



Product Data

Castrol Optigear Synthetic X 320 WTO

Synthetic Gear Oils

Description

Castrol Optigear™ Synthetic X 320 WTO is based on synthetic hydrocarbons and a special plastic deformation (PD) and surface improvement additive package.

The additive package, when activated by high specific loads and corresponding temperatures, helps to equalize surface roughness without creating abrasion leading to the surface improvement (plastic deformation).

Optigear Synthetic X 320 WTO is a CLP-HC gear oil (according to DIN 51502) and exceeds the minimum requirements according to DIN 51517 (2003), part 3, CLP gear oils.

Applications

Optigear Synthetic X 320 WTO may be used in spur gear, bevel gears or planetary gear units and in heavy loaded gear units, e.g. wind turbine main gears. It is also suitable for the lubrication of oil-lubricated rolling bearings.

Depending on the specific application, Optigear Synthetic X 320 WTO may be used in an operating temperature range from -30 °C to +95 °C.

Advantages

- High load carrying capability
- Superior micropitting protection
- Excellent friction reduction
- Good filtration properties
- Excellent bearing lubrication suitability

Additional Information

Optigear Synthetic X 320 WTO gear oil can be applied by an oil can, oil cup reservoir, splash, spray mist or by automatic dispensing equipment and central or circulation systems.

It is compatible with mineral oils and esters. This means that traces up to 3% of previous oil in the gear case after draining will not pose any problems. However, the beneficial effects of the special PD additives are reduced when mixed with other gear oils

To achieve an optimum lifetime of your elastomer seals, we recommend the use of Viton (FKM) based materials.

Typical Technical Characteristics

Test	Method	Units	X 320
ISO Viscosity Grade	-	-	320
Density @ 15.6°C	ASTM D 4052	g/ml	0.854
Kinematic Viscosity @ 40°C @ 100°C	ASTM D 445	cSt	325 40.8
Viscosity Index	ASTM D 2270	-	179
Flash Point, COC	ASTM D 92	°F °C	> 482 > 250
Pour Point	ASTM D 97	°F °C	-45 -49
Rust Test – Procedure A (24 hrs, distilled water)	ASTM D 665A	-	Pass
Copper Corrosion (3 hrs @ 100°C)	ASTM D 130	-	1a
FE8 wear test (81212MPB-7.5/100-80) Roller wear Cage wear	DIN 51819-3	mg mg	< 10 < 10
FE8 wear test (81212TVPB-7.5/100-70 800 hrs) Wear of rollers	DIN 51819-3 (modified)	mg	< 20
FZG Gear Scuffing Test (A/8.3/90) Failure Load Stage	DIN 51354	-	>14
FZG Micropitting Test @ 60°C @ 90°C	FVA 54-7	-	> 10, GFT-Level High > 10, GFT-Level High
Foam Sequence I	ASTM D 892	ml	< 100 / 10

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