



## PHILSYN® MEP-EL Gear Oil

PHILSYN MEP-EL Gear Oils are premium quality, full synthetic, extreme-pressure (EP) gear lubricants with advanced micropitting protection. PHILSYN MEP-EL Gear Oils are specifically formulated for superior protection of the heavily loaded gears and rolling-element bearings in modern industrial gearboxes and motorized off-highway wheel-drive gearboxes found on mining haul trucks.

PHILSYN MEP-EL Gear Oils are formulated with synthetic polyalphaolefin (PAO) base oils and a product specific, proprietary additive system to combat traditional wear modes and provide superior protection against micropitting common in modern heavily loaded gearboxes using case hardened gear sets. The PAO base oil is supported with select antioxidants to provide outstanding oxidation resistance and thermal stability minimizing deposit formation and providing long service life. The high viscosity index allows for operation over a wide temperature range and improved cold weather startup. PHILSYN MEP-EL Gear Oils are formulated with select, premium, inhibitors to protect against rust and corrosion even in the presence of salt water while eliminating excessive foam that can interfere with proper lubrication.

### Applications

- Motorized wheel gearboxes found on mining haul trucks
- Enclosed industrial gear drives operating at extreme ambient temperatures, or operating continuously at higher than normal operating temperatures <sup>(1)</sup>
- Heavily loaded plain and rolling-element bearings operating at extreme temperatures
- Applications where the equipment manufacturer recommends a gear oil with micropitting protection

PHILSYN MEP-EL Gear Oil is approved for GE Transportation (Wabtec) oil specification D50E35:

- Approval for D50E35E

PHILSYN MEP-EL Gear Oil meets the requirements of the following industry and OEM specifications:

- ANSI/AGMA Standard 9005-F16, Anti-Scuff/Anti-Wear (AS) Oils
- DIN 51517 Part 3, Lubricating Oils, Type CLP HC
- German Steel Industry SEB 181226, Type CLP HC
- ISO 12925-1:1996, Type L-CKC
- U.S. Steel 224

<sup>(1)</sup>Note: PHILSYN MEP-EL 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**

**Premium, EP  
Gear Lubricant**

**Off-Highway  
Wheel Motor  
Gearboxes**

**Industrial Gear  
Drive Systems**





## Features/Benefits

- Outstanding protection against micropitting
- 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
- Suitable for year-round use
- Extended service intervals compared to conventional mineral oil-based gear oils

## PHILSYN® MEP-EL Gear Oil

Typical Properties		
<b>ISO Grade</b>		<b>680</b>
Specific Gravity @ 60°F		0.867
Density, lbs/gal @ 60°F		7.22
Color	ASTM D1500	1.0
Flash Point (COC), °C (°F)	ASTM D92	233 (451)
Pour Point, °C (°F)	ASTM D5950	-42 (-44)
Viscosity	ASTM D445	
cSt @ 40°C		699
cSt @ 100°C		77.4
Viscosity Index	ASTM D2270	193
Acid Number, mg KOH/g	ASTM D664	0.60
Copper Corrosion, 3 hrs @ 121°C	ASTM D130	1B
Rust Test, ASTM D665 A&B	ASTM D665 A&B	Pass
Foaming Characteristics, Tendency/Stability, Seq. II	ASTM D892	0/0
Four-Ball EP, Load Wear Index (LWI)	ASTM D2783	61.5
Four-Ball EP, Weld Load, kgf	ASTM D2783	200
FZG Scuffing Test, Failure Load Stage	DIN 51534 A8.3/90	>14
	DIN 51534 A/16.6/90	≥14
FZG Micropitting, Passing Load Stage	FAG FVA-57/7	>10
FZG Micropitting, GFT Class		High
Bearing Wear, mg	DIN 5181-3, FAG-FE8	2
Demulsibility, Total Free Water for EP Oils, mL	ASTM D2711	83

\* Additional vis grades available upon request

## 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/SDS>.