



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 sulfur/phosphorus extreme pressure (EP) additive technology providing good thermal stability and high load carrying capacity.

Application

The Alphasyn EP range has 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

The Alphasyn EP range meets the requirements of:

- DIN 51517 Part 3
- AGMA 9005 - D94
- US Steel 224
- David Brown Type E
- Hansen Transmissions
- Flender
- Lohmann & Stofferfoht

Advantages

- Full EP performance provides excellent 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	EP 150	EP 220	EP 320	EP 460	EP 680
Density @ 15°C, Relative	ASTM D 4052	g/ml	0.86	0.86	0.86	0.87	0.87
Viscosity, Kinematic 40C	ASTM D 445	mm ² /s	150	220	320	460	680
Viscosity, Kinematic 100C	ASTM D 445	mm ² /s	18	25	33	45	57
Viscosity Index	ASTM D 2270	-	140	140	140	140	140
Pour Point	ASTM D 97	°C / °F	-48 / -54	-42 / -44	-36 / -33	-36 / -33	-33 / -27
Flash Point, PMCC	ASTM D 93	°C / °F	220 / 428	220 / 428	230 / 446	230 / 446	240 / 464
Foam Sequence I, Tendency/Stability	ASTM D 892	ml	0/0	0/0	0/0	0/0	0 / 0
Rust Test, Procedure B	ASTM D 665B	-	Pass	Pass	Pass	Pass	Pass
Timken OK Load	ASTM D 2782	lb	85	90	90	>90	>90
FZG Gear Failure Load Stage (A/8.3/90)	DIN 51354	-	-	-	>14	>14	>14
FZG Gear Failure Load Stage (A/16.6/90)*	DIN 51354	-	>12	>12	>12	>12	>12

* ISO 320 grade achieved FZG >14 rating under A16.6./90 (double speed) test conditions. Subject to usual manufacturing tolerances.

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