Product Data

Optigear Synthetic RO

High performance gear oil

Description

Optigear™ Synthetic RO range are high-performance, synthetic oils developed especially for gears used in rail traffic and mechanical engineering applications (such as in Robots). The properties of Optigear Synthetic RO mean it can be used in extreme climate conditions and for long-term use.

Optigear Synthetic RO is formulated with Castrol's Microflux Trans (MFT) Plastic Deformation (PD) additive. MFT PD helps improve performance when operating temperature and loads reach a certain level of activation energy, by enabling the micro-smoothing of surface roughness without increasing wear. The smoothed surface delivers optimum wear protection and an extremely low coefficient of friction, especially in applications which experience extreme pressure, shock loads, vibrations or low speeds. MFT PD helps to protect against scuffing and shock loading, while maintaining a high load carrying capacity, and can help prevent the progression of micro-pitting in pre-damaged gears.

Application

All types of spur gear teeth, also under difficult load conditions.
Bevel gear units, including those with a large offset (hypoid) and heavy alternating loads.
All types of roller bearings, with heavy loads and low and high temperatures. Can be used in a very broad range of temperatures (no preheating needed in winter).
Dip lubrication at high numbers of revolutions, as well as injection and oil mist lubrication.
No influence on usual sealing materials or paint in gear casings.
Filtering (mechanical) does not result in any additive loss.
Not for synchronised gears or limited slip differentials due to low friction coefficients.

Advantages

- High pressure absorption and excellent wear protection[1]
- Safe bearing lubrication in high- and low-temperature ranges
- High seizure load-bearing capacity[1]
- Above-average application times – even under difficult conditions[1]
- Reduction of friction coefficient and operating temperature[1]
- Good corrosion protection[1]
- Long service life for gears[1]
- Exceeds requirements regarding wear protection in line with DIN 51517, part 3

[1]When compared to conventional gear oils.

Typical Characteristics

Name	Method	Units	RO 32	RO 150	RO 220
Appearance	Visual	-	blue green	blue green	blue green
Density @ 15°C / 59°F	ASTM D 4052 DIN 51757	Kg/m³	850	868	875
Viscosity, Kinematic @ 40°C / 104°F	ASTM D 445 ISO 3104	mm²/s	32	150	200
Viscosity, Kinematic @ 100°C / 212°F	ASTM D 445 ISO 3104	mm²/s	6.0	18.0	22.2
Viscosity Index	ASTM D 2270 ISO 2909	-	125	130	134
Pour Point	ASTM D 97 DIN-ISO 3016	°C / °F	- 45 / -49	- 45 / -49	- 45 / -49
Copper Corrosion (24hrs @ 100°C / 212°F)	ASTM D 130 DIN EN ISO 2160	-	1	1	1
Flash Point - open cup method	ASTM D 92 DIN EN ISO 2592	°C / °F	210 / 410	210 / 410	210 / 410

Subject to usual manufacturing tolerances.

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