



## 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.

### Advantages

- Full EP performance\* gives maximum 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 220	Alphasyn EP 320	Alphasyn EP 460
Density @ 15°C/59°F	ISO 12185 / ASTM D4052	kg/m <sup>3</sup>	860	860	860
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	223	326	455
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	26.4	35.5	46.5
Viscosity Index	ISO 2909 / ASTM D2270	-	153	155	159
Pour Point	ISO 3016 / ASTM D97	°C / °F	-45/-49	-42/-44	-39/-38
Flash point, open cup method	ISO 2592 / ASTM D92	°C / °F	240/464	242/468	248/478
Foam Sequence I - tendency / stability	ISO 6247 / ASTM D892	ml	20/0	20/0	20/0
Rust Test - synthetic seawater (24h)	ISO 7120 / ASTM D665B	Rating	Pass	Pass	Pass
FZG Gear Scuffing Test - A/ 8.3/90	ISO 14635-1	Failure Load Stage	>14	>14*	>14*
FZG Gear Scuffing Test - A/ 16.6/90	ISO 14635-1 (modified)	Failure Load Stage	>14	>14*	>14*
FZG Micropitting test @ 90°C/ 194°F	FVA 54-7	Failure Load Stage / Micropitting Rating	10 (High)	10 (High)*	10 (High)*
FE-8 Bearing Wear test (roller weight loss)	DIN 51819-3	mg	<5	<5*	<5*

\* ISO 320 grade achieved FZG >14 rating under A16.6./90 (double speed) test conditions. Subject to usual manufacturing tolerances. It is not recommended filtering the finished fluid through a filter which is <5microns, as this has potential to filter out the antifoam.

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