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Hydraulic EP

ISO 46

Very High Viscosity Index lubricant for hydraulic systems with antioxidant, anti-wear and antifoam additives. (V.I. 160).

PAKELO HYDRAULIC EP ISO 46 is a Very High Viscosity Index lubricant formulated with selected paraffinic oil base stocks, antioxidant, antirust, anti-wear and antifoam additives.

Thanks to its chemical and physical characteristics the product has been developed for the most modern hydraulic systems working even under severe conditions.

PAKELO HYDRAULIC EP ISO 46 transfers power with great promptness and uniformity under all working and ambient conditions lengthening life of systems operating at high pressures, and/or at high pump speed (vane pumps, gear pumps, piston pumps, etc.).

The product provides the following properties:

- **Very High Viscosity Index** that enables minimum viscosity changes, if compared to common hydraulic lubricants, when the fluid is exposed to different operating temperatures;
- **low Pour Point** that enables easy start-ups at low temperatures;
- **high anti-wear properties** to increase efficiency, life of pumps and of the operating parts in the system;
- **high thermal stability** that allows the use of the product in hydraulic systems operating also at high temperatures and pressures without causing deposits and sludge;
- **good oxidative stability** that allows longer oil drain intervals and thus avoids early oil thickening;
- **high hydrolytic stability** which enables to protect the oil being used also when contaminated with small percentages of water;
- **good demulsivity**: the lubricant can easily separate from the water that could contaminate the system avoiding an accelerated process of oxidation;
- **high filterability** even with presence of water avoiding in this way filter plugging and guaranteeing longer filter life;
- **anticorrosion and antirust capability** to provide efficiently the protection of all metallic components of the hydraulic system;
- **antifoam properties** to avoid the presence of foam and air that reduce system efficiency due to the different compressibility ratio between lubricant and air/lubricant mix;
- **compatibility** with **gaskets** and **metals** normally used in hydraulic systems.

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Application fields

PAKELO HYDRAULIC EP ISO 46 satisfies a wide range of applications, in terms of types of pumps (vane, gear, piston pumps, etc.), of metals used in the working system and of resistance to severe working conditions (high temperatures, pressure, etc.) which they may face without causing stress and/or decomposition.

The product has been specifically developed for hydraulic systems requiring, for correct functioning, Very High Viscosity Index lubricants with good mechanical resistance, low pour point, good anti-wear properties and high chemical stability at high temperatures.

PAKELO HYDRAULIC EP ISO 46 transfers power with great promptness and uniformity lengthening life of systems even under severe working and ambient conditions.

The product is available in different ISO Viscosity Grades. For the correct Viscosity Grade selection please refer to pump's Constructor recommendations and ambient temperatures.

Performance levels

ISO 6743-4 HV, Afnor NFE 48-602, ISO 11158, DIN 51524 Part 3 HVLP, Afnor NFE 48-603 HV, ASTM D6158, Denison HF-0 / HF-1 / HF-2, Eaton Vickers I-286-S / M-2950-S, Cincinnati Machine P-68 / P-69 / P-70, Afnor NFE 48-690(dry), Afnor NFE 48-691(wet), U.S. Steel 126 / 127 / 136, JCMAS HK, Bosch variable vane pumps, Rexroth RE 90220, Sauer Danfoss 520L0463, General Motors (LS-2) LH-03-1 / LH-04-1 / LH-06-1, SEB 181222.

ASTM D 6080 Classification

ISO VG 46 / L32 - 42 (150)

Chemical-Physical Characteristics

Hydraulic EP	Method analysis	Unit measure	Value ISO 46
Density at 15°C	ASTM D1298	kg/l	0,872
Kinematic Viscosity at 40°C	ASTM D445	cSt	47,4
Kinematic Viscosity at 100°C	ASTM D445	cSt	8,6
Viscosity Index	ASTM D2270	-	161
Kinematic Viscosity at 40°C after Sonic Shear	ASTM D445	cSt	41,8
Viscosity Index after Sonic Shear	ASTM D2270	-	151
FZG Failure Load Stage	ASTM D5182	Stage	12
Flash Point (C.O.C.)	ASTM D92	°C	210
Pour Point	ASTM D97	°C	-35
Temperature for Brookfield Viscosity of 750cP	ASTM D2983	°C	-9

The data just above refer to average values and must not be understood as guaranteed characteristics.

This Technical Data Sheet has been carefully checked to guarantee complete and precise information. However, we do not take any responsibility in case of damages caused by any mistakes or omissions. Due to continual product research and development, the information contained herein is subject to change without notification.