.

**SECTION 5: Firefighting measures**
**5.1. Extinguishing media**
**Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>). Dry extinguishing powder. alcohol resistant foam. Water spray.

**5.2. Special hazards arising from the substance or mixture**

Special exposure hazards arising from the substance itself, combustion products, resulting gases: CO, NO<sub>x</sub>

**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/m <sup>3</sup> | fibres/ml | Category  | Origin |
|----------|-------------------|-----|-------------------|-----------|-----------|--------|
| 111-46-6 | 2,2'-Oxydiethanol | 23  | 101               |           | TWA (8 h) | WEL    |

**8.2. Exposure controls**

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**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:         | light yellow   |
| Odour:          | characteristic |

|                      |         |             |
|----------------------|---------|-------------|
| pH-Value (at 20 °C): | ca. 7-8 | ASTM-D 1287 |
|----------------------|---------|-------------|

**Changes in the physical state**

|  |         |             |
|--|---------|-------------|
| Initial boiling point and boiling range: | >260 °C | ASTM D 1120 |
|--|---------|-------------|

|                |  |             |
|----------------|--|-------------|
| Setting point: |  | ASTM-D 1177 |
|----------------|--|-------------|

|              |         |                 |
|--------------|---------|-----------------|
| Flash point: | >126 °C | DIN EN ISO 2719 |
|--------------|---------|-----------------|

|                         |                |
|-------------------------|----------------|
| Lower explosion limits: | not determined |
|-------------------------|----------------|

|                         |                |
|-------------------------|----------------|
| Upper explosion limits: | not determined |
|-------------------------|----------------|

|                       |         |           |
|-----------------------|---------|-----------|
| Ignition temperature: | >300 °C | DIN 51794 |
|-----------------------|---------|-----------|

|                                |          |
|--------------------------------|----------|
| Vapour pressure:<br>(at 20 °C) | <0,1 hPa |
|--------------------------------|----------|

|                     |                             |           |
|---------------------|-----------------------------|-----------|
| Density (at 20 °C): | ca. 1,065 g/cm <sup>3</sup> | DIN 51757 |
|---------------------|-----------------------------|-----------|

|                                 |                     |
|---------------------------------|---------------------|
| Water solubility:<br>(at 20 °C) | completely miscible |
|---------------------------------|---------------------|

**Solubility in other solvents**

not determined

|                        |                |
|------------------------|----------------|
| Partition coefficient: | not applicable |
|------------------------|----------------|

|                                      |                             |           |
|--------------------------------------|-----------------------------|-----------|
| Viscosity / kinematic:<br>(at 20 °C) | ca. 12,5 mm <sup>2</sup> /s | DIN 51562 |
|--------------------------------------|-----------------------------|-----------|

|                 |                |
|-----------------|----------------|
| Vapour density: | not determined |
|-----------------|----------------|

|                   |                |
|-------------------|----------------|
| Evaporation rate: | not determined |
|-------------------|----------------|

**9.2. Other information**

|                |   |
|----------------|---|
| Solid content: | 0 |
|----------------|---|

The product is hygroscopic.

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**SECTION 10: Stability and reactivity**
**10.2. Chemical stability**

Onset of decomposition at elevated temperatures (~360°C)

**10.3. Possibility of hazardous reactions**

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

**10.4. Conditions to avoid**

none

**10.5. Incompatible materials**

none

**10.6. Hazardous decomposition products**

No hazardous decomposition products known.

**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<br>mg/kg  | 500     |        |        |
|          | dermal                                 | LD50<br>mg/kg | 11890   | Rabbit |        |

**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**

Fischtox (Fish tox.) LD50: 250-350 mg/l (96h Goldorfe), DIN 38412 Part 15

Bakterientox (Tox of bacteria) EC50 &gt;5 g/l, OECD 209

| CAS No   | Chemical name                          |              |           |                          |        |        |
|----------|--|--------------|-----------|--------------------------|--------|--------|
|          | Aquatic toxicity                       | Dose         | [h]   [d] | Species                  | Source | Method |
| 111-46-6 | 2,2' -oxybisethanol, diethylene glycol |              |           |                          |        |        |
|          | Acute fish toxicity                    | LC50<br>mg/l | > 32000   | 96 h<br>Gambusia affinis |        |        |

**12.2. Persistence and degradability**

Product is biodegradable. (97% / 4d)

**12.3. Bioaccumulative potential**

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**Partition coefficient n-octanol/water**

| CAS No   | Chemical name                          | Log Pow      |
|----------|--|--------------|
| 111-46-6 | 2,2' -oxybisethanol, diethylene glycol | -1,98 (25°C) |

**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

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information**
**Changes**

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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.

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