



Syncon® Barrier Oil

Phillips 66® Syncon® Barrier Oil is a premium quality, non-reactive, synthetic, process oil developed for use as a barrier oil in mechanical seal applications. Typical applications include seal service in refineries, gas plants, steel mills, power plants and chemical plants.

Syncon Barrier Oil is manufactured with synthetic polyalphaolefin (PAO) base oils and select additives to provide excellent oxidation inhibition and lubricity over a wide temperature range. It is free of impurities that can cause catalyst poisoning in process applications, and is compatible with most commonly used seal materials.⁽¹⁾ It complies with FDA 21 CFR 178.3570 regulations for use in food processing plants where there is the possibility of incidental food contact.

Applications

- Seal applications in gas processing and pumping
- Barrier fluid in dual mechanical seals used in refineries, power plants, and chemical plants, where the manufacturer calls for a premium quality PAO seal oil

Features/Benefits

- Premium quality seal oil
- Outstanding oxidation resistance and thermal stability at high temperatures
- Superior heat transfer properties
- Excellent low-temperature fluidity
- Resistant to chemical contamination
- Helps keep the face of the seal cool and free of deposits
- Low odor

⁽¹⁾ **Note:** For information on compatibility with elastomers, paints, and plastics, please call our Technical Support Hotline.

Premium

Synthetic PAO

Barrier or Seal Oil





Syncon® Barrier Oil

Typical Properties			
ISO Grade		5	32
Specific Gravity @ 60°F		0.797	0.827
Density, lbs/gal @ 60°F		6.64	6.89
Color	ASTM D1500	0.5	0.5
Flash Point (COC), °C (°F)	ASTM D92	149 (300)	238 (460)
Pour Point, °C (°F)	ASTM D97	-60 (-76)	-61 (-78)
Viscosity	ASTM D445		
cSt @ 40°C		5.10	30.5
cSt @ 100°C		1.70	5.9
Viscosity Index	ASTM D2270	N/A	141
Acid Number, mg KOH/g	ASTM D974	0.17	0.37
Copper Corrosion, 48 hrs @ 80°C	ASTM D130	1a	1a
Demulsibility, minutes to pass	ASTM D1401	10	10
Foam Test, Seq. I, mL	ASTM D892	0/0	0/0
Four-Ball Wear Test, Scar Diameter, mm	ASTM D4172	0.55	0.40
Rust Test	ASTM D665 AA&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/SDS>.