



## 1. Identification of the substance/preparation and company/undertaking

|                                   |   |
|-----------------------------------|---|
| <b>Product name</b>               | <b>Castrol Marine DFM</b>   |
| <b>SDS no.</b>                    | 53726   |
| <b>Product use</b>                | <input checked="" type="checkbox"/> Diesel Fuel Treatment<br>For specific application advice see appropriate Technical Data Sheet or consult our company representative.  |
| <b>Supplier</b>                   | Castrol Marine Oil GmbH<br>Große Theaterstr. 42<br>D-20345 Hamburg<br><br>Customer Service Center: +49 (0)40 3594-01<br>Environmental Protection / Product Safety: +49 (0)40 75197-0<br><br>Carechem: +44 (0) 208 762 8322 (24 hours) |
| <b>EMERGENCY TELEPHONE NUMBER</b> |   |

## 2. Composition/information on ingredients

| Chemical name   | CAS no.    | %        | EINECS / ELINCS. | Classification                               |
|---|------------|----------|------------------|--|
| <input checked="" type="checkbox"/> Low boiling point hydrogen treated naphtha (white spirit) | 64742-82-1 | 50 - 100 | 265-185-4        | R10<br>Xn; R65<br>R66<br>R52                 |
| 2-ethyl hexanol   | 104-76-7   | 10 - 20  | 203-234-3        | Xi; R36/38<br>R52/53                         |
| Low boiling point naphtha - unspecified   | 64742-95-6 | 0.1 - 1  | 265-199-0        | R10<br>Xn; R65<br>Xi; R36/38<br>N; R51/53    |
| 1,2,4-Trimethylbenzene  | 95-63-6    | 0.1 - 1  | 202-436-9        | R10<br>Xn; R20<br>Xi; R36/37/38<br>N; R51/53 |
| Kerosine - unspecified  | 64742-94-5 | 0.1 - 1  | 265-198-5        | R10<br>Xn; R65<br>Xi; R36/38<br>N; R51/53    |

See section 16 for the full text of the R-phrases declared above  
Occupational exposure limits, if available, are listed in section 8.

## 3. Hazards identification

This preparation is classified as dangerous according to Directive 1999/45/EC as amended and adapted. -

|                                  |  |
|----------------------------------|--|
| <b>Physical/chemical hazards</b> | Not classified as dangerous. -   |
| <b>Human health hazards</b>      | <input checked="" type="checkbox"/> Harmful: may cause lung damage if swallowed. -<br><input checked="" type="checkbox"/> Irritating to eyes and skin. |
| <b>Environmental hazards</b>     | <input checked="" type="checkbox"/> Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.                      |
| <b>Effects and symptoms</b>      |  |
| <b>Eyes</b>                      | <input checked="" type="checkbox"/> Causes eye irritation.   |
| <b>Skin</b>                      | <input checked="" type="checkbox"/> Causes skin irritation.  |
| <b>Inhalation</b>                | <input checked="" type="checkbox"/> No significant health hazards identified.  |
| <b>Ingestion</b>                 | <input checked="" type="checkbox"/> Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.                              |

## 4. First-aid measures

|                       |  |
|-----------------------|--|
| <b>Eye contact -</b>  | <input checked="" type="checkbox"/> In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Obtain medical attention immediately.   |
| <b>Skin contact -</b> | <input checked="" type="checkbox"/> In case of contact, immediately flush skin copiously with water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Obtain medical attention immediately. |
| <b>Inhalation -</b>   | If inhaled, remove to fresh air. Get medical attention if symptoms appear.   |

|                             |   |
|-----------------------------|---|
| <b>Ingestion -</b>          | Swallowed, do NOT induce vomiting. Never give anything by mouth to an unconscious person. Aspiration hazard if swallowed- can enter lungs and cause damage. Obtain medical attention. |
| <b>Notes to physician -</b> | Aspiration of this material into the lungs may cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this material.        |

## 5. Fire-fighting measures

### Extinguishing media

|                     |  |
|---------------------|--|
| <b>Suitable -</b>   | In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray. |
| <b>Not suitable</b> | Do not use water jet.  |

**Hazardous decomposition products** These products are carbon oxides

**Unusual fire/explosion hazards** Vapour may cause flash fire.

**Special fire-fighting procedures** None identified.

**Protection of fire-fighters -** Fire-fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.

## 6. Accidental release measures

**Personal precautions -** Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (See Section: "Exposure controls/personal protection"). Follow all fire fighting procedures (See Section: "Fire-fighting measures").

**Environmental precautions and clean-up methods -** If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Avoid contact of spilt material with soil and prevent runoff entering surface waterways. See Section 13 for Waste Disposal Information.

