



## Syncon® WTL

Phillips 66® Syncon WTL is a state-of-the-art, synthetic, extreme-pressure (EP) gear lubricant specifically developed for the lubrication of heavily loaded gears and rolling-element bearings in gearboxes on older and new-generation wind turbine generators.

Syncon WTL is formulated with synthetic polyalphaolefin (PAO) base oils, a non-chlorinated extreme-pressure additive package and select inhibitors. It has outstanding oxidation resistance and thermal stability at high temperatures to minimize deposit formation and provide long service life. It also has outstanding low-temperature fluidity for use over a wide temperature range. The advanced additive technology provides high load-carrying capacity for outstanding protection against scuffing and wear, as well as excellent protection against rust and corrosion.

### Applications

- Gear drives of wind turbine generators
- Enclosed industrial gear drives operating under severe-service conditions, such as heavy loads or high operating temperatures, or in extreme temperature environments
- Applications where the equipment manufacturer specifies a synthetic AGMA 6 EP gear oil (obsolete) or ISO 320 AS gear oil (new)

Syncon WTL meets or exceeds the requirements of the following industry specifications:

- ANSI/AGMA Standard 9005-F16, Anti-Scuff Lubricants (AS)
- ANSI/AGMA/AWEA 6006-A03
- DIN 51517 Part 3, Lubricating Oils, Type CLP
- ISO 12925-1, Type CKD

Syncon WTL is listed on the latest Flender T7300 approved lubricants list (02/2017) and is approved against Revision 15 of the Flender specification.

### Features/Benefits

- Outstanding performance in wind turbine generator gearboxes
- Outstanding oxidation resistance and thermal stability at high temperatures
- Very high load-carrying capacity for protection against scuffing and wear
- Excellent protection against micropitting
- Protects against rust and corrosion
- Non-chlorinated additive system
- Outstanding low-temperature properties
- High viscosity index and low pour point for year-round use

## Synthetic PAO-Based Extreme-Pressure Gear Lubricant for Wind Turbine Generators





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| Typical Properties                                 |            |
|--|------------|
| <b>ISO Grade</b>                                   | <b>320</b> |
| AGMA Grade (obsolete)                              | 6 EP       |
| AGMA Classification                                | AS         |
| Specific Gravity @ 60°F                            | 0.862      |
| Density, lbs/gal @ 60°F                            | 7.18       |
| Color, ASTM D1500                                  | 1.5        |
| Flash Point (COC), °C (°F)                         | 246 (475)  |
| Pour Point, °C (°F)                                | -45 (-49)  |
| Viscosity  |            |
| cSt @ 40°C   | 320        |
| cSt @ 100°C  | 34.9       |
| SUS @ 100°F  | 1,660      |
| SUS @ 210°F  | 170        |
| Viscosity Index                                    | 152        |
| Acid Number, ASTM D974, mg KOH/g                   | 0.83       |
| Copper Corrosion, ASTM D130, 48 hrs @ 80°C         | 1a         |
| Four-Ball EP, ASTM D2783, Weld Load, kgf           | 250        |
| Four-Ball Wear Test, ASTM D4172, Scar Diameter, mm | 0.35       |
| FZG Micropitting Test, FVA 54/11 @ 90°C            |            |
| Fail Stage   | >10        |
| Classification                                     | High       |
| FZG Scuffing Test, ASTM D5182, Failure Load Stage  | >14        |
| Rust Test, ASTM D665 A&B                           | Pass       |
| Timken OK Load, ASTM D2782, lb                     | 95         |

## 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>.