Mobil EAL Arctic Series

Mobil Industrial , Japan

Refrigeration Oils

Product Description

Mobil EAL Arctic Series are high performance Environmental Awareness Lubricants (EAL) that are fully synthetic products designed specifically for the lubrication of refrigeration compressors and systems, using ozone-friendly HFC refrigerants. (HFCs are chlorine-free products replacing chlorine-containing refrigerants in the world market).They are also recommended for carbon dioxide applications, with appropriate miscibility for proper oil return to compressor (typically piston type applications). Mobil EAL Arctic Series oils are formulated from proprietary synthesized Polyol Esters (POEs) and a unique additive system to provide outstanding lubricity, wear protection, chemical and thermal stability, and hydrolytic stability. They are miscible with HFC refrigerants and have well-defined viscosity/temperature/pressure relationships with a widel range of HFCs. The performance of the Mobil EAL Arctic Series has been well documented with HFCs in a broad range of refrigeration and air conditioning systems and are used by many major compressor and system builders around the world.

Mobil EAL Artic Series are available in ISO Viscosity grades 15 to 220. They are recommended for use in household and commercial refrigeration and air conditioning systems where HFC or carbon dioxide refrigerants are used.

Features and Benefits

Mobil EAL Arctic Series oils offer the following features and potential benefits:

The Mobil EAL brand of lubricants are recognised and appreciated around the world for their compatibility with the environment and their excellent performance. The Mobil EAL Arctic Series of products were designed by our research scientists to complement the new generation of ozone-friendly refrigerants mandated by the Montreal Protocol and succeeding world-wide agreements. Development of these products symbolises our continuing commitment to use advanced technology to provide outstanding lubricant products. A key factor in the development of Mobil EAL Arctic Series of lubricants was our close contacts between our scientists and key compressor OEMs and system designers to ensure that our product offerings will provide exceptional performance in a wide range of applications.

This work in combination with our lab testing has helped confirm the exceptional performance of the Mobil EAL Arctic Series lubricants. This cooperative work allowed our scientists to design optimum synthetic POE structures for each viscosity grade in the product series and to develop an additive package to meet the stability and compatibility requirements for refrigeration applications

Features	Advantages and Potential Benefits
Excellent high temperature stability	Improved evaporator cleanliness, less unscheduled downtime and reduced maintenance costs
Well defined miscibility and P-V-T relationships with HFC refrigerants	Assures high system efficiency and proper oil return in refrigeration system designs
Very good anti-wear properties	Reduced compressor wear resulting in lower maintenance costs
High Viscosity Index and wax-free	Excellent low temperature fluidity, no waxy deposits and improved evaporator efficiency
Wide viscosity range	Can meet specific viscosity requirements of a wide range of equipment and applications

Applications

Application considerations: Mobil EAL Arctic Series oils are hygroscopic and care must be taken to avoid moisture absorption during handling. Packages should be tightly closed when not in use, and small packaging preferred. Product should not be transferred to plastic containers that may allow moisture ingress.

Mobil EAL Arctic Series oils are recommended for refrigeration systems where HFC or carbon dioxide refrigerants are used. Specific applications include:

- Household refrigeration such as refrigerators, freezers, air conditioners and heat pumps
- Commercial refrigeration applications such as business, shopping mall and hotel air conditioning, and low temperature transportation
- Typical Properties Industrial applications such as food preparation and freezing, as well as cryogenic applications

Properties and Specifications

Property	**68**	**100**
Grade	ISO 68	ISO 100
Density @ 15 C, kg/l, ASTM D4052		0.96
Flash Point, Closed Cup, C, ASTM D7094	230	
Kinematic Viscosity @ 100 C, mm2/s, ASTM D445	8.7	11.6
Kinematic Viscosity @ 40 C, mm2/s, ASTM D445	68	105
Pour Point, °C, ASTM D5950		-30
Pour Point, °C, ASTM D97	-36	
Specific Gravity, 15.6 C/15.6 C, ASTM D4052	0.96	
Viscosity Index, ASTM D2270	95	

Health and Safety

Health and Safety recommendations for this product can be found on the Material Safety Data Sheet (MSDS) @ http://www.msds.exxonmobil.com/psims/psims.aspx

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Typical Properties are typical of those obtained with normal production tolerance and do not constitute a specification. Variations that do not affect product performance are to be expected during normal manufacture and at different blending locations. The information contained herein is subject to change without notice. All products may not be available locally. For more information, contact your local ExxonMobil contact or visit www.exxonmobil.com
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