



Gulf Harmony HVI

*Premium quality high viscosity index hydraulic oil
for extreme temperature ranges*

Product Description

Gulf Harmony HVI series are premium quality anti-wear hydraulic oils specially developed for applications subjected to wide range of temperature or where small viscosity change with fluctuating temperature is required. They are formulated with high quality paraffinic base oils, a highly shear stable polymer and an advanced additive system to meet the stringent requirements of modern hydraulic systems using high pressure high output pumps and critical requirement of other hydraulic system components such as high accuracy numerically controlled machine tools and those employing close clearance servo valves. These oils provide excellent protection against oxidation degradation, rust & corrosion and wear. They also possess superior foam control, water separation and rapid air release properties.

They are available in ISO viscosity grades 46, 68 & 100 and exceed the performance requirements of global industry standards viz. DIN 51524 Part 3 HVLP, AFNOR NFE 48-603 (HV) & ISO 11158 HV and majority of the international OEMs viz. Poclain, Hitachi, Cincinnati Lamb, Eaton (Vickers) and Denison.

Features & Benefits

- Exceptional anti-wear property results in longer pump and component life and reduces costs
- Extremely high viscosity index assures equipment protection at cold start-up temperatures and protects system components at high operating temperatures
- Excellent shear stability minimises viscosity loss over time and exhibits “stay-in-grade” performance under high shear conditions
- Excellent thermo-oxidative stability controls the formation of sludge & varnish and improves oil life
- Superior demulsibility helps in faster separation of water from oil and resists formation of emulsions
- Special rust & corrosion inhibitors protect multi-metallurgy components even in presence of moisture
- Rapid air release property minimises chances of pump cavitation leading to trouble free operations
- Compatible with multi-metals and sealing materials commonly used in hydraulic systems

Applications

- Hydraulic and power transmission systems subjected to a wide range of ambient & operating temperatures
- Critical hydraulic systems such as high accuracy numerically controlled machine tools and those employing close clearance servo valves
- Hydraulic systems of excavators, cranes and hydrostatic drives subjected to most severe outdoor operating conditions
- Hydraulic systems operating under high pressures and requiring high degree of load carrying capability and anti-wear protection

Properties mentioned above are typical only and minor variations, which do not affect the product performances, are to be expected in normal manufacturing. The above information is based on past history of the grade only and must not be construed as a guarantee of performance. Follow equipment manufacturer's recommendations for performance level and viscosity grade. The Material Safety Data Sheet for this product is available from your nearest Gulf Distributor.

Gulf Oil International

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Specifications, Approvals & Typical Properties

ISO Viscosity grades		32	46	68	100
Meet the following Specifications					
DIN 51524 Part 3 HVLP		x	x	x	x
AFNOR NFE 48-603 (HV)		x	x	x	x
ISO 11158 HV		x	x	x	x
Denison HF-0, HF-1, HF-2		x	x	x	
Eaton (Vickers) M-2950-S, I-286-S		x	x	x	
Poclain				x	x
Hitachi			x		
Has the following Approvals					
Cincinnati Machine		P-68	P-70	P-69	
Typical Properties					
Test Parameters	ASTM Method	Test Values			
Viscosity @ 40 °C, cSt	D 445	32.1	46.9	69.9	98.6
Viscosity Index	D 2270	144	144	147	134
Flash Point, °C	D 92	218	218	226	238
Pour Point, °C	D 97	-36	-30	-27	-24
Density @ 15°C, Kg/l	D 1298	0.868	0.874	0.881	0.886
Rust Test	D 665A/B	Pass	Pass	Pass	Pass
Emulsion Test 30 minutes max	@ 54 °C	Pass	Pass	Pass	-
	@ 82 °C		-	-	Pass
Foam Test, foam after 10 minutes of settling for all sequences	D 892	Nil	Nil	Nil	Nil
Turbine Oil Stability Test, hrs	D 943	2500+	2500+	2500+	3000+
FZG, fail load stage, minimum	DIN 51324	11	11	11	11

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