



TARMOND HSO ZF SERIES

ZINC FREE HYDRAULIC SYSTEM OILS

Product Description:

TARMOND ZF HSO SERIES are blended with new generation zinc-free anti-wear (AW) additive technology and highly refined base stocks. They are high-performance hydraulic fluids for severe operating conditions, containing anti-oxidant and anti-foam additives at low temperatures.

Applications:

TARMOND ZF HSO SERIES Zinc Free Anti-Wear Hydraulic Fluid is designed as an environmentally safer alternative to conventional zinc based hydraulic fluid and is an excellent high pressure, high temperature power transfer fluid where vane, piston, and gear pumps are utilized. This fluid may also be used as a general purpose lubricant where straight mineral oils and conventional rust and oxidation inhibited oils are recommended in the appropriate viscosity grade. Such industrial applications may include (but are not limited to) machine tools, presses, die casting and injection molding machines among others.

Benefits:

- Good thermal stability
- Excellent oxidation resistance
- Load-carrying and wear-resistant performance
- Low pour points ensure fluidity at low temperatures
- Good demulsifying property
- Excellent filterability
- Excellent anti-foaming and release of entrained air
- Zinc-free chemistry, noncorrosive to silver and yellow metals found in some pumps
- Low environmental impact, no heavy metals to contaminate water or soil

Meets Performance:

DIN 51524 Part 1 (HL), Part 2 (HLP), Part 3 (HVLP), Cincinnati P-68, P-69, P-70, AFNOR NF E 48-603 HL&HM, DENISON HF-0 bench tests

Please check your owner's manual for the manufacturer's recommended oil viscosity grade and API classification and approvals.



Technical Data:

| TARMOND ZF HSO SERIES | Test method | | | | | |
|------------------------------------|-------------|-------|-------|-------|-------|-------|
| ISO VG | HM | 22 | 32 | 46 | 68 | 100 |
| Density at 15°C gr/cm ³ | ASTM D 1298 | 0.865 | 0.870 | 0.875 | 0.880 | 0.890 |
| Viscosity at 40°C cSt | ASTM D 445 | 22 | 32 | 46 | 68 | 100 |
| Viscosity at 100°C cSt | ASTM D 445 | 4 | 5 | 6.5 | 8.7 | 11 |
| Viscosity Index | ASTM D 2270 | 95 | 95 | 95 | 95 | 95 |
| Zinc, wt % | ASTM D5185 | - | - | - | - | - |
| Flash point °C | ASTM D 92 | 190 | 216 | 220 | 220 | 220 |
| Pour point °C | ASTM D 97 | -33 | -33 | -30 | -30 | -30 |

Above values are the typical values of the products and may vary with each batch.