

## Hyspin AWH-M (Superclean)

High viscosity index anti-wear hydraulic oils

### Description

The Castrol Hyspin™ AWH-M (Superclean) hydraulic oil is a shear stable high viscosity index lubricant are based on the latest stabilised zinc additive technology and filtered to ISO class 15/13/10.

### Application

Hyspin AWH-M contains a shear stable additive system which helps 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 very cold environments. It exhibits excellent corrosion and wear protection as well as outstanding thermal and oxidative stability. In addition, Hyspin AWH-M has excellent hydrolytic stability and separates rapidly from water contamination upon standing. Applications include:

- Outdoor equipment which are likely to operate in 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..
- The Hyspin AWH-M range is fully compatible with elastomer materials commonly used for static and dynamic seals, such as nitrile, silicone and fluorinated (e.g. Viton) polymers..

Hyspin AWH-M is classified as follows: DIN 51502 classification – HVLP  
ISO 6743/4 - Hydraulic Oils Type HV

Hyspin AWH-M grades meet the requirements (for appropriate viscosity grade) of:  
DIN 51524 Part 3  
Cincinnati Lamb (Milacron) P 68  
Denison (Parker Hannafin) HF-0  
US Steel 126 & 127  
Eaton (formerly Vickers) I-286-S & M-2950-S  
Bosch Rexroth RE90220

### Advantages

- High viscosity index and low pour point enables the product to be used over a wide temperature range, with good shear stability which 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.
- Good filterability gives a cleaner system with less frequent filter changes.
- Industrial Superclean increasing the service life of hydraulic systems.

## Typical Characteristics

Name	Method	Units	Hyspin AWH-M 32 Superclean
ISO Viscosity Grade	-	-	32
Density @ 15°C / 59°F	ISO 12185 / ASTM D4052	kg/m <sup>3</sup>	880
Base Oil Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	32
Base Oil Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	6.41
Viscosity Index	ISO 2909 / ASTM D2270	-	>150
Pour Point	ISO 3016 / ASTM D97	°C/°F	-45/-49
Flash Point - open cup method	ISO 2592 / ASTM D92	°C/°F	210/411
Flash Point - closed cup method	ISO 2719 / ASTM D93	°C/°F	200/392
Foam Sequence I - tendency / stability	ISO 6247 / ASTM D892	ml/ml	20/0
Water Separation @ 54°C / 129°F (40/37/3)	ISO 6614 / ASTM D1401	min	10
Air Release @ 50°C / 122°F	ISO 9120 / ASTM D3427	min	4
FZG Gear Scuffing test - A/8.3/90	ISO 14635-1	Failure Load Stage	11
Rust test - distilled water (24 hrs)	ISO 7120 / ASTM D665A	-	Pass
Rust test - synthetic seawater (24 hrs)	ISO 7120 / ASTM D665B	-	Pass
Particle Count	ISO 4406	-	15/13/10

Subject to usual manufacturing tolerances.

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