Product Data Sheet

Alphasyn PG

Synthetic gear oils

Description

The Castrol Alphasyn™ PG gear oil range of synthetic lubricants are based on polyalkyleneglycol (PAG) fluids enhanced with antioxidants, rust inhibitors and Extreme Pressure (EP) additives of high thermal stability.

Application

Alphasyn PG gear oils are primarily intended for use in worm reduction gear boxes, where the low coefficient of friction of the PAG base fluid improves efficiency and consequently reduces power consumption and operating temperatures. This is particularly important in applications where sliding contact is high. The use of a PAG base stock provides inherently high Viscosity Index (VI) and low pour points making these products suitable for use over a wide temperature range. Alphasyn PG meets the requirements of most OEM's that allow the use of PAG based gear oils.

Advantages

- Low coefficient of friction reduces energy consumption and lowers operating temperatures, this leads to longer oil life.
- Good thermal and oxidative stability provides reliable operation and extended operating life when compared to mineral oil based products.
- Inherently high VI makes the product suitable for operations over a wide temperature range.
- High load carrying capacity and good wear protection reduces maintenance.

Typical Characteristics

Name	Method	Unit	PG 150	PG 220	PG 320	PG 460
Density @ 15°C	ASTM D4052	kg/m³	1050	1060	1060	1060
Kinematic Viscosity @ 40°C	ASTM D 445	mm²/s	150	220	320	460
Kinematic Viscosity @ 100°C	ASTM D 445	mm²/s	28	40	56	80
Viscosity Index	ASTM D2270	-	225	235	240	255
Pour Point	ASTM D97	°C	-39	-39	-36	-36
Flash Point - closed cup method	ASTM D93	°C	210	210	210	210
Foam Sequence I - tendency / stability	ASTM D892	ml/ml	10/0	10/0	10/0	10/0
Rust test - distilled water (24 hrs)	ASTM D665A	-	Pass	Pass	Pass	Pass
Timken OK Load test	ASTM D2782	kg	29.5	31.8	36.3	38.6
FZG Gear Scuffing test - A/8.3/90	ISO 14635-1	Failure Load Stage	-	-	>12	>12

Subject to usual manufacturing tolerances.

Additional Information

Normal industrial paints are not compatible with these lubricants. Gearboxes should be left unpainted internally, or alternatively should be painted with two component coatings such as epoxy resins. Care must be taken that seal materials are compatible with these lubricants. The recommended materials are nitrile rubber (NBR), silicone (VMQ), fluoro-silicone rubber (FMQ), and fluoroelastomers (FKM). Incompatible materials are likely to shrink or swell, thus causing either severe leakage or seizure of the seal. These products are not miscible with mineral oils.

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