

Mobil EAL Arctic Series

Product Description

Mobil EAL Arctic Series are supreme 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). 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 widely used 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 Arctic 32, 46 and 68 are recommended for use in household, commercial and marine refrigeration and air conditioning systems where HFC refrigerants are used.

Features and 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 the 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 ExxonMobil lab testing has helped confirm the exceptional performance of the Mobil EAL Arctic Series lubricants. This cooperative work allowed ExxonMobil 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

Mobil EAL Arctic 32, 46 and 68 oils offer the following features and potential benefits:

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 antiwear 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

Mobil EAL Arctic 32, 46 and 68 oils were designed for use in refrigeration systems where HFC refrigerants are used. They are recommended for applications such as food preparation and freezing.

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. Product should not be transferred to plastic containers that may allow moisture ingress.

Typical Properties

Mobil EAL Arctic Series			
ISO Viscosity Grade	32	46	68
Viscosity, ASTM D 445			
cSt @ 40°C	34.2	49.2	68.0
cSt @ 100°C	5.8	7.3	8.7
Viscosity Index, ASTM D 2270	115	115	95
Pour Point, °C, ASTM D 97	-48	-42	-36
Flash Point, °C, ASTM D 92	236	230	230
Specific Gravity @15°C kg/l, ASMT D 1298	0.98	0.97	0.96

Health and Safety

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application, following the recommendations provided in the Material Safety Data Sheet (MSDS). MSDSs are available upon request through your sales contract office, or via the Internet on <http://www.exxonmobil.com>. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

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ExxonMobil Lubricants & Specialties

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