

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 20.07.2012

Version number 1

Revision: 20.07.2012

**1 Identification of the substance/mixture and of the company/  
undertaking**

- **Product identifier**
  - **Trade name:** TRW GRAND PRIX 600  
TRW ESP DOT 4
  - **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
    - **Application of the substance / the preparation** Brake fluid
- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**  
TRW Automotive Aftermarket  
Stratford Road  
Shirley  
West Midlands  
B90 4AX  
United Kingdom  
Tel. +44.121.506.5000  
Fax +44.121.506.5001  
www.trwaftermarket.com  
cst.uk@trw.com
  - **Informing department:** Tel.: +49 (0) 2631 / 912 - 0
  - **Emergency telephone number:**  
Poison Information Center Munich  
Phone: +49 (0) 89 - 19 240  
Information in German and English

**2 Hazards identification**

- **Classification of the substance or mixture**
  - **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Repr. 2 H361d Suspected of damaging the unborn child.  
STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void
  - **Information concerning particular hazards for human and environment:**  
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
  - **Classification system:**  
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

· **Label elements**

- **Labelling according to EU guidelines:**  
The product does not require labelling according to the dangerous substance directive 67/548/EEC or the dangerous preparations directive 1999/45/EC.  
After change of the classification system to the the CLP-regulation 1272/2008 by 1st July 2015 at latest the product will require labelling with the same composition.
- **Special labelling of certain preparations:**  
Safety data sheet available for professional user on request.

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- **Other hazards**
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:**

Mixture of the substances listed below including additives not requiring identification.

- **Dangerous components:**

CAS: 111-46-6 EINECS: 203-872-2	2,2'-oxybisethanol ☒ Xn R22 ☠ STOT RE 2, H373; ☠ Acute Tox. 4, H302	10-25%
CAS: 111-77-3 EINECS: 203-906-6	2-(2-methoxyethoxy)ethanol ☒ Xn R63 Repr. Cat. 3 ☠ Repr. 2, H361d	2.5-10%
CAS: 143-22-6 EINECS: 205-592-6	2-[2-(2-butoxyethoxy)ethoxy]ethanol ☒ Xi R41 ☠ Eye Dam. 1, H318	2.5-10%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

### 4 First aid measures

- **Description of first aid measures**

- **General information** Instantly remove any clothing soiled by the product.

- **After inhalation** Supply fresh air; consult doctor in case of symptoms.

- **After skin contact**

The product is not skin irritating.

Wash intensively with water and soap. Use protective skin ointment.

If skin irritation continues, consult a doctor.

- **After eye contact**

Keep eye lids open and rinse them amply with clean running water for at least 15 minutes.

In case of permanent aches and pains please go and see the doctor.

- **After swallowing**

Rinse out mouth and then drink plenty of water.

Seek immediate medical advice.

- **Information for doctor**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

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

No further relevant information available.

### 5 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents**

Extinguishing powder, foam or water jet. Fight larger fires with water jet or alcohol-resistant foam.

- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

- **Special hazards arising from the substance or mixture**

Inhalation of combustion gases may cause serious health hazards.

Formation of flammable mixtures of vapours with air possible.

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- **Advice for firefighters**
  - **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
  - Remove fill mass from incendiary zone, if possible.
  - Use water to keep fire exposed containers cool.
  - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  - Avoid contact with the product.
  - Particular danger of slipping on leaked/spilled product.
- **Environmental precautions:**
  - Prevent from spreading (e.g. by damming-in or oil barriers).
  - Do not allow to enter drainage system, surface or ground water.
- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
  - Dispose of the material collected according to regulations.
- **Reference to other sections**
  - See Section 7 for information on safe handling
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for information on disposal.

### 7 Handling and storage

- **Handling**
  - **Precautions for safe handling**
    - Open and handle container with care.
    - Keep containers tightly sealed.
    - Avoid splashes or spray in enclosed areas.
    - Avoid contact with eyes and skin.
    - Do not spray into the eyes.
  - **Information about protection against explosions and fires:** Do not heat close to flash point.
- **Conditions for safe storage, including any incompatibilities**
  - **Storage**
    - **Requirements to be met by storerooms and containers:** Store only in the original container.
    - **Information about storage in one common storage facility:**
      - Store away from oxidizing agents.
    - **Further information about storage conditions:**
      - Keep container tightly sealed.
      - Store container in a well ventilated position.
      - Store under dry conditions.
  - **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Control parameters**
  - **Components with limit values that require monitoring at the workplace:**
    - OEL: occupational exposure limit
    - WEL: workplace exposure limit

<b>111-46-6 2,2'-oxybisethanol</b>	
<b>WEL</b>	Long-term value: 101 mg/m <sup>3</sup> , 23 ppm

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**111-77-3 2-(2-methoxyethoxy)ethanol**

WEL Long-term value: 50.1 mg/m<sup>3</sup>, 10 ppm  
Sk

· **DNELs****111-46-6 2,2'-oxybisethanol**

Dermal	DNEL (consumer, long-term, systemic)	53 mg/kg bw/day (human)
	DNEL (worker, long-term, systemic)	106 mg/kg bw/day (human)
Inhalative	DNEL (consumer, long-term, local)	12 mg/m <sup>3</sup> (human)
	DNEL (worker, short-term, local)	60 mg/m <sup>3</sup> (human)

· **PNECs****111-46-6 2,2'-oxybisethanol**

PNEC STP	199.5 mg/L (.)
PNEC aqua (freshwater)	10 mg/L (.)
PNEC aqua (intermittent releases)	10 mg/L (.)
PNEC aqua (marine water)	1 mg/L (.)
PNEC sediment (freshwater)	20.9 mg/kg sedim. dw (.)
PNEC soil	1.53 mg/kg soil dw (.)

