

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

Printing date 26.02.2016

Version number 1

Revision: 26.02.2016

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

- **1.1 Product identifier**
- **Trade name: DOT 5**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Brake fluid
- **1.3 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:** Phone: +49 (0) 2631 / 912 - 0
- **1.4 Emergency telephone number:**
Poison Information Center Munich
Phone: +49 (0) 89 - 19 240
Information in German and English

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
The product is not classified according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Precautionary statements** Keep out of reach of children.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:**
Mixture of components not requiring labelling.
Added are corrosion and oxidation inhibitors.
- **Dangerous components:** Void

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

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information** Instantly remove any clothing contaminated by the product.
- **After inhalation**
Take affected persons into the open air and position comfortably
In case of persistent symptoms consult doctor.
- **After skin contact**
Remove contaminated clothing.
Wash with water and soap.
If skin irritation continues, consult a doctor.
- **After eye contact**
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
Call a doctor immediately.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.
- **Information for doctor**

SECTION 5: Firefighting measures

- **5.1 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.
- **5.2 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.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Remove goods in stock from incendiary zone, if possible.
Use water to keep fire exposed containers cool.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Avoid contact with eyes, skin and clothes.
Ensure adequate ventilation
Particular danger of slipping on leaked/spilled product.
- **6.2 Environmental precautions:**
Prevent from spreading (e.g. by damming-in or oil barriers).
Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Dispose of contaminated material as waste according to section 13.

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- **6.4 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.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Prevent formation of aerosols.
Don't eat, drink or smoke while working.
Keep containers tightly sealed.
Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:**
The product forms flammable fumes when heated.
- **7.2 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 oxidising agents.
- **Further information about storage conditions:**
Keep container tightly sealed.
Protect from humidity and keep away from water.
Store container in a well ventilated position.
Store under dry conditions.
- **7.3 Specific end use(s)** Brake fluid

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:**
The lists that were valid during the compilation were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
Do not eat, drink or smoke while working.
Avoid close or long term contact with the skin.
Take off all contaminated clothing immediately.
Wash hands during breaks and at the end of the work.
- **Breathing equipment:**
Not necessary if room is well-ventilated.
Use breathing protection only when aerosol or mist is formed.
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.

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Chloroprene rubber, CR

Nitrile rubber, NBR

PVC gloves

Recommended thickness of the material: 0.4 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.

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

- **Form:**

Fluid

- **Colour:**

purple

- **Odour:**

Light

- **Odour threshold:**

Not determined.

- **pH-value:**

Not determined.

- **Change in condition**

- **Melting point/Melting range:**

< -50 °C (SAE J 1703)

- **Boiling point/Boiling range:**

> 260 °C (SAE J 1703)

- **Flash point:**

> 150 °C (IP 35)

- **Inflammability (solid, gaseous)**

Not applicable.

- **Ignition temperature:**

> 400 °C (ASTM D 286)

- **Decomposition temperature:**

> 400 °C

- **Self-inflammability:**

Product is not selfigniting.

- **Danger of explosion:**

Product is not explosive.

- **Critical values for explosion:**

- **Lower:**

Not determined.

- **Vapour pressure at 20 °C:**

< 2 hPa

- **Density at 20 °C**

0.945 - 0.965 g/cm³ (DIN 51757)

- **Evaporation rate**

Not determined.

- **Solubility in / Miscibility with**

- **Water:**

Not miscible or difficult to mix

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

- **dynamic:**

Not determined.

- **kinematic at 20 °C:**

35 - 50 mm²/s (ASTM D 445)

- **Solvent content:**

- **Organic solvents:**

0.9 %

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- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid**
Brake fluids should never be contaminated with any other substance.
- **10.5 Incompatible materials:**
Avoid contact with strong oxidizing agents.
Strong acids and alkali
Can attack paints and coatings as well as some plastics and rubber.
- **10.6 Hazardous decomposition products:**
None in case of intended use and storage in compliance with instructions.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Long-term skin contact may cause skin irritation and/or dermatitis.
- **Serious eye damage/irritation** Splashes can cause temporary eye irritation.
- **Respiratory or skin sensitisation**
Based on available data, the classification criteria are not met.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** biodegradable
- **Other information:** There are no data available about the preparation.
- **Behaviour in environmental systems:**
- **Components:**
A product that has flown out can lead to the formation of a film on the water surface which reduces the oxygen exchange and results in the organisms dying-off.
- **12.3 Bioaccumulative potential** Does not accumulate in organisms
- **12.4 Mobility in soil** No further relevant information available.

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- **Additional ecological information:**
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 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.
Dispose of packaging according to regulations on the disposal of packagings.
Non contaminated packagings can be used for recycling.
Cleaned packing materials have to be admitted to local recycling circuits.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

- | | |
|---|-----------------|
| · 14.1 UN-Number
· ADR, ADN, IMDG, IATA | Void |
| · 14.2 UN proper shipping name
· ADR, ADN, IMDG, IATA | Void |
| · 14.3 Transport hazard class(es)
· ADR, ADN, IMDG, IATA
· Class | Void |
| · 14.4 Packing group
· ADR, IMDG, IATA | Void |
| · 14.5 Environmental hazards:
· Marine pollutant: | No |
| · 14.6 Special precautions for user | Not applicable. |

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| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | Void |

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Labelling according to Regulation (EC) No 1272/2008** Void
 - **Hazard pictograms** Void
 - **Signal word** Void
 - **Hazard statements** Void
 - **Directive 2012/18/EU**
 - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 - **National regulations**
 - **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- | |
|--|
| · Substances of very high concern (SVHC) according to REACH, Article 57 |
| None of the ingredients is contained. |
- **15.2 Chemical safety assessment:**
A Chemical Safety Assessment has not been carried out.

SECTION 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.

- **Department issuing data specification sheet:**
This Material Safety Data Sheet has been drawn up in cooperation with:
DEKRA Assurance Services GmbH, Hanomagstr. 12, D-30449 Hanover, Germany,
phone: (+49) 511 42079 - 0, reach@dekra.com.
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- **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 Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
PBT: Persistent, Bioaccumulative and Toxic
SVHC: Substances of Very High Concern
vPvB: very Persistent and very Bioaccumulative

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