**Personal protection in case of a large spill** Splash goggles. Full suit. Boots. Gloves.

## 7. Handling and storage

**Handling** Wash thoroughly after handling. Do not spray on a naked flame or any incandescent material.

**Storage** Keep container tightly closed. Keep container in a cool, well-ventilated area.

**Not suitable** Prolonged exposure to elevated temperature.

## 8. Exposure controls/personal protection

### Ingredient name -

Low boiling point hydrogen treated naphtha (white spirit)

2-ethyl hexanol

Low boiling point naphtha - unspecified

1,2,4-Trimethylbenzene

Kerosine - unspecified

### Occupational exposure limits

#### TRGS900 (Germany).

MAK: 500 mg/m<sup>3</sup> 8 hour(s).  
MAK: 100 ppm 8 hour(s).

#### MAK-Werte Liste (Germany, 7/2006).

PEAK: 110 mg/m<sup>3</sup>, 4 times per shift, 15 minute(s).  
PEAK: 20 ppm, 4 times per shift, 15 minute(s).  
TWA: 110 mg/m<sup>3</sup> 8 hour(s).  
TWA: 20 ppm 8 hour(s).

#### TRGS900 AGW (Germany, 1/2006).

PEAK: 540 mg/m<sup>3</sup> 15 minute(s).  
PEAK: 100 ppm 15 minute(s).  
TWA: 270 mg/m<sup>3</sup> 8 hour(s).  
TWA: 50 ppm 8 hour(s).

#### TRGS900 (Germany).

MAK: 200 ppm 8 hour(s).  
MAK: 1000 mg/m<sup>3</sup> 8 hour(s).

#### MAK-Werte Liste (Germany, 7/2006).

PEAK: 200 mg/m<sup>3</sup>, 4 times per shift, 15 minute(s).  
PEAK: 40 ppm, 4 times per shift, 15 minute(s).  
TWA: 100 mg/m<sup>3</sup> 8 hour(s).  
TWA: 20 ppm 8 hour(s).

#### TRGS900 AGW (Germany, 1/2006).

PEAK: 200 mg/m<sup>3</sup> 15 minute(s).  
PEAK: 40 ppm 15 minute(s).  
TWA: 100 mg/m<sup>3</sup> 8 hour(s).  
TWA: 20 ppm 8 hour(s).

#### TRGS900 MAK (Germany).

: 50 ppm 8 hour(s).  
: 200 mg/m<sup>3</sup> 8 hour(s).

Whilst specific OELs for certain components are included in this SDS, it should be noted that other components of the preparation will be present in any mist, vapour or dust produced. For this reason, the specific OELs may not be applicable to the product and are provided for guidance purposes.

#### Control Measures

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

All chemicals should be assessed for their risks to health and appropriate control measures put in place to prevent or adequately control exposure. A hierarchy of control measures exists (e.g. elimination, substitution, general ventilation, containment, systems of work, changing the process or activity) that must be considered before use of personal protective equipment. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

#### Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

#### Personal protective equipment

##### Respiratory system

Ensure good ventilation.

In case of insufficient ventilation, wear suitable respiratory equipment.

Respiratory protective equipment must be checked to ensure it fits correctly each time it is worn.

Air-filtering respirators, also called air-purifying respirators, will not be adequate under conditions of oxygen deficiency (i.e. low oxygen concentration), and would not be considered suitable where airborne concentrations of chemicals with a significant hazard are present. In these cases air-supplied breathing apparatus will be required.

Provided an air-filtering/air-purifying respirator is suitable, a filter for organic gases and vapours (boiling point >65°C) can be used for vapour. Use filter type A or comparable standard.

Provided an air-filtering/air-purifying respirator is suitable, a filter for particulates can be used for mist or fume. Use filter type P or comparable standard.

A combination filter for particles, organic gases and vapours (boiling point >65°C) may be required if mist or fume is present as well as vapour. Use filter type AP or comparable standard.

#### Skin and body

Use of protective clothing is good industrial practice.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

#### Hands

Wear chemical resistant gloves.

Recommended: nitrile gloves

Protective gloves will deteriorate over time due to physical and chemical damage. Inspect and replace gloves on a regular basis. The frequency of replacement will depend upon the circumstances of use.

#### Eyes

Safety glasses with side shields.

## 9. Physical and chemical properties

|                    |   |
|--------------------|---|
| Flash point        | >62 °C (Closed cup) Pensky-Martens.                       |
| Pour point         | >40 °C  |
| Colour             | Amber.  |
| Odour              | Mild  |
| Physical state     | Liquid.   |
| Density            | 840 kg/m <sup>3</sup> (0.84 g/cm <sup>3</sup> ) at 15.6°C |
| Solubility         | Insoluble in water.                                       |
| LogK <sub>ow</sub> | 3   |
| Viscosity          | Kinematic: 4.2 mm <sup>2</sup> /s (4.2 cSt) at 40°C       |

## 10. Stability and reactivity

|   |   |
|---|---|
| Incompatibility with various substances | Reactive or incompatible with the following materials: oxidizing materials and acids. |
| Hazardous polymerisation                | Will not occur.   |
| Hazardous decomposition products        | These products are carbon oxides  |

## 11 . Toxicological information

### Acute toxicity

Likely to cause eye irritation.

