

PREMIUM WIDE-TEMP/MU HYDRAULIC OILS

ISO GRADES 15, 22, 32, 46, 68

ISO GRADE	<u>Typical Properties</u>				
	15	22	32	46	68
Appearance	Pale/Clear	Pale/Clear	Pale/Clear	Pale/Clear	Pale/Clear
Gravity, API @ 60 F	31.0	31.0	30.8	30.5	30.0
Viscosity, cSt					
At 40 C	16.3	23.9	34.5	46.7	68.5
At 100 C	4.05	5.2	6.7	8.30	11.00
Viscosity Index	155	155	155	154	152
Flash Point, (COC) Deg F	310	350	370	400	425
Pour Point, Deg F(C)	-40(-40)	-40(-40)	-40(-40)	-35(-37)	-30(-34)
Dielectric Strength, ASTM D-877	32 Kv	32 Kv	32 Kv	32Kv	32Kv
Rust Test, ASTM D 665A	No Rust	No Rust	No Rust	No Rust	No Rust

The values shown are typical of current production. Some are controlled in the manufacturing process, while others are not. All of them may vary within tolerable ranges.

Premium Wide-Temp/Multi-Vis Hydraulic Oils are formulated with highly refined distillate stocks, anti-wear agents, rust and oxidation inhibitors. These oils are characterized by multigrade viscosity properties that allow them to impart improved low temperature flow capability while providing increased service life for hydraulic pumps operated at elevated temperatures. They contain an effective anti-wear agent that helps reduce wear in high-speed, high-pressure vane and gear pumps.

APPLICATIONS

Recommended for mobile, construction, agricultural, industrial equipment, and those hydraulic systems and applications that are subject to wide variations in ambient and system operating temperatures. In a clean dry system, typical value for ASTM D-877, "Dielectric Breakdown Voltage of Insulating Liquids" will exceed 32 Kv. This product is suitable for use in the following applications: AIST 127, 126, ASTM D-6158(HV), Chinese National Hydraulic Specifications GB111118.1-2011(L-HV), DIN 51524 Part 2 and 3 (HVLP), SEB 181222, ISO 11158 Hydraulic Fluids (HV), MAG Cincinnati Machine Anti-wear Hydraulic Specifications, General Motors Hydraulic Lubricant Standards (anti-wear hydraulic oil), Parker Denison Hydraulic Requirements-TP30560 (HF-0, HF-2), JCMAS HK (JCHASP 041:2004) Hydraulic Fluid for Construction Machinery (normal and low temperature use), and SAE MS1004 Type H Hydraulic Oil Specifications (HM anti-wear).

**Application ISO Grades 15, 22, 32, 46, & 68 meet dielectric strength test results described in ASTM D-877 @ 32 Kv providing customer storage and containment are free of moisture under all conditions.