

## ConocoPhillips Syncon® 460 Synthetic R&O Oil

Category : Fluid , Lubricant , Polyalphaolefin (PAO)

**Material Notes:**

Syncon R&O Oil is a premium quality, synthetic, rust and oxidation (R&O)-inhibited circulating oil developed for use in circulating systems, rotary air compressors, lightly loaded enclosed gear drives and other industrial equipment 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 rust, corrosion and deposit formation. It has outstanding oxidation resistance and thermal stability at high temperatures to minimize sludge and varnish formation, and provide long service life. It protects system components against rust, corrosion and wear. It has excellent low-temperature properties for use over a wide temperature range, and is resistant to excessive foam buildup that can interfere with proper lubrication. Syncon R&O Oil is compatible with mineral oil-based lubricants, but mixing should be avoided for optimum performance benefits.

**Applications:** Rotary air compressors where the manufacturer specifies a PAO-based lubricant Plain and rolling-element bearings operating at very high or very low temperatures Lightly to moderately loaded enclosed industrial gear drives that do not require a compounded or extreme-pressure (EP) gear lubricant Circulating systems of paper machine dryer sections and calender stacks Electric motor bearings Industrial worm gear drives with bronze-on-steel gears Lubrication of the upper cylinders of gas compressors handling natural gas or process gas (ISO VG 150 or 220, typically) 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 sludge and varnish formation Protects against wear Protects against rust and corrosion Good water-separating properties Good foam resistance Excellent low-temperature fluidity Low carbon-forming tendency for use in rotary air compressors Extended service intervals compared with conventional mineral oil-based lubricants Compatible with mineral oil-based lubricants

Information provided by ConocoPhillips

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_ConocoPhillips-Syncon-460-Synthetic-RO-Oil.php](http://www.lookpolymers.com/polymer_ConocoPhillips-Syncon-460-Synthetic-RO-Oil.php)

Physical Properties	Metric	English	Comments
Specific Gravity	0.881 g/cc	0.881 g/cc	
Density	0.880 g/cc	0.0318 lb/in <sup>3</sup>	
Viscosity Measurement	123	123	Viscosity Index
Saybolt Viscosity at 100°F	2431 SUS	2431 SUS	
Saybolt Viscosity at 210°F	181 SUS	181 SUS	
Kinematic Viscosity at 40°C (104°F)	460 cSt	460 cSt	
Kinematic Viscosity at 100°C (212°F)	37.2 cSt	37.2 cSt	
Oxidative Stability	14.17 hour	14.17 hour	RPVOT; ASTM D2272
ASTM Color	1.0	1.0	L; ASTM D1500

Mechanical Properties	Metric	English	Comments
Four Ball Wear	0.400 mm	0.0157 in	Scar Diameter; ASTM D4172

Thermal Properties	Metric	English	Comments
Pour Point	-28.9 °C	-20.0 °F	
Flash Point	243 °C	470 °F	COC

Chemical Properties	Metric	English	Comments
Total Acid Number	0.20	0.20	[mg KOH/g]; ASTM D974

Descriptive Properties	Value	Comments
ASTM Rust A&B	Pass	
Copper Corrosion	1B	ASTM D130
FZG Scuffing Test	10 Failure Load Stage	ASTM D5182

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