



Syncon® R&O Oil (ISO VG 32-68)

Phillips 66® Syncon R&O Oil (ISO VG 32-68) is a premium quality, synthetic, rust and oxidation (R&O)-inhibited circulating oil developed primarily for use in rotary screw and rotary vane air compressors operating under severe-service conditions or at extreme temperatures. It is particularly recommended for use in applications where operating conditions may be unfavorable or too severe for conventional mineral oil-based circulating oils.

Syncon R&O Oil is formulated with synthetic polyalphaolefin (PAO) base oils and select additives to provide excellent protection against wear, rust, corrosion, and foaming. It has outstanding oxidation resistance and thermal stability at high temperatures to minimize deposit and varnish formation and provide long service life. It has excellent low-temperature properties for use over a wide temperature range. It has good water-separating properties to reduce carryover and blockage of filters.

Syncon R&O Oil is compatible with mineral oil-based lubricants, but mixing should be avoided for optimum performance benefits. Syncon R&O Oil meets the requirements of the following industry and OEM specifications:

- AGMA 9005-F16 Inhibited, R&O, Lubricants

Applications

- Rotary and centrifugal air compressors where the manufacturer specifies a PAO-based lubricant
- Plain and rolling-element bearings operating at very high or very low temperatures
- Electric motor, fan, and blower bearings
- Vacuum pumps
- Industrial equipment operating over a wide temperature range where an inhibited mineral oil is recommended

Features/Benefits

- Outstanding resistance to thermal breakdown at high temperatures
- Outstanding oxidation resistance to minimize deposit and varnish formation
- Protects against wear
- Protects against rust and corrosion
- Good water-separating properties
- Good foam resistance
- Excellent low-temperature fluidity

**Synthetic PAO-
Based, Rust
& Oxidation-
Inhibited Air
Compressor Oil**

KEEPING THE
WORLD
RUNNING
SMOOTHLY. 



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Typical Properties			
ISO Grade	32	46	68
AGMA Grade (obsolete)	0	1	2
AGMA Classification	R&O	R&O	R&O
Specific Gravity @ 60°F	0.854	0.857	0.865
Density, lbs/gal @ 60°F	7.11	7.14	7.20
Color, ASTM D1500	0.5	0.5	0.5
Flash Point (COC), °C (°F)	245 (473)	270 (518)	275 (527)
Pour Point, °C (°F)	-51 (-60)	-39 (-38)	-39 (-38)
Viscosity			
cSt @ 40°C	32.0	46.0	68.0
cSt @ 100°C	5.8	7.4	9.8
SUS @ 100°F	164	225	339
SUS @ 210°F	45.7	51.0	59.4
Viscosity Index	125	133	131
Acid Number, ASTM D974, mg KOH/g	0.17	0.17	0.17
Copper Corrosion, ASTM D130, 48 hrs @ 80°C	1a	1a	1a
Demulsibility, ASTM D1401, minutes to pass	10	15	15
Foam Test, ASTM D892, Seq. I, mL	0/0	0/0	0/0
Four-Ball Wear Test, ASTM D4172, Scar Diameter, mm	0.47	0.42	0.41
FZG Scuffing Test, ASTM D5182, Failure Load Stage	9	9	9

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>.