



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

Product name	Energol PM 220
Historic SDS no.	401836
Use of the substance/preparation	Lubricant for circulatory systems. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier	Castrol BP Petco Ltd. 7 th Floor, Central Plaza Office Building 17 Le Duan Street, District 1 HCMC, Vietnam Tel: 84-8-38219596 / 38219153 Fax: 84-8-38219603 / 38219152
Emergency telephone number	Carechem: +65 3158 1074 (24 hours)
Code	401836-VN02

2. Composition/information on ingredients

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

This product does not contain any hazardous ingredients at or above regulated thresholds.

3. Hazards identification

This preparation is not classified as dangerous.

Physical/chemical hazards	Not classified as hazardous.
Health hazards	Not classified as hazardous.
Additional hazards	Not available.
Effects and symptoms	
Eyes	No significant health hazards identified.
Skin	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
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 plenty of water for at least 15 minutes. Get medical attention if irritation occurs.
Skin contact	Immediately wash exposed skin with soap and 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 potentially dangerous quantities of this material have been swallowed, call a physician immediately.
Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects.

5. Fire-fighting measures

Extinguishing media	
Suitable	Use foam or all-purpose dry chemical to extinguish. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Not suitable	Do not use water jet.
Hazardous decomposition products	Combustion products may include the following: carbon oxides
Unusual fire/explosion hazards	This material is not explosive as defined by established regulatory criteria.
Special fire-fighting procedures	None identified.
Protection of fire-fighters	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

6 . Accidental release measures

Personal precautions	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material.
Large spill	Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see section 1 for emergency contact information and section 13 for waste disposal.
Small spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7 . Handling and storage

Handling	Avoid prolonged or repeated contact with skin. Avoid contact of spilt material and runoff with soil and surface waterways. Wash thoroughly after handling.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

8 . Exposure controls/personal protection

Ingredient name	Occupational exposure limits
------------------------	-------------------------------------

Base oil - unspecified

ACGIH (United States).

STEL: 10 mg/m³ 15 minute(s). Form: Mineral oil, mist

TWA: 5 mg/m³ 8 hour(s). Form: Mineral oil, mist

For information and guidance, the ACGIH values are included. For further information on these please consult your supplier.

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Exposure controls

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

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	None required. However, use of adequate ventilation is good industrial practice.
Skin and body	Avoid prolonged or repeated contact with skin. Wear protective clothing if prolonged or repeated contact is likely.
Hands	Wear protective gloves if prolonged or repeated contact is likely. Chemical-resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.
Eyes	Safety glasses with side shields.

9 . Physical and chemical properties

Physical state	Liquid.
Flash point	Closed cup: 220°C (428°F) [Pensky-Martens.]
Viscosity	Kinematic: 220 mm ² /s (220 cSt) at 40°C Kinematic: 19.3 mm ² /s (19.3 cSt) at 100°C
Pour point	-18 °C
Relative density	0.89 [at 15°C]
Solubility	insoluble in water.

Product name Energol PM 220

Product code 401836-VN02

Page: 2/4

Version 2

Date of issue 3 November 2009

Format Vietnam

Language ENGLISH

(Vietnam)

(ENGLISH)

10 . Stability and reactivity

Stability	The product is stable.
Conditions to avoid	No specific data.
Materials to avoid	Reactive or incompatible with the following materials: oxidizing materials.
Hazardous decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Chronic toxicity	
Carcinogenic effects	No known significant effects or critical hazards.

12 . Ecological information

Persistence/degradability	The biodegradability of this material has not been determined.
Environmental hazards	No ecotoxicity or ecological information to report.

13 . Disposal considerations

Disposal considerations / Waste information	The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
---	---

14 . Transport information

International transport regulations	
Not classified as dangerous for transport (IMDG, ICAO/IATA)	

15 . Regulatory information

European Union - Label requirements

Risk phrases	This product is not classified as hazardous under applicable regulations.
--------------	---

Other regulations

Europe inventory	All components are listed or exempted.
United States inventory (TSCA 8b)	All components are listed or exempted.
Australia inventory (AICS)	All components are listed or exempted.
Canada inventory	All components are listed or exempted.
China inventory (IECSC)	All components are listed or exempted.
Japan inventory (ENCS)	At least one component is not listed.
Korea inventory (KECI)	All components are listed or exempted.
Philippines inventory (PICCS)	All components are listed or exempted.

Vietnam

Toxic classification (TCVN 3164-79)	Not classified as hazardous.
-------------------------------------	------------------------------

16 . Other information

History	
Date of issue/ Date of revision	3 November 2009
Date of previous issue	10 July 2007
Prepared by	Product Stewardship

Notice to reader

Indicates information that has changed from previously issued version.

Product name Energol PM 220

Product code 401836-VN02

Page: 3/4

Version 2 Date of issue 3 November 2009

Format Vietnam
(Vietnam)

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 Energol PM 220

Product code 401836-VN02

Page: 4/4

Version 2

Date of issue 3 November 2009

Format Vietnam

Language ENGLISH

(Vietnam)

(ENGLISH)