Product Data

Castrol Alphasyn EP

Synthetic Gear Oils

Description

The Castrol Alphasyn™ EP gear oil range of high quality synthetic lubricants are based on poly-alphaolefin (PAO) fluids and sulphur/phosphorus Extreme Pressure (EP) additive technology providing good thermal stability and high load carrying capacity.

Application

The Alphasyn EP range have been formulated for use in all types of enclosed gears including heavy and shock-loaded gears and bearings where EP properties are required.
They are suitable for use in gear boxes where micro-pitting resistance is required and for a wide range of applications in extreme environments, for example mining and quarrying, marine applications and paper production.
The use of a PAO base stock provides an inherently high Viscosity Index (VI) and low pour points making these products suitable for use over a wide temperature range.

The Alphasyn EP range is fully compatible with nitrile, silicone and fluropolymer seal materials.

Alphasyn EP is classified as follows:
DIN Classification is CLP-HC

The Alphasyn EP range meets the requirements of:

- DIN 51517 Part 3
- AGMA 9005 - F16
- AIST 224
- David Brown S1.53.101 Type E
- Flender Gear Units Rev 16.2 for Helical-, Bevel- and Planetary Gear Units ISO VG 150 - 680

Advantages

- Full EP performance gives protection of gears against wear and shock loading, including protection against micro-pitting.
- Good thermal and oxidative stability provides reliable operation and extended operating life when compared to mineral oil based products.
- High corrosion protection for gears.
- Inherently high Viscosity Index (VI) makes the product suitable for operations over a wide temperature range.
- Rapid air release and good performance in the Flender Foam Test prevents foaming and bearing damage.
- Good water separation and demulsification characteristics means reduced down time through prolonged lubricant life and increased equipment reliability.
- PAO based lubricant provides good compatibility with seals, paints and mineral oil based lubricants.

Typical Characteristics

Name	Method	Units	Alphasyn EP 150	Alphasyn EP 220	Alphasyn EP 320	Alphasyn EP 460	Alphasyn EP 680
Density @ 15°C/ 59°F	ISO 12185 / ASTM D4052	kg/m³	860	860	860	860	870
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm²/s	151	223	326	455	671
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm²/s	19.8	26.4	35.5	46.5	63.4
Viscosity Index	ISO 2909 / ASTM D2270	-	150	152	155	161	167
Pour Point	ISO 3016 / ASTM D97	°C / °F	-45/-49	-45/-49	-45/-49	-45/-49	-42/-44
Flash point, open cup method	ISO 2592 / ASTM D92	°C / °F	242/468	244/471	240/464	242/468	254/489
Foam Sequence I - tendency / stability	ISO 6247 / ASTM D892	ml	0/0	20/0	20/0	20/0	20/0
Rust Test - synthetic seawater (24h)	ISO 7120 / ASTM D665B	Rating	Pass	Pass	Pass	Pass	Pass
FZG Gear Scuffing Test - A/8.3/90	ISO 14635-1	Failure Load Stage	>12	>14	>14*	>14*	>14*
FZG Gear Scuffing Test - A/16.6/90	ISO 14635-1 (modified)	Failure Load Stage	>12	>14	>14*	>14*	>14*
FZG Micropitting test @ 90°C/194°F	FVA 54-7	Failure Load Stage / Micropitting Rating	10 (High)	10 (High)	10 (High)*	10 (High)*	10 (High)*
FE-8 Bearing Wear test (roller weight loss)	DIN 51819-3	mg	<5	<5	<5*	<5*	<5*

Subject to usual manufacturing tolerances. *read across from lower viscosity

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