

# QATOL REDLINE HYDRO ZAF Oils

## Ashless Zinc Free Hydraulic Oils



QATOL REDLINE HYDRO ZAF Oils are premium fluids formulated with solvent-neutral base oils and enhanced with ashless zinc-free additives for superior power transmission and motion. These high-quality hydraulic oils are specifically engineered for general-purpose use and are suitable for a multitude of applications.

Created with quality and performance in mind, Valvoline HLP ZF hydraulic oils help the hydraulic systems operate seamlessly and efficiently when faced with extreme temperatures and high load bearings. Perfect for hydraulic systems that require zinc-free ashless hydraulic oils.

### APPLICATION

- Hydraulic systems operating under high pressure and/or temperature conditions.
- High-pressure vane, piston or gear pumps.
- Sensitive hydraulic circuits requiring absolute filterability of the fluid
- Any hydraulic system where the risk of contamination of the environment and waters exists.
- Any application where an antiwear, high-performance oil is necessary : various movements, plain bearings and rolling bearings, reducers under low load, etc.
- Lubrication of circuits in which the presence of water is accidental: machine tools, farm and food products industries, paper mills, steel making, etc.

### SPECIFICATIONS:

- ISO 6743/4 HM
- DIN 51524 P2 HLP
- US steel 136, 127
- SEB 181222
- SAE MS 1004
- Bosch Rexroth RE 90 220
- Eaton Vickers I-286-S (Industrial), M-2950-S (Mobile)
- Cincinnati Milacron P 68, P 69, P 70
- DENISON HF0, HF1, HF2 (approval of T6H20C pump).

## KEY BENEFITS

- Outstanding Oxidation Stability – outstanding resistance to the effects of oxidizing agents, resists sludge and deposit formation. Minimizes filter choking. Ensures longer operating life, less maintenance and reduction in operating cost.
- Superior Hydrolytic Stability – resists water absorption and the chemical decomposition of the oil in the presence of water. Protects from acid corrosion, rusting and allows longer oil life.
- Excellent Wear Protection – excellent protection to the pump, valve and other system components. Operates on a wide range of load conditions – moderate to severe.
- Good Thermal Stability – provides good resistance to thermal break down and capability to work under varied ambient and operating temperatures to offer optimum life and performance.
- Anti-foam – allows precision control, high pump pressures and efficient power transfer.
- Fast Air Release – ensures release of entrapped air from oil to offer superior performance of the control mechanism in the system.
- Increased System Reliability – by resisting thermal and chemical break down of the oil as these oils minimize the risk of formation of the harmful sludge and deposit.

## KEY PROPERTIES

Properties	Units	Values								Test Methods
ISO Grade		32	37	46	68	100	150	220	320	-
Viscosity@ 40°C	mm <sup>2</sup> /s	32	36.5	46.9	68	99.5	149	220	320	ASTM D-445
@ 100°C	mm <sup>2</sup> /s	5.4	5.87	6.9	8.8	11.1	14.6	19	24	ASTM D-445
Viscosity Index	-	102	102	102	99	96	96	97	95	ASTM D-2270
Density @ 35°C	Kg/m <sup>3</sup>	864	866	868	873	877	881	885	889	ASTM D-4052
Flash Point	°C	214	216	222	232	240	250	254	260	ASTM D-92
Pour Point	°C	-24	-24	-24	-24	-18	-15	-12	-12	ASTM D-97

## HAZARDS

This oil used as recommended and for the application for which it has been designed does not present any particular health & environmental risk. Prolonged and repeated contact with oil may cause skin disorders. Avoid contact. Wash immediately with soap and water. Do not discharge used oil in to drains or the environment. Dispose to an authorized used oil collection point.

For further Information on Safety Guidelines please refer to Material Safety Data Sheet.

## PACKING

Available Packages: 1000L, 208L, 60L, 20L, 4L, 5L