



Product Data

Castrol Alphasyn HTX Range

High Temperature Synthetic Gear Lubricant

Description

The Alphasyn™ HTX gear oil range of synthetic lubricants are based on polyalpha-olefin (PAO) fluids and sulphur/phosphorus antiwear additive technology providing outstanding thermal stability and good load carrying capacity.

Application

The Alphasyn HTX range has been formulated for use in most types of light to medium duty enclosed gear systems but should not be used for heavy / shock loaded systems. Alphasyn HTX is also suitable for bearings and circulatory systems operating at high temperatures.

The outstanding oxidation and thermal stability of Alphasyn HTX allows oil change intervals to be extended in circumstances where extreme temperatures would result in a short service life if using conventional mineral oil based lubricants. This allows demonstrable savings to be made by reducing the level of maintenance required.

All products in the Alphasyn HTX range have very low pour points and excellent viscosity/temperature characteristics, allowing their use in low temperature as well as high temperature applications.

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

Alphasyn HTX is classified as follows:

DIN Classification is CLP

Alphasyn HTX grades meet the requirements of:

DIN 51517 Part 3

Advantages

- Good thermal and oxidative stability provides reliable operation and extended operating life when compared to mineral oil based products.
- Inherently high viscosity index makes the product suitable for operations operating over a wide temperature range.
- Good antiwear and load carrying abilities including FZG > 12 rating under A16.6/110 test conditions eliminates wear and prolongs gear tooth life.
- 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	HTX 68	HTX 150	HTX 220	HTX 320	HTX 460	HTX 1000
Density at 15°C	ISO 12185 / ASTM D4052	kg/m ³	860	870	870	870	870	880
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm ² /s	68	157	227	326	471	990
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm ² /s	10.8	20	30	40	54	90
Viscosity Index	ISO 2909 / ASTM D2270	-	150	150	173	177	180	178
Pour Point	ISO 3016 / ASTM D97	°C	-51	-51	-51	-48	-48	-36
Flash Point - open cup method	ISO 2592 / ASTM D92	°C	220	268	268	262	286	284
Foam Sequence I	ISO 6247 / ASTM D892	mls/mls	0/0	0/0	0/0	0/0	0/0	0/0
Water Separation @ 54°C / 129°F (40/37/3)	ISO 6614 / ASTM D1401	Minutes	9	-	-	-	-	-
Water Separation @ 82°C / 180°F (40/37/3)	ISO 6614 / ASTM D1401	Minutes	-	9	12	17	22	45
Rust Test (24hrs Distilled Water)	ISO 7210 / ASTM D665A	Rating	Pass	Pass	Pass	Pass	Pass	Pass
FZG Gear Scuffing test - A/ 16.6/110	ISO 14635-1	Failure Load Stage	-	-	>12	>12*	>12*	>12*
FZG Gear Scuffing test - A/ 8.3/90	ISO 14635-1	Failure Load Stage	-	>14	>14*	>14*	>14*	>14*
Rust Test (24hrs Distilled Water)		Rating	Pass	Pass	Pass	Pass	Pass	Pass

Subject to usual manufacturing tolerances. * Read across from lower viscosity grade.

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