



Energol GR-XP

Premium Industrial Gear Oil

Description; Description

A range of high-quality, lead-free EP oils having outstanding thermal stability and high load-carrying capacity. The formulation provides excellent corrosion-protection, anti-foam characteristics, demulsibility and oxidation-resistance. Very good viscosity characteristics ensure that starting torques are not excessive in cold conditions.

non-ferrous metals used in industrial gear units. The EP properties are provided by a sulphur-phosphorus additive

This data sheet contains technical information concerning viscosity grades ISO 68, 100, 150, 220 and 320. For higher viscosity grades ISO 460 and 680 please refer to our other technical data sheet.

The additives are compatible with the ferrous and

Applications; Applications

These oils are formulated for the circulatory and bath lubrication of spur, helical and worm-type industrial gears. Any questions of compatibility should be referred to the local BP Representative. The Energol GR-XP oils meet the performance requirements of DIN 51 517 Part 3, AGMA 250.04 and US Steel 224. They are approved by :

- David Brown Industries Ltd

- PIV
- Sew Usocome

Oil temperatures should not exceed 120 °C. In any system that incorporates electric heaters for effecting rapid warm-up, it is important to avoid high rates of heat input. Heat fluxes in excess of 15 kW/m² (9.5 W/in²) are likely to cause separation of additives, and this would affect the oil's lubrication performance.

Main Benefits; Main Benefits

- Attention-free operation between standard overhauls even at elevated temperatures and in adverse conditions.

- Maximum protection against corrosion and wear.

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

Health, Safety and Environment; 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.; 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.

BP Lubricants and Special Products Ltd. 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.; BP Lubricants and Special Products Ltd. 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.

Typical Characteristics; Typical Characteristics

	Test Methods; Test Methods	Units; Units	Grade :: Grade :				
Density at 15 °C	ISO 3675, ASTM D1298	kg/m ³	68 888	100 901	150 904	220 907	320 912
Flash Point (COC)	ISO 2592, ASTM D92	°C	224	224	238	241	243
Viscosity KV @ 40 °C	ISO 3104, ASTM D445	mm ² /s	65 8.6	96 11.1	140 14.0	210 18.0	305 22.7
Viscosity Index	ISO 2909, ASTM D2270	-	104	100	96	94	92
Pour Point	ISO 3016, ASTM D97	°C	-24	-24	-24	-21	-15
Colour	ISO 2049, ASTM D1500	-	L3.5	L4.0	L4.5	L4.5	L5.0
Corrosion - rust protection	ISO 7210, ASTM D665	-	pass	pass	pass	pass	pass
Sulphated Ash	ASTM D874	%wt	L0.01	0.01	0.01	0.01	0.01
Foam Tendency/Stability :	ASTM D892						
Sequence I : 24 °C		ml	-	-	-	5/0	-
Sequence II : 93 °C		ml	-	-	-	5/0	-
Sequence III : 24 °C after Sequence II		ml	-	-	-	5/0	-
Four ball EP test	IP 239						
Welding Load		kg	220	230	230	240	240
Timken OK Load	IP 240	lb	60-70	60-70	60-70	60-70	60-70
FZG gear test :	IP 334, DIN 51 354	load stage					
A/16.6/110 °C		failure	>12	>12	>12	>12	>12

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

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