



## Refrigerant Oil

Conoco Refrigerant Oil is a high-quality lubricating oil developed for use in reciprocating and rotary screw compressors in refrigeration systems using ammonia (NH<sub>3</sub>) or carbon dioxide (CO<sub>2</sub>). It is available in two viscosity grades: ISO 46 and 68.

Refrigerant Oil is formulated with premium hydrocracked paraffinic base oils and a foam inhibitor to provide an excellent lubricant. The natural oxidation stability of the base oils provides longer service life between oil changes. The foam inhibitor prevents excessive foam buildup that can interfere with proper lubrication.

Refrigerant Oil is more resistant to oxidation than conventional naphthenic-based refrigeration oils. It has a low pour point for use in ammonia refrigeration systems used for subzero cooling. It has been used successfully in systems with evaporator temperatures as low as -30° F (-34°C), and with discharge temperatures as high as 250° F (121°C).

Refrigerant Oil is not recommended for use with chlorinated hydrocarbons such as Freon 12, 22 or 502, or with fluorinated hydrocarbons such as HFC-134A.

### **Applications**

- Reciprocating and 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

Refrigerant Oil meets the requirements for use in Copeland, Frick, Sullair and Vilter ammonia refrigeration compressors that specify:

- Frick Oil No. 3, 4, 9, 12, 13 or 14
- Vilter OEM Refrigeration Oil
- York Oil C or E

### Lubricating Oil For Ammonia Refrigeration Compressors

**U.S. Technical  
Services Hot line:**  
1-800-255-9556

**U.S. Customer  
Service:**  
1-800-640-1956

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

**Asia-Pacific:**  
tel: (65) 6536-0010  
fax: (65) 6536-0012

**E-mail address:**  
[conocolubricants@  
conocophilips.com](mailto:conocolubricants@conocophilips.com)

[www.lubes.conoco.com](http://www.lubes.conoco.com)

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



### **Outstanding Features**

- Excellent oxidation resistance
- Provides longer service life than conventional naphthenic refrigeration oils
- Low pour point
- Clear color for ease of inspection
- Good foam resistance

### **Refrigerant Oil Typical Properties**

<b>ISO Grade</b>	<b>46</b>	<b>68</b>
Specific Gravity @ 15.6°C (60°F)	0.862	0.868
Density, lbs/gal	7.19	7.23
Color, ASTM D1500	0.0	0.5
Flash Point (COC), °C (°F)	210 (410)	254 (489)
Pour Point, °C (°F)	-40 (-40)	-34 (-29)
Viscosity,		
cSt @ 40°C	45.5	69.7
cSt @ 100°C	6.8	9.0
SUS @ 100°F	335	361
SUS @ 210°F	49	57
Viscosity Index	104	100
Acid Number, ASTM D664, mg KOH/g	0.01	0.01
Aniline Point, ASTM D611, °C (°F)	110 (230)	111 (232)
Foam Test, ASTM D892	Pass	Pass

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

© 2005 ConocoPhillips Company. Conoco logo is a trademark of ConocoPhillips Company or its subsidiaries.