

Optigear Synthetic A

High performance fully synthetic gear oils

Description

Optigear™ Synthetic A are fully synthetic high performance gear oils with MICROFLUX TRANS additives. They offer optimum wear protection under very extreme thermal loads and operating conditions such as vibrations, oscillating motions and shock loads. The wide range of temperature - especially in case of low starting temperatures - and the high load carrying capacity are special assets of these industrial gear oils. Thermally and mechanically stable polyalphaolefin and the MICROFLUX TRANS additive combination adjust themselves to the changing operating conditions and actively prevent wear.

Application

- For especially highly loaded industrial gears - in case of great changes in temperature and extreme loads.
- For wind power stations, conveyor belts, crane control gears, lifts, rolling mills etc.
- For highly loaded eccentrics, gear couplings, chain drives, robot drives and joints as well as positive power transmissions.
- For all types of rolling and sliding bearings, especially for tapered roller bearings in extruders, shaking screens, vibrators or for spindle presses.
- For transport systems operated during winter.
- Especially suited for arctic countries such as Canada, North America and Scandinavia.

Optigear Synthetic A are CLP-HC gear oils (DIN 51502) and exceed minimum requirements according to DIN 51517 part 3.

Advantages

- Good viscosity/temperature behavior, wide range of operating temperature.
- Excellent low-temperature behavior, easy starting, good fluidity at extremely low temperatures.
- Optimum wear protection - smoothing of pitting and scoring.
- Especially low coefficient of friction leading to reduced friction and energy costs, lowering of oil temperatures.
- Significantly extended oil change intervals, reduced maintenance costs.
- Shear-stable
- High corrosion protection, compatible with non-ferrous metals.
- Compatible with conventional paints and sealing materials.

Typical Characteristics

Name	Method	Units	A 220	A 320	A 460
Appearance	Visual	-	Dark brown	Dark brown	Dark brown
ISO Viscosity Group	-	-	220	320	460
Density @ 15°C / 59°F	ISO 12185 / ASTM D4052	kg/m ³	870	870	860
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D 445	mm ² /s	210	330	463.2
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D 445	mm ² /s	23.5	33	44.5
Viscosity Index	ISO 2909 / ASTM D2270	-	140	140	151
Pour Point	ISO 3016 / ASTM D97	°C/°F	-36/-32.8	-36/-32.8	-30/-22
Flash Point - open cup method	ISO 2592 / ASTM D92	°C/°F	220/428	220/428	205/399
Copper corrosion (3 hrs@100°C/212°F)	ISO 2160 / ASTM D130	Rating	1a	1a	1a
SRV Friction and Wear test	ASTM D6425 / DIN 51834	coeff. of friction/ wear scar diam (mm)	0.055/0.50	0.055/ 0.50	0.055/ 0.50
FZG Gear Scuffing test - A/16.6/140	ISO 14635-1 (modified)	Failure Load Stage	>12	>12	>12
FE-8 Bearing Wear test (F.562831.01-7.5/80-80)	DIN 51819-3	roller wear (Mw50)	4.5	4.5	-
FZG Micropitting test @ 60°C/140°F	ASTM D5182 / FVA 54-7	Failure Load Stage/ Micropitting Rating	>10/High	>10/High	10/High

Subject to usual manufacturing tolerances.

Additional Information

- Observe the viscosity specified by the machine manufacturer.
- Miscible with all gear oils based on mineral oil. Maximum performance is only guaranteed if not mixed with any other product.

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