



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

Product name	Energol AC-C 460
SDS #	401601
Historic SDS#:	SE-401601
Product use	Steam Cylinder Oil For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier	BP PETCO LTD. 4th Floor, Sun Wah Tower, 115 Nguyen Hue Boulevard, Dist.1, HCM City Vietnam Tel: 84-8-8219596 Fax: 84-8-8219601
EMERGENCY TELEPHONE NUMBER	Carechem: +65 3158 1074 (24 hours)

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 dangerous.
Health hazards	Not classified as dangerous.
Effects and symptoms	
Eyes	Unlikely to cause more than transient stinging or redness if accidental eye contact occurs.
Skin	Unlikely to cause harm to the skin on brief or occasional contact but prolonged or repeated exposure may lead to dermatitis.
Inhalation	Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.
Ingestion	Unlikely to cause harm if accidentally swallowed in small doses, though larger quantities may cause nausea and diarrhoea.

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.

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
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 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	Occupational exposure limits
Base oil - unspecified	ACGIH (United States). STEL: 10 mg/m ³ 15 minute(s). Form: Oil mist, mineral TWA: 5 mg/m ³ 8 hour(s). Form: Oil mist, mineral
Where there are no regulatory exposure limits, for information and guidance, the ACGIH values are included. For further information on these please consult your supplier.	
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	None required; however, use of adequate ventilation is good industrial practice.
Skin and body	None required; however, use of protective clothing is good industrial practice.
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.
Colour	Brown.
Odour	Oily. [Slight]
Flash point	293 °C (Open cup) Cleveland.
Pour Point	-9 °C
Density	910 kg/m ³ (0.91 g/cm ³) at 15°C
Solubility	Insoluble in water.
LogK_{ow}	>3

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Viscosity	Kinematic: 460 mm ² /s (460 cSt) at 40°C Kinematic: 30 mm ² /s (30 cSt) at 100°C
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10 . Stability and reactivity

Incompatibility with various substances	Reactive with oxidising agents.
Hazardous polymerization	Will not occur.
Hazardous decomposition products	These products are carbon 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).

12 . Ecological information

Persistence/degradability	The biodegradability of this material has not been determined.
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.
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 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	
Inventories	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): All components are listed or exempted. 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.

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16 . Other information

History

Date of issue	27 July 2007
Date of previous issue	No Previous Validation
Prepared by	Product Stewardship

Notice to reader

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.