



# Energol HLP

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## Description

Energol HLP hydraulic oils are a range of premium quality products based upon BP's proven ashless sulphur-phosphorus additive technology. This unique additive system has many benefits over traditional zinc

containing products, especially when the oils operate in moist conditions. It results in improved corrosion prevention, reduced wear and significantly better filtration performance.

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## Applications

Energol HLP is primarily for use in hydraulic equipment, but is also suitable for other duties in which lubricants of high oxidation stability and lubrication performance are required.

Energol HLP range of oils exceed the requirements of the German DIN 51524 part 2, CETOP RP 47H and

American Vickers 1.286.S specifications for anti-wear hydraulic oils and are classified as ISO type HM. The oils have been formulated to minimize oxidation and foaming and to ensure long machinery life by reducing wear to a minimum and preventing corrosion. The oils are compatible with the seal materials used in modern hydraulic systems.

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## Main Benefits

- Excellent filterability and no tendency to block fine filters when contaminated with water
- High chemical stability, excellent corrosion inhibition, low foaming and seal compatibility

- Unique ashless additive technology for premium performance.
- Very low rates of wear and therefore extended life for hydraulic components.

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## Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration

of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

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## Health, Safety and Environment

Health, safety and environmental information is provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products.

The British Petroleum Company p.l.c. or its subsidiaries will not accept liability if the product is used other than in the manner or with the precautions or for the purpose/s specified. Before the product is used other than as directed, advice should be obtained from the local BP office.



# Energol HLP

## Typical Characteristics

		Test Methods	Units	Grade :									
Energol HLP	Test Method	Units	10	15	22	32	46	68	100	150	220	320	
Density @ 20°C	ASTM D1298	kg/l	0.87	0.86	0.86	0.87	0.88	0.88	0.89	0.89	0.89	0.90	
Flash Point	ASTM D92	°C	152	182	226	210	222	232	240	267	270	270	
Kin Viscosity @ 40°C	ASTM D445	cSt	10.0	15.0	22.0	32.0	46.0	68.0	105	160	220	320	
Kin Viscosity @ 100°C	ASTM D445	cSt	2.47	3.31	4.32	5.47	6.88	8.77	12	16	20	25	
Viscosity Index	ASTM D2270		55	82	101	107	104	101	101	101	101	101	
Pour Point	ASTM D97	°C	-18	-18	-18	-30	-30	-30	-24	-24	-24	-24	
Neutralization Value	ASTM D664	mgKOH/g	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Air release @ 75°C	ASTM D3427	min	-	-	-	2	-	-					
Corrosion Protection	ASTM D665B		Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	
Copper Corrosion	ASTM D130		1A	1A	1A	1A	1A	1A	1A	1A	1A	1A	
Vane-Pump test													
Ring Wear	CETOP RP67H	mg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Vane Wear	IP 281	mg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
FZG Gear Test	IP 334	Pass	10	10	10	10	10	10	10	10	10	10	
A/8.3/90°C		Stage											

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

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