Likely to cause skin irritation. Defatting to the skin.

Aspiration hazard if swallowed -- harmful or fatal if liquid is aspirated into lungs.

At normal ambient temperatures this product will be unlikely to present an inhalation hazard because of its low volatility. May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.

### Chronic toxicity

#### Carcinogenic effects

No component of this product at levels greater than or equal to 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research on Cancer (IARC) or the European Commission (EC).

## 12 . Ecological information

### Persistence/degradability

Inherently biodegradable.

### Mobility

Spillages may penetrate the soil causing ground water contamination.

### Bioaccumulative potential

This product may bioaccumulate through food chains in the environment.

### Environmental hazards

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Other ecological information

Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

## 13 . Disposal considerations

### Disposal Consideration / Waste information

Where possible, arrange for product to be recycled.  
Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

### Unused product

#### European waste catalogue (EWC)

07 03\* other fuels (including mixtures)




However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.


### Hazardous waste

The classification of the product may meet the criteria for a hazardous waste.

## 14 . Transport information

### International transport regulations

| Regulatory information        | UN number | Proper shipping name   | Class | Packing group | Label   | Additional information  |
|-------------------------------|-----------|--|-------|---------------|---|---|
| <b>ADR/RID Classification</b> | 3082      | Environmentally hazardous substance, liquid, n.o.s. (Low boiling point naphtha - unspecified ) | 9     | III           |  | <b>Hazard identification number</b><br>90<br><b>UK Emergency Action Code:</b><br>3Z<br><b>Classification code</b><br>M6 |
| <b>ADNR Classification</b>    | 3082      | Environmentally hazardous substance, liquid, n.o.s. (Low boiling point naphtha - unspecified ) | 9     | III           |  | <b>Remarks</b><br>Classification code: M6   |
| <b>IMDG Classification</b>    | 3082      | Environmentally hazardous substance, liquid, n.o.s. (Low boiling point naphtha - unspecified ) | 9     | III           |  | <b>Marine pollutant</b><br>Marine pollutant (P)   |
|                               |           |  |       |               |   |   |

| Regulatory information   | UN number | Proper shipping name   | Class | Packing group | Label   | Additional information |
|--------------------------|-----------|--|-------|---------------|---|------------------------|
| IATA/ICAO Classification | 3082      | Environmentally hazardous substance, liquid, n.o.s. (Low boiling point naphtha - unspecified ) | 9     | III           |  |                        |

## 15 . Regulatory information

### Label requirements

#### Hazard Symbol(s)



Harmful

#### Indication of danger

#### Risk phrases -

R65- Harmful: may cause lung damage if swallowed. -  
 R36/38- Irritating to eyes and skin. -  
 R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. -

#### Safety phrases -

S24- Avoid contact with skin.  
 S61- Avoid release to the environment. Refer to special instructions/safety data sheet.  
 S62- If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

#### EU regulations -

Classification and labelling have been performed according to EU directives 1999/45/EC and - 67/548/EEC as amended and adapted. -

### Other regulations

#### Inventories -

**Europe inventory:** All components are listed or exempted. -  
 **United States inventory (TSCA 8b):** Not determined. -  
 **Australia inventory (AICS):** Not determined. -  
 **Canada inventory:** Not determined. -  
 **China inventory (IECSC):** Not determined. -  
 **Japan inventory (ENCS):** Not determined. -  
 **Korea inventory (KECI):** Not determined. -  
 **Philippines inventory (PICCS):** Not determined. -

#### Hazard Class for water (WGK), according to - VwVwS -

Appendix No. 4 -

#### Incident directive -

BImSchV (StörfallV): not listed

## 16 . Other information

### Full text of R-phrases referred to in sections 2 and 3

R10- Flammable.  
 R20- Harmful by inhalation.  
 R65- Harmful: may cause lung damage if swallowed.  
 R36/38- Irritating to eyes and skin.  
 R36/37/38- Irritating to eyes, respiratory system and skin.  
 R66- Repeated exposure may cause skin dryness or cracking.  
 R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
 R52- Harmful to aquatic organisms.  
 R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### History

#### Date of issue

11/05/2007.

#### Date of previous issue

02/12/2003.

#### Prepared by

Product Stewardship Group

### Notice to reader

Revision Indicator: The presence of a triangle in the upper left corner of a field indicates a change since the previous version.

|   |   |                              |
|---|---|------------------------------|
| Product name <input checked="" type="checkbox"/> Castrol Marine DFM | Product code <input checked="" type="checkbox"/> 53726-BE10 | Page: 5/6                    |
| Version 1   | Date of issue 11 May 2007                                   | Format Germany               |
|   | Build 8.2.2 (Germany)                                       | Language ENGLISH ( ENGLISH ) |

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from us.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken.

**Product name** Castrol Marine DFM

**Product code** 453726-BE10

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