Product Data Sheet

Hyspin HVI

High Viscosity Index anti-wear Hydraulic oils

Description

The Castrol Hyspin™ HVI range of high viscosity index (VI) oils is based on a carefully selected ashless (zinc free) additive system designed to meet and exceed the most exacting performance standards.

Application

Hyspin HVI oils are intended for severely stressed hydraulic systems requiring a high level of anti-wear performance and fine filtration. In addition, Hyspin HVI exhibits excellent corrosion protection as well as outstanding thermal and oxidative stability. Hyspin HVI has excellent hydrolytic stability and separates rapidly from water contamination. Hyspin HVI contains a shear stable additive system which helps to maintain the viscosity characteristics of the product over a wide temperature range, even during prolonged use, and imparts a very low pour point which enables the product to be used in cold environments. The Hyspin HVI range is fully compatible with elastomer materials commonly used for static and dynamic seals, such as nitrile, silicone and fluorinated (e.g. Viton) polymers.

Applications include:

- Outdoor equipment which are likely to operate over wide temperature ranges, such as machinery subjected to cold start up conditions and high temperature continuous running. Examples include off-highway and marine applications.
- Indoor manufacturing equipment that incorporates control systems requiring minimal viscosity change with temperature. Examples include precision machine tools.

Hyspin HVI is classified as follows:

- DIN 51502 classification - HVLP
- ISO 6743/4 - Hydraulic Oils Type HV

Hyspin HVI grades meet the requirements of:

- DIN 51524 Part 3
- Cincinnati Lamb (Milacron) P 68-69-70
- Parker Hannifin (Denison) HF0
- US Steel 126 & 127
- Eaton I-286-S & M-2950-S
- Frank Mohn

Advantages

- High viscosity index and low pour point enables the product to be used over a wide temperature range. Good shear stability means no excessive loss in viscosity due to mechanical shearing.
- Excellent anti-wear performance provides extended wear protection for hydraulic pumps. Reduced down time due to unscheduled maintenance and savings from replacement part costs.
- Excellent water separation and hydrolytic stability means reduced down time through prolonged lubricant life and increased equipment reliability.
- Excellent thermal and oxidative stability provides reliable performance and extended oil life in severe applications. Minimal deposit formation gives a cleaner system and reduced frequency of filter changes.
- Excellent filterability characteristics (including in the presence of water) enables cost savings to be made due to

increased filter life.

Typical Characteristics

Name	Method	Units	HVI 15	HVI 32	HVI 46	HVI 68	HVI 100
ISO Viscosity Grade	-	-	15	32	46	68	100
Density @ 15°C	ISO 12185 / ASTM D4052	kg/m³	880	880	880	880	890
Kinematic Viscosity @ 40°C	ISO 3104 / ASTM D445	mm²/s	15	32	46	68	100
Kinematic Viscosity @ 100°C	ISO 3104 / ASTM D445	mm²/s	3.8	6.3	8.1	10.8	14.0
Viscosity Index	ISO 2909 / ASTM 2270	-	>150	>150	>150	>140	>140
Pour Point	ISO 3016 / ASTM D97	°C	-48	-39	-36	-36	-33
Flash Point - closed cup method	ISO 2719 / ASTM D93	°C	160	200	220	220	220
Foam Sequence I - tendency / stability	ISO 6247/ ASTM D892	ml/ml	20/0	20/0	20/0	20/0	20/0
Water Separation @ 54°C (40/37/3)	ISO 6614/ ASTM D1401	min	5	10	15	15	-
Water Separation @ 82°C (40/37/3)	ISO 6614/ ASTM D1401	min	-	-	-	-	20
Air Release @ 50°C	ISO 9120/ ASTM D3427	min	4	4	8	8	12
FZG Gear Scuffing test - A/ 8.3/90	ISO 14635-1	Failure Load Stage	-	11	12	12	12
Rust test - distilled water (24 hrs)	ISO 7210 / ASTM D665A	Rating	Pass	Pass	Pass	Pass	Pass
Rust test - synthetic seawater (24 hrs)	ISO 7210 / ASTM D665B	Rating	Pass	Pass	Pass	Pass	Pass
Shear Stability - KRL test (4hrs)	DIN 51350-6	viscosity loss (%)	-	-	9.5	-	-

Subject to usual manufacturing tolerances.

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