

# Mobil SHC Gargoyle™ 80 POE

High performance refrigeration oil for CO<sub>2</sub> miscible applications



Energy lives here™

## Key benefits



Excellent low temperature fluidity and potential for improved evaporator efficiency, due to high viscosity index

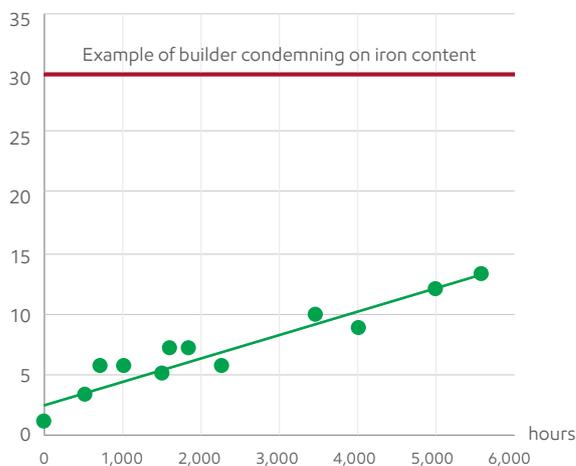


Offering potential for increased system efficiency and process improvements due to innovative Polyol Ester technology



Improved compressor protection resulting in potential for extended compressor life

Demonstrated  
**6,000**  
Hours oil life



Mobil SHC Gargoyle 80 POE, cumulative hours in CP1 compressor

● Iron

Mobil SHC Gargoyle™ 80 POE is a high-performance refrigeration oil designed specifically for the lubrication of refrigeration compressors using carbon dioxide (R744) refrigerant for CO<sub>2</sub> miscible applications. It is formulated using an innovative Polyol Ester technology (POE) to provide outstanding lubricity, wear protection, and chemical and thermal stability.

- High oil film thickness in the presence of CO<sub>2</sub> refrigerant
- Appropriate miscibility and VPT relationships with carbon dioxide
- High Viscosity Index
- Low traction coefficient

## Typical properties\*

Product Code		Mobil SHC Gargoyle 80 POE
Kinematic Viscosity at 40 °C, cSt	ASTM D445	78
Kinematic Viscosity at 100 °C, cSt	ASTM D445	11.4
Viscosity Index (typical)	ASTM D2270	142
Total Acid Number, mg KOH/g	ASTM D974	0.02
Pour Point, °C	ASTM D5950	-45
Density at 15°C, g/ml	ASTM D4052	1.02
Brookfield Viscosity, -30°C, cP	ASTM D2983	23,600
Falex Pin and Vee Block wear test, Load at Failure, Direct lbs.	ASTM D3233, Method A	1,000

\* 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](http://www.exxonmobil.com) ExxonMobil is comprised of numerous affiliates and subsidiaries, many with names that include Esso, Mobil, or ExxonMobil. Nothing in this document is intended to override or supersede the corporate separateness of local entities. Responsibility for local action and accountability remains with the local ExxonMobil-affiliate entities.

# Mobil SHC Gargoyle™ 80 POE

## Proof of Performance\*\*

The SAS Abera Plant at Saint-Brice-en-Coglès, France, is a major slaughterhouse, producing fresh and deep-frozen meat. Using a conventional polyol ester on their 4 CO<sub>2</sub> reciprocating compressors, Abera faced several problems due to insufficient lubrication.

ExxonMobil's innovative lubricant technology used at the Abera plant has the following improved properties, compared to the conventional POE:

- 28% higher viscosity index
- 68% lower Brookfield viscosity at -30°C
- Lower traction coefficient as measured on a mini-traction machine (MTM)

## Impact of Mobil SHC Gargoyle™ 80 POE on the Abera plant

Using ExxonMobil's lubricant on Abera's compressors produces significant change in the following key parameters:

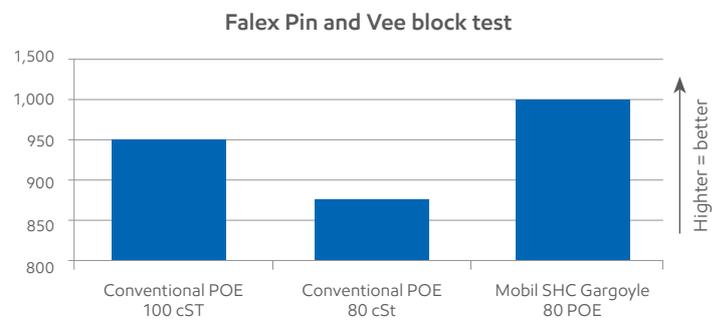
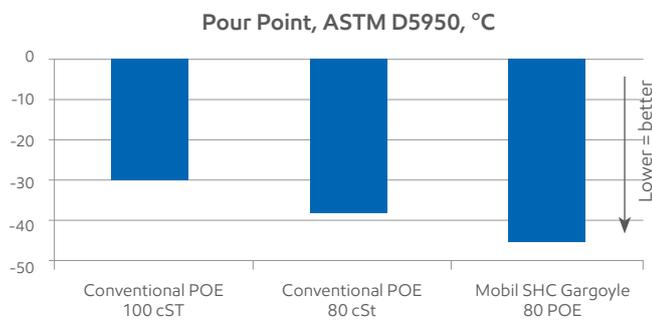
- Better protection of sensitive parts compared to conventional POE 80cSt
- Increased inspection/overhaul intervals
- Lower oil carter and piston temperatures
- Lower power consumption

Switching to Mobil's innovative Polyol Ester technology vs. the conventional lubricant used previously has delivered important process improvements to the Abera plant as Abera's productivity increases.

## Application of Mobil SHC Gargoyle 80 POE

Mobil SHC Gargoyle 80 POE is recommended as refrigeration oil for CO<sub>2</sub> miscible applications. This includes:

- Large industrial reciprocating refrigeration compressors used in the food industry for food preparation and freezing, such as in slaughter houses
- Industrial applications such as food freezing and cold storage plants
- Marine refrigeration applications



## Industrial Lubricants



## Advancing Productivity™

## Safety

Remarkably high wear protection helps to extend oil life time – which can help reduce maintenance and the risk associated with employee – equipment interaction.

## Environmental Care\*\*\*

Extended oil drain intervals up to 6,000h can help mitigate the need for waste oil disposal.

## Productivity

Equipment protection and equipment life extension paired with less downtime are helping to increase productivity.

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\*\* This proof of performance is based on the experience of a single customer. Actual results can vary depending upon the type of equipment used and its maintenance, operating conditions and environment, and any prior lubricant used.

\*\*\* Visit [mobilindustrial.com](http://mobilindustrial.com) to learn how certain Mobil-branded lubricants may provide benefits to help reduce environmental impact. Actual benefits will depend upon product selected, operating conditions and applications.

## Health and Safety

Based on available information, these products are not expected to produce adverse effects on health when used for the applications referred to above and the recommendations provided in the Material Safety Data Sheets (MSDSs) are followed. MSDSs are available upon request through your sales contact office or via the Internet. These products should not be used for purposes other than the applications referred to above. If disposing of used product, take care to protect the environment.

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