



Energol® HLP-HM

PRODUCT DESCRIPTION

Energol® HLP-HM oils are premium quality anti-wear hydraulic oils designed to provide maximum pump life and trouble-free service in industrial and mobile hydraulic systems. They possess proven protection against wear, outstanding oxidation and thermal stability, and are able to satisfy low- ambient-temperature applications in appropriate viscosity grades. These properties make them suitable for vane, gear or axial piston type hydraulic pumps and motors. Energol® HLP-HM oils exceed all AGMA R & O gear oil requirements for the lubrication of enclosed industrial gear drives, and give excellent results on the FZG Test. They are premium quality oils, and should not be confused with many of the lower quality economy oils on the market.

APPLICATION

Energol® HLP-HM oils are recommended for many commercial, industrial and construction uses typified as follows:

- Circulating systems
- Mist applicators
- Bearings-journal, anti-friction
- Electric motors
- Hydraulic systems (including high-pressure systems)
- General hand oiling
- Machine tools
- Gear cases

GENERAL RECOMMENDATIONS FOR HYDRAULIC SYSTEMS

Pump Type

Vane, Gear and Axial Piston Pumps
Oil Gear Pumps requiring heavy oil

Energol® HLP-HM

32, 46 or 68
100

FEATURES

- Anti-wear – Minimizes repairs and downtime.
- Anti-rust – Protects against rust and corrosion.
- Anti-oxidant – Resists sludging and extends service life.
- Anti-foam – Suppresses foam.
- Low-temperature fluidity – Extends the useful ambient temperature operating range.
- Water separation – Separates from water easily.

QUALIFICATIONS

Vickers, Inc. 35VQ25A:

M-2950-S Mobile Hydraulic Systems
I-286-S Industrial Hydraulic Systems

Denison:

HF-0, HF-1, HF-2

Racine Hydraulics

S-106: Petroleum Hydraulic
Fluids Recommendations
USDA H2

Cincinnati Machine:

P-68: Energol® HLP-HM 32
P-69: Energol® HLP-HM 68
P-70: Energol® HLP-HM 46



TYPICAL PROPERTIES

Energol® HLP-HM

	Test Method	22	32	46	68	100	150	220	320
Grade (ISO VG)		22	32	46	68	100	150	220	320
AGMA No		—	—	1	2	3	4	5	6
Gravity: °API	D287	33.0	30.4	30.2	28.3	28.3	27.6	27.3	26.9
Viscosity, Kin: cSt									
	D445								
40° C		20.6	33.3	46.2	62.5	96.4	143	207.5	320.0
100° C		4.1	5.5	6.7	8.1	11.0	14.3	18.2	24.0
Viscosity, SUS									
	D2161								
100° F		108.6	171.6	238.3	323.7	501.9	746.6	1095	1702
210° F		40.1	44.7	48.7	53.4	64.0	76.3	93.0	119.3
Viscosity Index	D2270	100	100	98	97	96	96	96	95
Pour Point	D97								
°C		-35	-32	-29	-23	-20	-20	-18	-15
°F		-31	-25	-20	-10	-5	-5	0	5
Flash Point	D92								
°C		202	199	205	249	254	266	266	288
°F		395	390	400	480	490	510	510	552
Color	D1500	L 1.0	1.5	1.5	L 2.0	L 5.0	7.0	7.0	8.0
Rust Preventive Test									
Procedures A & B, 24 hrs									
	D665	pass	pass	pass	pass	pass	pass	pass	pass
Oxidation: hrs	D943	3000+	2500+	2500+	2500+	2000+	1000+	1500+	1000+
Zinc, % wt		0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04