



Hyspin HLP-D

Detergent Hydraulic Oil

Description

The Hyspin™ HLP-D hydraulic oil range of lubricants are based upon highly refined mineral oil enhanced with a zinc additive system. They also contain detergent and dispersant additives.

Application

Hyspin HLP-D oils are for use primarily in machine tool hydraulic systems, gears and clutch drives and in mobile hydraulic systems used outdoors.

These oils can tolerate high levels of water contamination, either from the outdoors environment or by water miscible cutting oils when used in machine tool equipment, and still provide effective lubrication. Such contamination can cause corrosion and seizure of hydraulic components. The detergent /dispersant properties of Hyspin HLP-D oils maintain the performance of hydraulic systems under these circumstances.

In hydraulic cylinders operating at low speeds, Hyspin HLP-D oils prevent erratic movement and stick/slip between seals and shafts, greatly reducing seal wear.

Hyspin HLP-D oils are suitable for mobile equipment where multi-disc clutches are employed, They permit higher torques to be transmitted, and maintain smooth clutch operation, short engagement times, and low rates of clutch wear.

The Hyspin HLP-D range is fully compatible with common seal materials.

Hyspin HLP-D is classified as follows:

DIN classification - HLP-D

ISO 6743/4 - Hydraulic Oils Type HM

Hyspin HLP-D grades meet the requirements of:

DIN 51524 Part 2 (except for demulsification)

Advantages

- Smooth functioning of sliding parts in hydraulic systems and machine tools.
- Good surface wetting properties provide smooth sliding of seals on hydraulic pistons and rods and reduces corrosion.
- Excellent corrosion protection in arduous conditions.
- Maintains performance in 'wet' operating conditions, eg outdoor equipment, machining operations.

Typical Characteristics

Name	Method	Units	HLP-D 22	HLP-D 32	HLP-D 46	HLP-D 68
Density @ 15°C / 59°F	ISO 12185 / ASTM D4052	kg/m ³	870	880	880	880
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm ² /s	22	32	46	68
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm ² /s	4.3	5.4	6.8	8.8
Viscosity Index	ISO 2909 / ASTM D2270	-	>95	>95	>95	>95
Pour Point	ISO 3016 / ASTM D97	°C	-33	-30	-24	-24
Flash Point - open cup method	ISO 2592 / ASTM D92	°C	210	220	225	230
Foam Sequence I - tendency / stability	ISO 6247 / ASTM D892	ml/ml	50/0	50/0	50/0	50/0
Rust test - synthetic seawater (24 hrs)	ISO 7120 / ASTM D665B	Rating	Pass	Pass	Pass	Pass
FZG Gear Scuffing test - A/8.3/90	ISO 14635-1	Failure Load Stage	-	12	12	12
Copper corrosion (3 hrs 100°C/ 212°F)	ISO 2160 / ASTM D130	Rating	1A	1A	1A	1A

Subject to usual manufacturing tolerances.

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