



Syncon® EP Plus Gear Oil

Syncon EP Plus Gear Oil is a premium quality, synthetic, extreme-pressure gear lubricant recommended for enclosed industrial gears and heavily loaded plain or rolling-element bearings operating under extreme-temperature conditions. It is specially formulated to have a very high viscosity index for use over a wide range of operating temperatures.

Syncon EP Plus Gear Oil is formulated with synthetic polyalphaolefin (PAO) base oils, a viscosity modifier and a non-chlorinated extreme-pressure additive package. It has outstanding oxidation resistance and thermal stability at high temperatures to help minimize deposit formation and provide long service life. It has high load-carrying capacity for protection against scuffing and wear, and protects against rust, corrosion and foaming. It has a high viscosity index and low pour point for use in equipment operating under extreme temperatures or over a very wide temperature range.

Applications

- Heavily loaded enclosed gearboxes, such as those commonly found in mine hoists and mining machinery
- Enclosed industrial gearboxes operating at very low or very high temperatures, or operating continuously at higher than normal operating temperatures
- Heavily loaded plain and rolling-element bearings operating under extreme temperatures
- Applications where the equipment manufacturer recommends a high VI synthetic EP gear oil

Syncon EP Plus Gear Oil meets the requirements of the following industry and OEM specifications:

- ANSI/AGMA Standard 9005-E02
- Cincinnati Machine P-74 (ISO VG 220), P-59 (ISO VG 320), P-35 (ISO VG 460)
- DIN 51517 Part 3, Lubricating Oils, Type CLP HC
- German Steel Industry SEB 181226, Type CLP HC
- ISO 12925-1:1996, Type L-CKC
- Joy Machinery TO-SHEP (ISO VG 320), TO-SMEP (ISO VG 220)
- U.S. Steel 224

**High VI Synthetic
PAO-Based
Extreme-Pressure
Industrial Gear
Lubricant**

Contact Information

**U.S. Customer
Service:
1-800-822-6457**

**Technical Hot Line:
1-800-766-0050**

**International
Customer Service:
+1-832-486-3363
+1-832-486-3870**

**E-mail address:
*lubricants@
conocophillips.com***

<http://lubricants.conocophillips.com>

600 N. Dairy Ashford • 2W9000 • Houston, TX 77079



Features/Benefits

- Outstanding oxidation resistance and thermal stability at high temperatures
- Outstanding low-temperature properties
- High viscosity index and low pour point for use over a wide temperature range
- Excellent extreme-pressure properties
- Protects against scuffing and wear
- Protects against rust and corrosion
- Non-chlorinated additive system
- Suitable for year-round use
- Extended service intervals compared with conventional mineral oil-based gear oils

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

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Typical Properties

ISO Grade	220	320	460
AGMA Grade	5 EP	6 EP	7 EP
Specific Gravity @ 60°F	0.870	0.871	0.879
Density, lbs/gal @ 60°F	7.25	7.26	7.33
Color, ASTM D1500	1.0	1.0	1.0
Flash Point (COC), °C (°F)	243 (469)	243 (469)	243 (469)
Pour Point, °C (°F)	-45 (-49)	-42 (-44)	-39 (-38)
Viscosity,			
cSt @ 40°C	222	320	460
cSt @ 100°C	26.5	34.7	44.6
SUS @ 100°F	1,147	1,662	2,402
SUS @ 210°F	130	169	216
Viscosity Index	153	153	151
Acid Number, ASTM D974, mg KOH/g	0.62	0.62	0.62
Copper Corrosion, ASTM D130	1a	1a	1a
Foam Test, ASTM D892	Pass	Pass	Pass
Four-Ball EP, ASTM D2783, Weld Load, kgf	250	250	250
Four-Ball Wear, ASTM D4172, Scar Diameter, mm	0.41	0.40	0.38
FZG Scuffing Test, ASTM D5182, Failure Load Stage	>12	>12	>12
Oxidation Stability, ASTM D2893,			
Viscosity Increase @ 100°C, %	5.28	5/35	5.35
Precipitation Number, ASTM D91, ml	0.001	0.001	0.001
Rust Test, ASTM D665 A&B	Pass	Pass	Pass
Timken OK Load, ASTM D2782, lb	>60	>60	>60

Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3.conocophillips.com/NetMSDS>.

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