



## Syncon® EP Gear Oil

Syncon EP 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 particularly recommended for use in applications where operating conditions may be unfavorable or too severe for conventional mineral oil-based gear lubricants.

Syncon EP Gear Oil is formulated with synthetic polyalphaolefin (PAO) base oils 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.

### **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 synthetic EP gear oil

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

- ANSI/AGMA Standard 9005-E02
- Cincinnati Machine P-77 (ISO VG 150), P-74 (ISO VG 220), P-59 (ISO VG 320), P-35 (ISO VG 460), P-34 (ISO VG 680)
- DIN 51517 Part 3, Lubricating Oils, Type CLP HC
- German Steel Industry Specification 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

### **Features/Benefits**

- Outstanding oxidation resistance and thermal stability at high temperatures

**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:  
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conoco



- Outstanding low-temperature properties
- High load-carrying capacity
- 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

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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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## Syncon® EP Gear Oil

### Typical Properties

ISO Grade	150	220	320	460	680
AGMA Grade	4 EP	5 EP	6 EP	7 EP	8 EP
Specific Gravity @ 60°F	0.868	0.872	0.877	0.881	0.885
Density, lbs/gal @ 60°F	7.24	7.27	7.31	7.34	7.38
Color, ASTM D1500	1.0	1.0	1.0	1.0	1.0
Flash Point (COC), °C (°F)	238 (460)	238 (460)	238 (460)	238 (460)	238 (460)
Pour Point, °C (°F)	-43 (-45)	-37 (-35)	-34 (-30)	-32 (-25)	-26 (15)
Viscosity,					
cSt @ 40°C	150	220	320	460	680
cSt @ 100°C	18.0	23.0	29.0	37.0	48.0
SUS @ 100°F	777	1,148	1,662	2,432	3,620
SUS @ 210°F	92.0	114	142	180	230
Viscosity Index	133	128	123	122	121
Acid Number, ASTM D974, mg KOH/g	0.35	0.35	0.35	0.35	0.35
Copper Corrosion, ASTM D130	1b	1b	1b	1b	1b
Foam Test, ASTM D892	Pass	Pass	Pass	Pass	Pass
Four-Ball EP, ASTM D2783, Weld Load, kgf	250	250	250	250	250
Four-Ball Wear, ASTM D4172,					
Scar Diameter, mm	0.38	0.38	0.38	0.38	0.38
FZG Scuffing Test, ASTM D5182,					
Failure Load Stage	>12	>12	>12	>12	>12
Oxidation Stability, ASTM D2893,					
Viscosity Increase @ 100°C, %	<4	<4	<4	<4	<4
Precipitation Number, ASTM D91, ml	Trace	Trace	Trace	Trace	Trace
Rust Test, ASTM D665 A&B	Pass	Pass	Pass	Pass	Pass
Timken OK Load, ASTM D2782, lb	>60	>60	>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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