SYNFILM®

Air Compressor and Industrial Oil

ROYAL PURPLE®

Beyond Synthetic™

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Synfilm®, Royal Purple's bestselling industrial lubricant, is recommended for air compressors, pumps, steam turbines, bearings, gears, air tools, etc.

Synfilm® is a long life, high film strength, energy efficient, synthetic lubricant that significantly increases bearing life and equipment reliability. Synfilm® gains its performance advantage over competing mineral and synthetic oils through its superior blend of synthetic base oils plus Royal Purple's proprietary Synerlec® additive technology. This unique additive technology is proven to make equipment run smoother, cooler, quieter, longer and more efficiently.

Synfilm® typically replaces conventional, low film strength, R&O (rust and oxidation inhibited) oils that rely solely on their viscosity to protect equipment against wear.

Synerlec® additive technology makes the difference!

Synthetic oils enable Royal Purple to make superior lubricants, but it is Royal Purple's advanced Synerlec® additive technology that gives its lubricants their amazing performance advantages. Synerlec® additive technology truly is *beyond synthetic*.™

Synerlec® additive technology forms a tough, slippery, synthetic film on all metal surfaces. This proprietary film significantly improves lubrication: first, by increasing the oil film's thickness, and second, by increasing the oil film's toughness, both of which help to prevent metal-to-metal contact. It displaces moisture from metal surfaces and protects all metals against rust and corrosion. It also fortifies the oil against the detrimental effects of heat, which causes oil to oxidize.

Performance Advantages:

- **High Film Strength**
  Synfilm® protects bearings far beyond the ability of other compressor and pump oils, carrying up to 700 percent greater loads.
- **Rapidly Separates from Water**
  Synfilm® rapidly and completely separates from water, which is easily drained from the bottom of the oil reservoir.
- **Saves Energy**
  Synfilm® has an extremely low coefficient of friction that is proven to save energy over conventional oils. In rotating equipment these savings frequently exceed the total cost of the oil within several months, making what was once an oil expense a profit.
- **Extremely Clean**
  Synfilm® is packaged in new poly containers and has a typical ISO 4406 Cleanliness Level of 14/13/11*, which is verified by a laser particle counter. This is up to 250 times cleaner than other new oils delivered in steel drums or by bulk delivery.
  *Currently for ISO viscosity grades 32, 46, and 68 only.
- **Reduces Bearing Vibrations**
  The tough oil film of Synfilm® coupled with its ability to micro-polish contacting bearing elements provides superior bearing lubrication.
- **Longer Oil Life**
  Synfilm® has outstanding oxidation stability that greatly extends oil change intervals while keeping equipment clean.
- **Excellent Corrosion Protection**
  The tough oil film of Synfilm® forms an ionic bond on metal surfaces, which acts as a preservative oil during shutdown and provides instant lubrication upon startup.
- **Synthetic Solvency**
  The natural solvency of Synfilm® cleans up dirty equipment and keeps it clean.
- **Compatible with Seals**
  Synfilm® has excellent compatibility with most seals.
- **Compatible with Other Oils**
  Synfilm® can be mixed with mineral oils and most synthetic oils. (It is not compatible with silicone or glycol synthetics.)
- **Environmentally Responsible**
  Synfilm® components are TSCA listed and meet EPA, RCRA and OSHA requirements. Synfilm® extends oil drain intervals, eliminates premature oil changes, decreases the amount of oil purchased and disposed of and conserves energy.

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	ISO Grade / AGMA Grade				
Typical Properties*	32	46	68	100	150
AGMA Grade	—	1	2	3	5
Viscosity					
cSt @ 40˚C	32	46	68	100	150
cSt @ 100˚C	5.8	7.3	9.5	12.9	16.9
SSU @ 100˚F	164	236	350	517	780
SSU @ 210˚F	46	51	58	71	88
Flash ˚F	455	475	485	485	480
Viscosity Index	123	121	118	124	122
Pour Point ˚F	-40	-35	-35	-30	-20
Specific Gravity @ 60/60˚F	0.85	0.855	0.858	0.857	0.864
ISO Cleanliness Level	14/13/11	14/13/11	14/13/11	N/A	N/A
ASTM D-1401 Demulsibility	40/40/0/10	40/40/0/15	40/40/0/20	40/40/0/20	40/40/0/30
D-892 Foam Tests					
Sequence I, II, & III	Pass	Pass	Pass	Pass	Pass
D-130 Copper Corrosion					
3 hrs. @ 210˚F	1a	1a	1a	1a	1a
250 hrs. @ 210˚F	1a	1a	1a	1a	1a
Cincinnati Millicron “A”					
Corrosion / Oxidation	Pass	Pass	Pass	Pass	Pass
D-665 Rust Test					
Fresh Water	Pass	Pass	Pass	Pass	Pass
Salt Water	Pass	Pass	Pass	Pass	Pass
D-2893 Dry Air Oxidation					
312 hrs. @ 203˚F,					
% Viscosity Increase	0	0	0	0	0
Precip. No. (% Solids)	0	0	0	0	0

*Properties are typical and may vary

Note: The solvency of Synfilm® cleans wear metals and deposits left behind by previous oils. These wear metals and deposits can become soluble in the new oil, causing abnormally high values on used oil analysis until equipment is clean.

Rotary Screw Air Compressor Service: Compressors operating intermittently in high humidity environments or at temperatures that allow the air / oil temperatures within the compressor to reach the dew point, condense large volumes of water into the oil. While these conditions do not shorten the oxidation life of the oil,which normally controls oil life, they can prematurely deplete the rust inhibitors or any oil, requiring oil drain intervals to be shortened.