



Syncon™ Synthetic R&O Oil

Conoco Syncon™ Synthetic R&O Oil comprises a line of synthetic PAO-based, multifunctional products intended for industrial applications. The lighter grades, ISO 32, 46, 68 and 100, are typically used in equipment such as rotary-type air compressors, turbines and mild hydraulic applications. The heavier grades, ISO 150, 220, 320 and 460, are typically used in gearboxes for which EP characteristics are not required. All grades can be used in other applications for the lubrication of pump bearings and electric motors.

Applications

Syncon™ Synthetic R&O Oils in the ISO 32 through 100 range are recommended for use in oil-flooded rotary screw, centrifugal and rotary-vane air compressors operating under severe conditions of high- and/or cold-temperature startup. The advantages of the use of these synthetic oils in place of mineral oil products include long drain intervals and minimizing varnish deposits and sludge where high air outlet temperatures are expected. Syncon™ R&O Oils used in compressor service are compatible with ammonia, carbon dioxide, helium and hydrocarbon gases (for which solubility with process gases is desired).

Syncon™ Synthetic R&O Oils in the ISO 150 through 460 range (AGMA Grades 4 through 7) are used most often in gearboxes that have the following characteristics: steel-on-steel or bronze-on-steel gearing with spur, helical, herringbone and bevel gear geometries. These oils are NOT intended for applications that require extreme-pressure ("EP") type additives, such as spiral-bevel and hypoid or worm gear equipment. These oils also can be used in circulating oil systems, paper machine drier bearings, calendar stacks, winders, large antifriction and journal-bearing applications.

Outstanding Features

- Lubricates effectively over wide temperature range
- Extended drain intervals
- Reduced power consumption
- Reduced maintenance and downtime
- Improved compressor, gearbox efficiency
- Rust, corrosion protection
- Resists oxidation, thermal breakdown: reduced varnish, deposits, sludge
- Excellent low-temperature fluidity
- Reduced lubricant use, disposal

**PAO-Synthetic
Multipurpose Oils
For Compressors,
Turbines And Gears**

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Syncon™ Synthetic R&O Oil
Typical Properties

ISO Grade	32	46	68	100	150	220	320	460
AGMA Grade		1	2	3	4	5	6	7
Density (lb/gal)	6.93	6.96	6.98	7.01	7.26	7.29	7.31	7.34
Flash Point, ASTM D92								
(°F)	469	500	509	529	475	475	470	465
(°C)	243	260	265	276	246	246	244	240
Pour Point, ASTM D97								
(°F)	-72	-72	-72	-65	-40	-35	-30	-20
(°C)	-58	-58	-58	-54	-40	-37	-34	-29
Viscosity, ASTM D445								
cSt @ 40°C	31	46	68	116	150	220	320	460
cSt @ 100°C	5.7	7.9	10.2	14.2	17.5	22.8	29.1	37.2
Viscosity Index, ASTM D2270	136	134	145	150	128	127	124	123
Emulsion Characteristics, ASTM D1401								
minutes to 40-40-0	10	10	10	10	30	30	30	30
ASTM Rust Test (A&B)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
FZG Pass Stage, ASTM D5182	11	12	12	12	12	12	12	12
Four-Ball Wear, mm @ 40 kg, ASTM D4472								
1200 rpm, 75°C	0.54	0.51	0.48	0.45	0.40	0.40	0.40	0.40
Color, ASTM D1500	0.5	0.5	0.5	1.0	2.5	3.5	4.5	5.0
TAN, ASTM D974	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Copper Stip Corrosion Test,								
ASTM D130	1a	1a	1a	1a	1b	1b	1b	1b

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