



Syncon® Premium EP Gear Oil

Phillips 66® Syncon Premium EP Gear Oil is a premium quality, synthetic, extreme-pressure gear lubricant specifically recommended for lubricating the heavily loaded gears and rolling-element bearings in motorized wheel gearboxes found on mining haul trucks. It also is recommended for lubrication of enclosed industrial gear drives operating at extreme temperatures.

Syncon Premium EP Gear Oil is formulated with synthetic polyalphaolefin (PAO) base oils, a non-chlorinated extreme-pressure additive and select inhibitors. It has outstanding oxidation resistance and thermal stability at high temperatures to minimize deposit formation and provide long service life. It has high load-carrying capacity to protect against scuffing and wear, protects against rust and corrosion, and is resistant to excessive foaming that can interfere with proper lubrication.

Syncon Premium EP Gear Oil meets the performance requirements of General Electric Transportation Systems Specification D50E27. It is approved for use in GE AC and DC electric motorized wheel gearboxes found on Komatsu, Terex, Euclid and Hitachi mining haul trucks.

Applications

- GE motorized wheels found on mining haul trucks
- Enclosed industrial gear drives operating at very high or very low temperatures, or operating continuously at higher than normal operating temperatures ⁽¹⁾
- Heavily loaded plain and rolling-element bearings operating at extreme temperatures
- Applications where the equipment manufacturer recommends a synthetic extreme-pressure gear oil

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

- ANSI/AGMA Standard 9005-E02, Anti-Scuff/Anti-Wear (EP) Oils
- DIN 51517 Part 3, Lubricating Oils, Type CLP HC
- GE Specification D50E27 (approved)
- German Steel Industry SEB 181226, Type CLP HC
- ISO 12925-1:1996, Type L-CKC
- Joy Machinery Specification TO-SHEP (ISO VG 320)
- U.S. Steel 224

⁽¹⁾Note: Syncon Premium EP Gear Oil is not recommended for use in worm gear drives with bronze-on-steel gears, or in automotive differentials with hypoid gears.

**Synthetic PAO-
Based Extreme-
Pressure Gear
Lubricant for
GE Motorized
Wheels**

**KEEPING THE
WORLD
RUNNING
SMOOTHLY.**





Features/Benefits

- Outstanding oxidation resistance and thermal stability at high temperatures
- 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 to conventional mineral oil-based gear oils

Syncon® Premium EP Gear Oil

Typical Properties		
ISO Grade	320	680
AGMA Grade	6 EP	8 EP
Specific Gravity @ 60°F	0.877	0.885
Density, lbs/gal @ 60°F	7.30	7.37
Color, ASTM D1500	1.0	1.0
Flash Point (COC), °C (°F)	238 (460)	238 (460)
Pour Point, °C (°F)	-34 (-30)	-26 (-15)
Viscosity		
cSt @ 40°C	320	680
cSt @ 100°C	29.0	51.6
SUS @ 100°F	1,682	3,601
SUS @ 210°F	142	250
Viscosity Index	123	132
Acid Number, ASTM D974, mg KOH/g	0.40	0.40
Copper Corrosion, ASTM D130, 48 hrs @ 80°C	1b	1b
Four-Ball EP, ASTM D2783, Weld Load, kgf	250	250
Four-Ball Wear Test, ASTM D4172, Scar Diameter, mm	0.36	0.38
FZG Scuffing Test, ASTM D5182, Failure Load Stage	>12	>12
Oxidation Stability, ASTM D2893B, Viscosity Increase @ 121°C, %	<4	<4
Precipitation Number, ASTM D91, mL	Trace	Trace
Rust Test, ASTM D665 A&B	Pass	Pass
Timken OK Load, ASTM D2782, lb	>60	>60

Health & Safety Information

For recommendations on safe handling and use of this product, please refer to the Safety Data Sheet via <http://www.phillips66.com/EN/products/Pages/MSDS.aspx>.