



## Syncon® Turbine Oil

Phillips 66® Syncon Turbine Oil is a premium quality, synthetic lubricant developed for use in land-based gas turbines operating over a wide temperature range, where the manufacturer calls for a synthesized hydrocarbon (SHC) or PAO based turbine oil.

Syncon Turbine Oil is formulated with synthetic polyalphaolefin (PAO) base oils and select additives to provide outstanding performance and protection in gas turbines. 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 wear. It protects system components against rust and corrosion, and is resistant to excessive foam buildup that can interfere with proper lubrication. It has a high viscosity index and a very low pour point for use over a wide temperature range.

### Applications

- Land-based gas turbines

Syncon Turbine Oil meets the requirements of the following OEM specification:

- Solar Turbines ES 9-224, Revision Y, Class I (Synthesized Hydrocarbon) Turbine Oil<sup>(1)</sup>

### Features/Benefits

- Outstanding oxidation resistance and thermal stability at high temperatures
- Excellent low-temperature fluidity
- High viscosity index and very low pour point for use over a wide temperature range
- Low volatility for lower oil consumption and less makeup oil
- Protects against wear
- Protects against rust and corrosion
- Good foam resistance
- Extended service intervals compared with conventional mineral oil-based lubricants

<sup>(1)</sup> In order to meet the ES 9-224 cleanliness specification, the fluid may need to be filtered prior to reservoir introduction

**Note:** For information on compatibility with seals, paints and plastics, please call our Technical Support Hotline.

## Synthetic PAO-Based Turbine Oil





## Syncon® Turbine Oil

Typical Properties		
ISO Grade	32	46
Specific Gravity @ 60°F	0.841	0.846
Density, lbs/gal @ 60°F	7.00	7.04
Color, ASTM D1500	0.5	0.5
Flash Point (COC), °C (°F)	254 (489)	260 (500)
Pour Point, °C (°F)	-57 (-71)	-42 (-44)
Viscosity		
cSt @ 40°C	32.0	42.4
cSt @ 100°C	6.0	7.5
SUS @ 100°F	164	197.7
SUS @ 210°F	46.3	50.8
Viscosity Index	136	145
Acid Number, ASTM D974, mg KOH/g	0.36	0.42
Copper Corrosion, ASTM D130, 48 hrs @ 80°C	1a	1a
Demulsibility, ASTM D1401, minutes to pass	10	10
Foam Test, ASTM D892, Seq. I, mL	0/0	0/0
Four-Ball Wear Test, ASTM D4172, Scar Diameter, mm	0.40	0.40
FZG Scuffing Test, ASTM D5182, Failure Load Stage	8	8
Oxidation Stability, RPVOT, ASTM D2272, minutes	1,600	1,600
Rust Test, ASTM D665 A&B	Pass	Pass

## 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>.