Product Data

# Hyspin HLP-AF Range

Anti-wear hydraulic oil

## Description

The Castrol Hyspin™ HLP-AF range of lubricants are mineral hydraulic fluids formulated without zinc containing additives.

## Application

Castrol Hyspin HLP-AF is primarily for use in hydraulic equipment, but is suitable for other duties in which lubricants with good oxidation stability and lubrication performance are required. The quality of its base oils and additives permits the application of Hyspin HLP-AF in lightly loaded gears and for use as circulating oil in applications where a rust and oxidation inhibited oil is required.
The 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 HLP-AF is classified as follows:
DIN 51502 classification - HLP
ISO 6743/4 - Hydraulic Oils Type HM

Hyspin HLP-AF meets the requirements (for appropriate viscosity grade) of:
DIN 51524 part 2
ASTM D6158 HM
ISO 11158 HM
GB 111118.1 L-HM Hydraulic Oil (Conventional)

## Advantages

- Good wear and corrosion protection
- Good thermal and oxidative stability
- High filterability characteristics
- Good water separation

## Typical Characteristics

| Name | Method | Units | HLP-AF 32 | HLP-AF 46 | HLP-AF 68 | HLP-AF 100 | HLP-AF 150 |
|---|---|---|---|---|---|---|---|
| Density @ 15°C / 59°F | ISO 12185 / ASTM D4052 / DIN 51757-3 | kg/m³ | 873 | 881 | 883 | 883 | 885 |
| Kinematic Viscosity @ 40°C / 104°F | (DIN EN) ISO 3104 / ASTM D445 | mm²/s | 32 | 46 | 68 | 100 | 150 |
| Kinematic Viscosity @ 100°C / 212°F | (DIN EN) ISO 3104 / ASTM D445 | mm²/s | 5.3 | 6.6 | 8.7 | 11.1 | 14.7 |
| Viscosity Index | (DIN) ISO 2909 / ASTM D2270 | - | 94 | 93 | 96 | 96 | 96 |
| Pour Point | (DIN) ISO 3016 / ASTM D97 | °C/°F | -27/-17 | -24/-11 | -24/-11 | -21/-6 | -15/0 |
| Foam Sequence I - tendency / stability | ISO 6247 / ASTM D882 | ml/ml | 30/0 | 30/0 | 30/0 | 30/0 | 30/0 |
| Flash Point - open cup method | ISO 2592 / ASTM D92 | °C/°F | 210/410 | 225/437 | 230/446 | 230/446 | 246/475 |
| Water Separation @ 54°C / 129°F (40/37/3) | (DIN) ISO 6614 / ASTM D1401 | minutes | 10 | 15 | 10 | - | - |
| Water Separation @ 82°C / 180°F (40/37/3) | (DIN) ISO 6614 / ASTM D1401 | minutes | - | - | - | 15 | 20 |
| Air Release @ 50°C / 122°F | (DIN) ISO 9120 / ASTM D342 | minutes | 4 | 6 | 8 | 12 | 18 |
| Copper corrosion 3h @ 100°C / 212°F | (DIN EN) ISO 2160 / ASTM D 130 | Class | 1 | 1 | 1 | 1 | 1 |
| Rust test - distilled w ater (24 hrs) | (DIN) ISO 7120 / ASTM D665A | Rating | Pass | Pass | Pass | Pass | Pass |
| Water content (%) | (DIN EN) ISO 12937 / ASTM D95 | %w t | Trace, max | | | | |
| FZG Gear Scuffing test - A/ 8.3/90 | (DIN) ISO 14635-1 | Failure Load Stage | >11 | | | | |

Subject to usual manufacturing tolerances.


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