



Product Data

Optigear Synthetic CT

High Performance Synthetic Gear Oil

Description

Castrol Optigear™ Synthetic CT is a synthetic polyalphaolefin (PAO) gear oil designed to perform in the most challenging of applications. Its high viscosity index coupled with advanced gear oil additives make it an ideal lubricant for gear boxes where large changes in temperature and humidity can not be controlled.

Application

Optigear Synthetic CT has been formulated specifically for use in wind turbine gear box applications but it can be used for all types of enclosed gears – including heavy and shock-loaded gears and bearings where EP properties are required. It is suitable for use in gear boxes where micro-pitting resistance is required and for a wide range of applications in extreme environments including mining and quarrying, marine applications, and paper production.

Optigear Synthetic CT is fully compatible with nitrile, silicone and fluoropolymer seal materials.

Optigear Synthetic CT is classified as follows: DIN Classification is CLP

Optigear Synthetic CT meets the requirements of:

- DIN 51517 Part 3
- AGMA 9005 - D94
- AIST 224
- David Brown Type E
- Winergy (Flender)

Advantages

- Maximum protection of gears against wear and shock loading, including protection against micro-pitting.
- Excellent 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 makes the product suitable for operations over a wide temperature range.
- Good water separation and demulsification characteristics reduce down time through prolonged lubricant life and increased equipment reliability.
- PAO based lubricant that provides good compatibility with seals, paints, and mineral oil based lubricants.

Typical Characteristics

Test	Method	Units	Optigear Synthetic CT
ISO Viscosity Grade	-	-	320
Appearance	Visual	-	Clear & Bright
Density @ 15°C / 59°F	ASTM D 4052	g/ml	0.85
Kinematic Viscosity @ 40°C	ASTM D 445	mm ² /s	335
Kinematic Viscosity @ 100°C	ASTM D 445	mm ² /s	40.4
Viscosity Index	ASTM D 2270	-	174
Pour Point	ASTM D 97	°C / °F	-45 / -49
Flash Point, COC	ASTM D 92	°C / °F	>250 / >482
Foam Sequence I - tendency / stability	ASTM D 892	ml / ml	0 / 0
Water Separation @ 82°C / 180 °F (40/37/3)	ASTM D 1401	min	9
Rust Test - Distilled water (24 hours)	ASTM D 665A	-	Pass
Rust Test - Synthetic seawater (24 hours)	ASTM D 665B	-	Pass
Rust Test - SKF Emcor - Distilled water	ASTM D 6138	Rating	0
Rust Test - SKF Emcor - Synthetic seawater	ASTM D 6138	Rating	1
Copper Corrosion (3 hrs @ 121°C / 250°F)	ASTM D 130	Rating	1
Timken OK Load Test	ASTM D 2782	kg / lb	39 / 85
FZG Gear Scuffing Test - A / 8.3 / 90	ISO 14635-1	Failure Load Stage	>14
FZG Gear Scuffing Test - A / 16.6 / 90	ISO 14635-1 (mod)	Failure Load Stage	>14
FZG Micropitting Test @ 90°C / 194°F	FVA 54-7	Failure Load Stage (Micropitting Rating)	10 (high)

Subject to usual manufacturing tolerances.

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12 Jan 2018

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