



Mobil™ Lubricants for Refrigeration, Air Conditioning and Heat Pump Systems

Fill with Mobil for outstanding equipment protection and maximised oil life. The suitable lubricant for your system is determined based on the type of refrigerant fluid used, evaporator temperature and compressor type*. For a complete list of Mobil Industrial Lubricants visit www.mobil.eu.

Refrigerant fluid	Compressor type	Evaporator temperature	Mobil™ solutions
HFO			
R-1234ze	Piston	❄ -20°C to +10°C	Mobil SHC Gargoyle™ 32
	Screws		Mobil EAL Arctic™ 170 & 220
	Scroll		Mobil SHC Gargoyle™ 32, Mobil EAL Arctic™ 46 & 68
	Centrifuge		Mobil EAL Arctic™ 68 & 100
R-1234yf	Piston	❄ -30°C to 0°C	Mobil EAL Arctic™ 22CC & Mobil SHC Gargoyle™ 32
	Screws		Mobil EAL Arctic™ 100 &170
	Scroll		Mobil EAL Arctic™ 68 & 100
HFO Blends			
R-455A	Piston	❄ -50°C to 0°C	Mobil SHC Gargoyle™ 32
	Screws		Mobil EAL Arctic™ 100 & 170
	Scroll		Mobil EAL Arctic™ 68 & 100
R-448A R-449A	Piston	❄ -40°C to 0°C	Mobil EAL Arctic™ 22CC & Mobil SHC Gargoyle™ 32
	Screws		Mobil EAL Arctic™ 100 & 170
	Scroll		Mobil EAL Arctic™ 68 & 100
R-513A	Piston	❄ -30°C to 0°C	Mobil EAL Arctic™ 22CC & Mobil SHC Gargoyle™ 32
	Screws		Mobil EAL Arctic™ 170 & 220
	Scroll		Mobil SHC Gargoyle™ 32, Mobil EAL Arctic 46 & 68
	Centrifuge		Mobil EAL Arctic™ 68 & 100
CO ₂ Miscible			
R-744	Piston	❄ -55°C to -10°C	Mobil SHC Gargoyle™ 80 POE
Propane			
R-290	Screws & Piston (non miscible)	❄ -30°C to +20°C	Mobil Glygoyle™ 22
	Piston, Screws & Centrifuge (miscible)		Mobil Gargoyle Arctic SHC™ 200 series Mobil Gargoyle™ Arctic Oil 300
Ammonia – Refrigeration			
R-717	Piston, Screws & Centrifuge	❄ -50°C to +10°C	Mobil Gargoyle SHC™ 226E Mobil Gargoyle Arctic SHC™ NH 68
		❄ -40°C to +10°C	Mobil Gargoyle SHC™ 226E Mobil Gargoyle Arctic SHC™ NH 68 Mobil Gargoyle™ Arctic 68 NH
		❄ -30°C to +10°C	Mobil Gargoyle SHC™ 226E Mobil Gargoyle Arctic SHC™ NH 68 Mobil Gargoyle™ Arctic 68 NH Mobil Gargoyle™ Arctic Oil 300
Ammonia - Heat Pump		Condenser temperature	
R-717	Piston, Screws & Centrifuge	🔥 +30°C to +50°C	Mobil Gargoyle Arctic SHC™ 226E
		🔥 +50°C to +60°C	Mobil Gargoyle Arctic SHC™ 226E Mobil Gargoyle Arctic SHC™ 228
		🔥 +60°C to +70°C	Mobil Gargoyle Arctic SHC™ 228 Mobil Gargoyle Arctic SHC™ 230

* For equipment under warranty, please refer to equipment builder recommendations. This guide is for refrigeration lubricant selection for industrial systems with dry type evaporators (i.e., oil carryover into evaporator is less than 15%). To select a lubricant for other types of refrigeration systems or for general advice, please contact the Technical Help Desk on TechDeskEurope@exxonmobil.com or use our MobilChat functionality on www.mobil.eu for a live-chat session with our Lubes engineers (functional cookies need to be enabled).

This document was created in cooperation with Climalife, a channel partner of Mobil.



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Mobil Gargoyle Arctic SHC™ 200 Series

Supreme performance synthetic lubricants for refrigeration compressors and heat pumps

Features and Benefits

Superb low temperature capability provides excellent fluidity at low temperatures. Resistance to viscosity loss due to refrigerant absorption under pressure for excellent bearing-film thickness and shaft-sealing properties.

