



Gulf Harmony HVI Super Clean

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

Product Description

Gulf Harmony HVI Super Clean series are premium quality anti-wear hydraulic oils specially developed for applications requiring super clean oils and subjected to wide range of temperature or where small viscosity change with fluctuating temperature is needed. 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. These oils provide oxidation protection, superior foam control, water separation and rapid air release properties. They 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 and Denison.

Features & Benefits

- Exceptional anti-wear property results in longer component life reducing costs
- Extremely high viscosity index assures equipment protection at cold start-up temperatures as well as 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
- Ensures smooth operation of hydraulic systems employing close clearance servo valves
- 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 & most sealing materials used in hydraulic systems

Applications

- Hydraulic and power transmission systems subjected to a wide range of ambient & operating temperatures requiring super clean oils
- Critical, high accuracy industrial hydraulic systems
- Hydraulic systems of excavators, cranes and hydrostatic drives subjected to most severe outdoor operating conditions

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 | 46 | 68 | 100 | |
|---|--------------------|-------------|-------|-------|
| Meet the following Specifications | | | | |
| DIN 51524 Part 3 HVLP, AFNOR NFE 48-603 (HV), ISO 11158 HV | X | X | X | |
| Denison HF-0, HF-1, HF-2, Eaton (Vickers) M-2950-S, M-2952-S, Eaton (Vickers) I-286-S, Bosch Rexroth 07 075 for vane, piston & gear pumps, Sauer Danfoss 520L0463 | X | X | | |
| Cincinnati Lamb (formerly Cincinnati Machine) | P-70 | P-69 | | |
| Poclair | | X | X | |
| Hitachi | X | | | |
| Typical Properties | | | | |
| Test Parameters | ASTM Method | Test Values | | |
| Viscosity @ 40 °C, cSt | D 445 | 46.9 | 69.9 | 99.4 |
| Viscosity Index | D 2270 | 144 | 147 | 145 |
| Flash Point, °C | D 92 | 218 | 226 | 238 |
| Pour Point, °C | D 97 | -30 | -27 | -24 |
| Density @ 15°C, Kg/l | D 1298 | 0.874 | 0.881 | 0.886 |
| Rust Test | D 665A/B | Pass | Pass | Pass |
| Emulsion Test 30 minutes max | @ 54 °C @ 82 °C | D 1401 | Pass | Pass |
| | | | - | - |
| Foam Stability in all three sequences, ml | D 892 | Nil | Nil | Nil |
| Turbine Oil Stability Test, hrs | D 943 | 2500+ | | 3000+ |
| FZG, fail load stage, minimum | DIN 51324 | 11 | 11 | 11 |
| Cleanliness level (at filling stage) | NAS 1638 | 6 | 6 | 6 |

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