



Syncon® Refrigeration Oil

Syncon Refrigeration Oil is a premium quality synthetic lubricant developed for use in rotary screw compressors in refrigeration service compressing ammonia, methyl chloride or carbon dioxide.

Syncon Refrigeration Oil is available in one viscosity grade: ISO 68. It is formulated with synthetic polyalphaolefin (PAO) base oils and a carefully balanced additive package to provide long service life, excellent deposit control, protection against rust and corrosion, and resistance to foaming. It has outstanding oxidation resistance and thermal stability at high temperatures to help minimize deposit formation and provide extended service intervals compared to conventional mineral oil-based lubricants, which can result in less maintenance and significant cost savings.

Syncon Refrigeration Oil has a very low pour point and outstanding thermal stability for use in ammonia refrigeration systems, where evaporator temperatures often reach -30°F (-34°C) and discharge temperatures can reach as high as 250°F (121°C). It has better oxidation resistance than conventional paraffinic and naphthenic-based refrigeration compressor oils, resulting in less buildup of varnish and sludge deposits. It also has lower volatility, resulting in lower oil consumption and hence the need for less makeup oil.

Syncon Refrigeration Oil is **not** recommended for use with chlorinated hydrocarbons (CFCs), such as Freon R12, R22 or R502, or with fluorinated hydrocarbons, such as HFC-134A.

Applications

- Rotary screw refrigeration compressors operating under severe-service conditions
- Rotary compressors used in ammonia and carbon dioxide refrigeration systems
- Ammonia and carbon dioxide manufacturing plants
- Cold storage warehouses and distribution facilities
- Chemical plants
- Ice plants

Syncon Refrigeration Oil meets the performance requirements of ammonia refrigeration compressors manufactured by Copeland, Frick, Sullair and Vilter where the manufacturer specifies:

- Copeland refrigeration oil
- Frick Oil No. 2A, 3, 7, 9 or 14

**Synthetic PAO-
Based Lubricant For
Refrigeration
Compressors**

Contact Information

**U.S. Customer
Service:
1-800-822-6457**

**U.S. Technical
Services Hot Line:
1-800-766-0050**

**International:
+1-832-486-3363**

**E-mail address:
lubricants@
conocophillips.com**

<http://lubricants.conocophillips.com>

600 N. Dairy Ashford • 2W9000 • Houston, TX 77079



- Vilter refrigeration oil
- York Oil B, C or E

Features/Benefits

- Outstanding low-temperature fluidity
- Outstanding oxidation resistance and thermal stability at high temperatures
- Excellent deposit control
- Low volatility for lower oil consumption and less makeup oil
- Protects against rust and corrosion
- Extended service intervals compared to conventional mineral oil-based refrigeration oils

Syncon® Refrigeration Oil

Typical Properties

ISO Grade	68
Density, g/cm ³ @ 15.6°C (60°F)	0.832
Density, lbs/gal @ 15.6°C (60°F)	6.93
Color, ASTM D1500	L 0.5
Flash Point (COC), °C (°F)	243 (469)
Pour Point, °C (°F)	-54 (-65)
Viscosity,	
cSt @ 40°C	70.0
cSt @ 100°C	10.0
SUS @ 100°F	360
SUS @ 210°F	60
Viscosity Index	143
Acid Number, ASTM D974, mg KOH/g	0.17
Copper Corrosion, ASTM D130	1a
Demulsibility, ASTM D1401, minutes to pass	10
Foam Test, ASTM D892	Pass
Four-Ball Wear, ASTM D4172, Scar Diameter, mm	0.79
Rust Test, ASTM D665 A&B	Pass

Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via <http://w3.conocophillips.com/NetMSDS>.

Due to continual product research and development, the information contained herein is subject to change without notification.

Copyright © 2007 ConocoPhillips Company. The ConocoPhillips logo, Conoco, the Conoco logo, Phillips 66, the Phillips 66 logo, 76 and the 76 logo are trademarks of ConocoPhillips Company in the U.S.A. and other countries.