Lubricant	Technology	ISO VG
Mobil Gargoyle Arctic SHC™ 224	PAO (Polyalphaolefin)	32
Mobil Gargoyle Arctic SHC™ 226E	PAO (Polyalphaolefin)	68
Mobil Gargoyle Arctic SHC™ 228	PAO (Polyalphaolefin)	100
Mobil Gargoyle Arctic SHC™ 230	PAO (Polyalphaolefin)	220

Mobil Gargoyle Arctic SHC™ NH 68

Supreme performance synthetic lubricant for refrigeration compressors with ammonia refrigerant

Features and Benefits

Wax-free for excellent low temperature fluidity and evaporator efficiency. Outstanding thermal/oxidative and chemical stability for long oil life and extended drain intervals. Compatibility with seals previously used with mineral lubricant for limited risk of oil leakage.

Lubricant	Technology	ISO VG
Mobil Gargoyle Arctic SHC™ NH 68	PAO/AB (Alkylbenzene)	68

Mobil Gargoyle™ Arctic 68 NH

New generation Mineral Paraffinic
Higher performance mineral lubricant for refrigeration compressors with ammonia refrigerant

Features and Benefits

Specifically designed for ammonia application, excellent low temperature performance and oxidation stability. Good lubricity and wear protection.

Lubricant	Technology	ISO VG
Mobil Gargoyle™ Arctic 68 NH	Mineral Paraffinic	68

Mobil Zerice™ S Series

Premium synthetic refrigeration compressor lubricants for ultralow temperature applications

Features and Benefits

Outstanding solubility with halocarbon refrigerants, helping avoid oil separation and congealing on the valve and heat-transfer surfaces of the refrigeration system. Very low pour and floc points prevent harmful waxprecipitation blocking expansion valves.

Lubricant	Technology	ISO VG
Mobil Zerice™ S 46	AB (Alkylbenzene)	46
Mobil Zerice™ S 68	AB (Alkylbenzene)	68
Mobil Zerice™ S 100	AB (Alkylbenzene)	100

Mobil EAL Arctic™ Series

High performance Polyolester (POE) for refrigeration compressors and systems

Features and Benefits

Specifically designed for use with ozone-friendly HFC refrigerant fluids. Formulated from synthesized Polyolesters to provide outstanding lubricity and wear protection, as well as chemical and thermal stability.

Lubricant	Technology	ISO VG
Mobil EAL Arctic™ 22CC**	POE (Polyolester)	22
Mobil EAL Arctic™ 32	POE (Polyolester)	32
Mobil EAL Arctic™ 46	POE (Polyolester)	46
Mobil EAL Arctic™ 68	POE (Polyolester)	68
Mobil EAL Arctic™ 100	POE (Polyolester)	100
Mobil EAL Arctic™ 170	POE (Polyolester)	170 cSt at 40°C
Mobil EAL Arctic™ 220	POE (Polyolester)	220



Mobil SHC Gargoyle™ 32

Mobil SHC Gargoyle 32 is a high performance, fully synthetic lubricant, formulated with proprietary synthesised Polyolesters (POE) for systems using HFC & HFO refrigerants and HFO/HFC blends. Provides outstanding lubricity, wear protection, chemical, thermal stability and hydrolytic stability.

Features and Benefits

Lubricant	Technology	ISO VG
Mobil SHC Gargoyle™ 32	POE (Polyolester)	32

Mobil SHC Gargoyle™ 80 POE

New generation synthesized Polyolester (POE) of moderate solubility with HFCs and CO₂ refrigerants

Features and Benefits

Specifically designed for use with CO₂ and ozone-friendly HFC refrigerant fluids when moderate solubility is required to keep proper viscosity at application. Provides outstanding lubricity and wear protection, as well as chemical and thermal stability.

Lubricant	Technology	ISO VG
Mobil SHC Gargoyle™ 80 POE	POE (Polyolester)	80 cSt at 40°C

Mobil Gargoyle™ Arctic Series

High performance naphthenic mineral oils for refrigeration compressors

Features and Benefits

Low pour point and good fluidity at very low temperatures. Good chemical stability. Suitable for both cylinder and bearing lubrication.

Lubricant	Technology	ISO VG
Mobil Gargoyle™ Arctic Oil 155	MN (Mineral Naphthenic)	32
Mobil Gargoyle™ Arctic C Heavy	MN (Mineral Naphthenic)	46
Mobil Gargoyle™ Arctic Oil 300	MN (Mineral Naphthenic)	68

Mobil Glygoyle™ Series

Synthetic Polyalkylene Glycol-based (PAG) lubricant suitable for specific refrigeration applications

Features and Benefits

Shear-stable with outstanding resistance to thermal degradation and the formation of sludge and deposits. Suitable for HC (hydrocarbon) or CO₂ refrigerant fluid applications.

Lubricant	Technology	ISO VG
Mobil Glygoyle™ 11	PAG (Polyalkylene Glycol)	85 cSt at 40°C
Mobil Glygoyle™ 22	PAG (Polyalkylene Glycol)	175 cSt at 40°C
Mobil Glygoyle™ 30	PAG (Polyalkylene Glycol)	225 cSt at 40°C

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** Please contact your Mobil Sales representative for details on application