

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

Product name	Castrol Power 1 Off-Road 4T 10W-40
SDS no.	465171
Product use	Automotive engine crankcase lubricant. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier	Castrol (UK) Ltd Wakefield House Pipers Way Swindon Wiltshire SN3 1RE
EMERGENCY TELEPHONE NUMBER	Carechem: +44 (0) 208 762 8322 (24 hours)

2. Composition/information on ingredients

Highly refined base oil (IP 346 DMSO extract < 3%). Proprietary performance additives.

Chemical name	CAS no.	%	EINECS / ELINCS.	Classification
Zinc alkyl dithiophosphate	68649-42-3	1 - 5	272-028-3	Xi; R38, R41 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 not classified as dangerous according to Directive 1999/45/EC as amended and adapted.

Physical/chemical hazards	Not classified as dangerous.
Human health hazards	Not classified as dangerous.
Environmental hazards	Unlikely to be harmful to aquatic organisms.
Effects and symptoms	
Eyes	No significant health hazards identified.
Skin	No significant health hazards identified.
	USED ENGINE OILS Used engine oil may contain hazardous components which have the potential to cause skin cancer. See Toxicological Information, section 11 of this Safety Data Sheet.
Inhalation	No significant health hazards identified.
Ingestion	No significant health hazards identified.

4. First-aid measures

Eye contact	In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin contact	In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.
Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects.

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5. Fire-fighting measures

Extinguishing media

Suitable In case of fire, use foam, dry chemical or carbon dioxide extinguisher or spray.

Not suitable Do not use water jet.

Hazardous decomposition products These products are carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide), sulphur oxides (SO₂, SO₃, etc.), phosphates. Some metallic oxides.

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. Minimize contact of spilled material with soils to prevent runoff to 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.

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

Base oil - unspecified

Occupational exposure limits

EH40-OES (United Kingdom (UK)).

STEL: 10 mg/m³ 15 minute(s). Form: Oil mist, mineral

TWA: 5 mg/m³ 8 hour(s). Form: Oil mist, mineral

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 relevant airborne concentrations below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the workstation location.

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. Relevant information can be obtained from the European Committee for Standardisation <http://www.cenorm.be/cenorm/index.htm>.

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

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Respiratory system

Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.

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 particulates can be used for mist or fume. Use filter type P or comparable standard. A combination filter for particles and organic gases and vapours (boiling point >65°C) may be required if vapour or abnormal odour is also present due to high product temperature. 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 protective gloves if prolonged or repeated contact is likely. 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	190 °C (Closed cup) Pensky-Martens.
Pour point	-30 °C
Colour	Red.
Odour	Oily.
Physical state	Liquid.
Density	875 kg/m ³ (0.875 g/cm ³) at 15°C
Solubility	Insoluble in water.
LogK _{ow}	The product is more soluble in octanol; log(octanol/water) >3
Viscosity	Kinematic: 88 mm ² /s (88 cSt) at 40°C Kinematic: 13.5 mm ² /s (13.5 cSt) at 100°C

10 . Stability and reactivity

Incompatibility with various substances	Reactive with oxidising agents.
Hazardous polymerisation	Will not occur.
Hazardous decomposition products	These products are carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide), sulphur oxides (SO ₂ , SO ₃ , etc.), phosphates. Some metallic oxides.

11 . Toxicological information

Acute toxicity	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs. Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis. Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhoea. 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).

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12 . Ecological information

Persistence/degradability	Inherently biodegradable.
Mobility	Spillages may penetrate the soil causing ground water contamination.
Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.
Environmental hazards	Unlikely to be harmful to aquatic organisms.
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.
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14 . Transport information

Not classified as hazardous for transport (ADR/RID, ADNR, IMDG, ICAO/IATA)

15 . Regulatory information

Label requirements

Risk phrases	This product is not classified according to the EU regulations.
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	AUSTRALIAN INVENTORY (AICS): In compliance. CANADA INVENTORY (DSL): In compliance. CHINA INVENTORY (IECS): In compliance. EC INVENTORY (EINECS/ELINCS): In compliance. JAPAN INVENTORY (ENCS): In compliance. KOREA INVENTORY (ECL): In compliance. PHILIPPINE INVENTORY (PICCS): In compliance. US INVENTORY (TSCA): In compliance.
Additional warning phrases	Safety Data Sheet available for professional user on request.

16 . Other information

Full text of R-phrases referred to in sections 2 and 3	R38- Irritating to skin. R41- Risk of serious damage to eyes. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
History	
Date of issue	15/11/2006.
Date of previous issue	02/11/2006.
Prepared by	Product Stewardship Group

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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.

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.

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