



Castrol Hyspin AWS Range

Anti-wear hydraulic oil

Description

The Castrol Hyspin AWS™ hydraulic oil range is based upon highly refined mineral oil enhanced with a stabilised zinc additive system.

Application

Hyspin AWS has been specially formulated to provide good anti-wear and thermal stability performance using the very latest additive technology. The careful blend of additives with a high quality base stock ensures that Hyspin AWS has excellent hydrolytic and oxidative stability while exhibiting a minimal tendency to produce sludge and deposits. In addition, Hyspin AWS provides corrosion protection to ferrous and yellow metal components found within a hydraulic system.

This range is designed for use in industrial hydraulic systems which require anti-wear protection. It is also suitable for other duties in which lubricants of high oxidation stability and lubrication performance are required, such as lightly loaded gears, variable speed units and bearings.

The Hyspin AWS 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 AWS is classified as follows:
 - DIN 51502 classification - HLP
 - ISO 6743/4 - Hydraulic Oils Type HM

- Hyspin AWS grades meet the requirements (for appropriate viscosity grade) of:
 - DIN 51524 Part 2
 - Cincinnati Lamb (Milacron) P 68-69-70
 - Denison (Parker Hannafin) HF-0
 - US Steel 126 & 127
 - Eaton (formerly Vickers) I-286-S & M-2950-S
 - Bosch Rexroth RE90220

Advantages

- Good thermal and oxidative stability leads to longer operating life, reduction in lubricant costs and minimises deposit formation giving a cleaner system.
- Excellent anti-wear performance gives wear protection and reduces downtime from unscheduled maintenance.
- Good filterability characteristics (including in the presence of water) enables cost savings to be made from increased filter life and reduced maintenance.
- Excellent water separation and hydrolytic stability means reduced down time through prolonged lubricant life and increased equipment reliability.

Typical Characteristics

| Name | Method | Units | AWS 10 | AWS 22 | AWS 32 | AWS 46 | AWS 68 | AWS 100 | AWS 150 |
|---------------------------|--------------------------|--------------------|---------|---------|---------|---------|---------|---------|---------|
| Product Code | | | 40471 | 40497 | 40509 | 40511 | 40524 | 40637 | 40540 |
| Density @ 15C | ISO 12185/ ASTM D4052 | g/ml | 0.87 | 0.87 | 0.88 | 0.88 | 0.88 | 0.89 | 0.89 |
| K. V @ 40°C | ISO 3104/ ASTM D445 | mm ² /s | 10 | 22 | 32 | 46 | 68 | 100 | 150 |
| K.V @ 100°C | ISO 3104/ ASTM D445 | mm ² /s | 2.6 | 4.3 | 5.3 | 6.7 | 8.6 | 11.1 | 14.5 |
| Viscosity Index | ISO 2909/ ASTM 2270 | - | - | >95 | >95 | >95 | >95 | >95 | >95 |
| Pour Point | ISO 3016/ ASTM D97 | °C/°F | -30/-22 | -30/-22 | -30/-22 | -27/-17 | -24/-11 | -21/-6 | -18/-04 |
| Flash Point, COC | ISO 2592/ ASTM D92 | °C/°F | 180/355 | 205/401 | 210/411 | 215/419 | 226/440 | 226/440 | 232/450 |
| Flash Point, PMCC | ISO 2719/ ASTM D93 | °C | 160 | 170 | 200 | 200 | 220 | 220 | 220 |
| Foam Seq I, | ISO 6247/ ASTM D892 | mls | 10/0 | 10/0 | 10/0 | 10/0 | 10/0 | 10/0 | 10/0 |
| Water Separability @ 54°C | ISO 6614/ ASTM D1401 | Mins | 5 | 10 | 15 | 15 | 15 | - | - |
| Water Separability @ 82°C | ISO 6614/ ASTM D1401 | Mins | - | - | - | - | - | 15 | 20 |
| Air Release value | ISO 9120/ ASTM D3427 | Mins | 4 | 4 | 4 | 8 | 8 | 12 | 18 |

| Name | Method | Units | AWS 10 | AWS 22 | AWS 32 | AWS 46 | AWS 68 | AWS 100 | AWS 150 |
|--|---------------------------|-------|--------|--------|--------|--------|--------|---------|---------|
| FZG fail stage (A8.3/90) | ISO 14635-17 DIN 51354 | - | - | - | 11 | 12 | 12 | 12 | 12 |
| Rust Test (24 hrs distilled water) | ISO 7210/ ASTM D665A | Pass | Pass | Pass | Pass | Pass | Pass | Pass | Pass |
| Rust Test (24 hrs Synthetic sea water) | ISO 7210/ ASTM D665B | Pass | Pass | Pass | Pass | Pass | Pass | Pass | Pass |

Subject to usual manufacturing tolerances.

Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and damage to drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing condition

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