



## Technical Data Sheet

- Reliable Protection
- Industrial Applications

# UPSOL HYDRAULIC ZF 22, 32, 46, 68, 100

Zinc-Free Hydraulic Oil

ISO VG 22, 32, 46, 68, 100

UPSOL HYDRAULIC ZF Series is Zinc-free hydraulic oil formulated from high viscosity index base oil and selected additives. It is designed to provide protection from excessive wear, rust and corrosion and maintain system cleanliness from sludge and deposit.

TYPICAL CHARACTERISTICS						
PROPERTIES	METHOD	ZF 22	ZF 32	ZF 46	ZF 68	ZF 100
ISO Viscosity Grade		22	32	46	68	100
Density at 15°C, kg/l	ASTM D - 4052	0.8696	0.8726	0.8760	0.8810	0.8844
Kinematic Viscosity at 40°C, cSt	ASTM D - 445	21.93	31.94	45.95	68.08	100.10
100°C, cSt		4.280	5.390	6.74	8.690	11.21
Viscosity Index	ASTM D - 2270	99	100	100	99	97
Flash Point, °C	ASTM D - 92	202	222	242	240	256
Pour Point, °C	ASTM D - 5950	-24	-18	-15	-25	-25

## APPLICATIONS

UPSOL HYDRAULIC ZF Series recommended for general hydraulic system requiring non zinc hydraulic oil, with circulating or oil baths lubrication systems.

## PERFORMANCE LEVELS

UPSOL HYDRAULIC ZF Series meets below performance level :

- DIN 51524 Part 1, Part 2.
- U.S. Steel 127, 136, 126.
- Fives Cincinnati P-68, P-69, P-70.
- Eaton Vickers 1-2865 and M-2950-S.
- ISO 11158 HM.
- ASTM D 6158 HM.