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **Exposure controls**· **Personal protective equipment**· **General protective and hygienic measures**

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Take off immediately all contaminated clothing

Do not carry cleaning cloths impregnated with the product in trouser pockets.

Wash hands during breaks and at the end of the work.

· **Breathing equipment:**

Not necessary if room is well-ventilated.

Use a breathing protection if high concentrations are present.

Filter A/P2.

· **Protection of hands:** Use gloves of stable material (i.e. nitril rubber).· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Chloroprene rubber, CR

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.2 mm

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Tightly sealed safety glasses.

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**· **Form:**

Fluid

· **Colour:**

Clear

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· <b>Odour:</b>	Recognizable
· <b>Odour threshold:</b>	Not determined.
· <b>pH-value at 20°C:</b>	7 - 10.5
· <b>Change in condition</b>	
· <b>Melting point/Melting range:</b>	< -50 °C
· <b>Boiling point/Boiling range:</b>	> 260 °C
· <b>Flash point:</b>	> 100 °C
· <b>Inflammability (solid, gaseous)</b>	Not applicable.
· <b>Ignition temperature:</b>	> 300 °C
· <b>Decomposition temperature:</b>	Thermally in general stable.
· <b>Self-inflammability:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product is not explosive.
· <b>Critical values for explosion:</b>	
· <b>Lower:</b>	0.7 Vol %
· <b>Upper:</b>	22.0 Vol %
· <b>Vapour pressure at 20°C:</b>	< 2 hPa
· <b>Density at 20°C</b>	1.04 - 1.09 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Partly miscible
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
· <b>kinematic at 20°C:</b>	5 mm <sup>2</sup> /s
· <b>Other information</b>	No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - **Chemical stability**
    - **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
  - **Possibility of hazardous reactions** Possible formation of peroxide
  - **Conditions to avoid** No further relevant information available.
  - **Incompatible materials:** Avoid contact with strong oxidizing agents.
  - **Hazardous decomposition products:**  
None in case of intended use and storage in compliance with instructions.

### 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**

· <b>LD/LC50 values that are relevant for classification:</b>	
111-46-6 2,2'-oxybisethanol	
Oral	LD50 16500 mg/kg (rat)

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Dermal	LD50	13300 mg/kg (rabbit)
Inhalative	LC50	> 4.6 mg/l/4h (rat)

- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**
  - Possible risk of impaired fertility.
  - May damage the unborn child.
  - **Repeated dose toxicity** Repeated oral intake can cause kidney damage.

### 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

#### 111-46-6 2,2'-oxybisethanol

EC50 (static)	> 10000 mg/l/24h (Daphnia magna) (DIN 38412-11)
LC50 (dynamic)	75200 mg/l/96h (Pimephales promelas)

- **Persistence and degradability** No further relevant information available.
- **Other information:** There are no data available about the preparation.
- **Behaviour in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
  - **General notes:**
    - Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
    - Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
The waste code numbers mentioned are recommendations based on the probable use of the product.

- **European waste catalogue**

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
16 01 00	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)
16 01 13*	brake fluids

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

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- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

### 14 Transport information

- |  |                 |
|--|-----------------|
| · <b>UN-Number</b><br>· <b>ADR, ADN, IMDG, IATA</b>                                    | Void            |
| · <b>UN proper shipping name</b><br>· <b>ADR, ADN, IMDG, IATA</b>                      | Void            |
| · <b>Transport hazard class(es)</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Class</b> | Void            |
| · <b>Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                     | Void            |
| · <b>Environmental hazards:</b><br>· <b>Marine pollutant:</b>                          | No              |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>       | Not applicable. |
| · <b>UN "Model Regulation":</b>  | -               |

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Designation according to EC guidelines:**  
The product does not require labelling according to the dangerous substance directive 67/548/EEC or the dangerous preparations directive 1999/45/EC.  
After change of the classification system to the the CLP-regulation 1272/2008 by 1st July 2015 at latest the product will require labelling with the same composition.
- **Special designation of certain preparations:**  
Safety data sheet available for professional user on request.
- **National regulations**
- **Information about limitation of use:**  
Employment restrictions concerning young persons must be observed.  
Employment restrictions concerning pregnant and lactating women must be observed.  
Employment restrictions concerning women of child-bearing age must be observed.
- **Technical instructions (air):**

Class	Share in %
I	2,5-10
NK	10-25

- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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### 16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

R22 Harmful if swallowed.

R41 Risk of serious damage to eyes.

R63 Possible risk of harm to the unborn child.

· **Department issuing data specification sheet:**

This Material Safety Data Sheet has been drawn up in cooperation with:  
DEKRA Consulting GmbH, Hanomagstr. 12, D-30449 Hannover, Germany  
Tel.: +49.511.42079-311, reach@dekra.com.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent