A photograph of an industrial refrigeration plant. In the foreground, there is a long row of white refrigeration units. Behind them, a complex network of blue pipes and white vertical cylinders is visible. A man wearing a white hard hat with the GEA logo, glasses, and a blue work shirt is looking towards the right. The background shows more industrial structures under a clear sky.

Oil to boost your
refrigeration performance.

CONSTANTLY
IMPROVING

PR-OLEO® C-MH68A / C-MH68A-FG

Premium-Quality Ammonia
Refrigeration Oils

Significant advantages over common ammonia refrigeration oils

PR-OLEO® premium-quality ammonia refrigeration oils are highly refined 2-stage hydrocracked lubricants formulated specifically for use in ammonia refrigeration systems with either reciprocating or screw compressors. Utilizing ultra-pure base oils and additives, PR-OLEO® lubricants offer significant advantages over common ammonia refrigeration oils and contribute to more efficient plant operation.

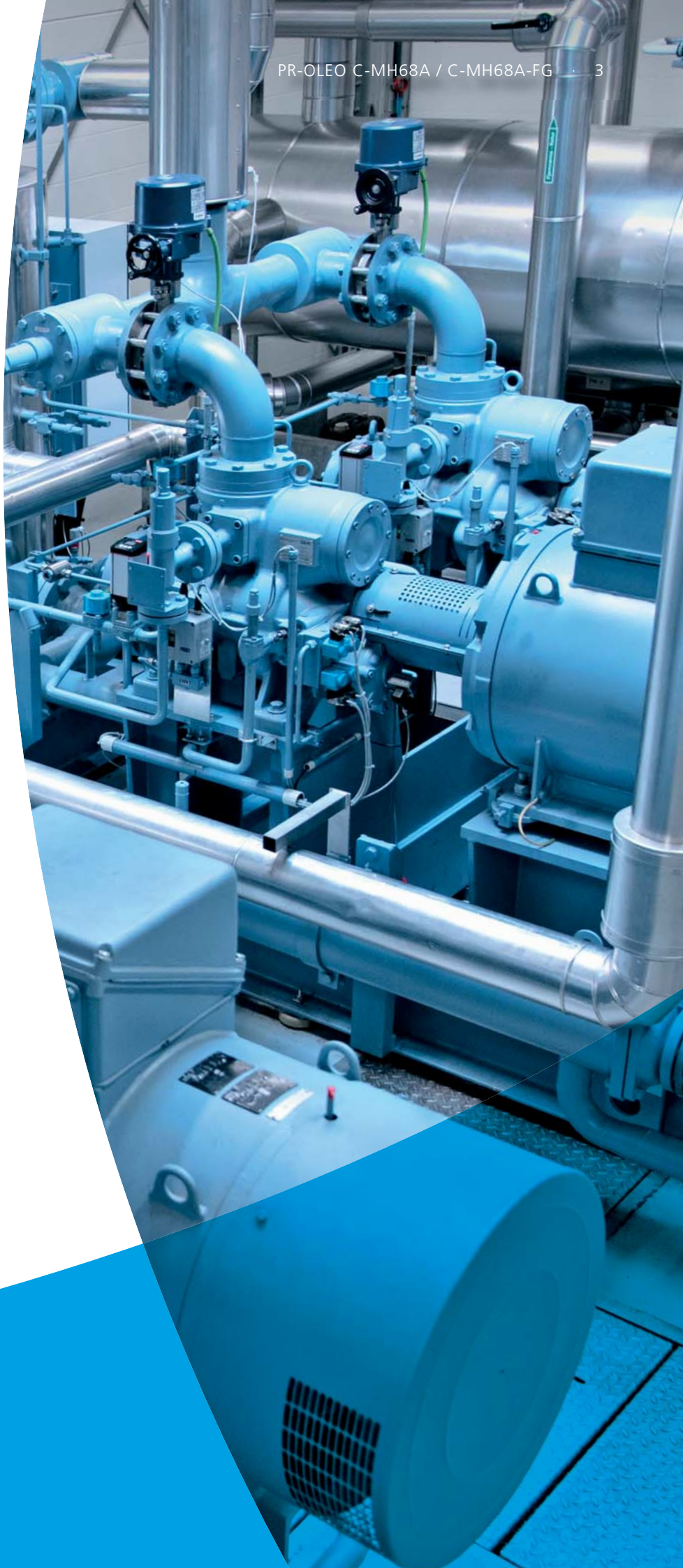
Advantages at a glance

- Ultra-pure base oil, very low oil carryover rates and excellent low-temperature fluidity all contribute to improved heat transfer in evaporators
- Improved heat transfer means higher evaporating temperatures, better system efficiency and lower compressor operating temperatures
- Long-lasting formulation combined with very low oil carryover rates leads to reduced wear of compressor parts, less interventions and increased safety
- A wide application range for piston and screw compressors, plus an NSF H1 registered Food Grade option means less customer stock requirements and improved product safety
- Upgrades are made simple due to compatibility with other ammonia refrigeration oils

Main customer benefits

- Reduced energy costs
- Lower maintenance costs
- NSF H1 registered Food Grade option
- Increased safety
- Easy to upgrade
- Suitable for piston and screw compressors
- Reduced stock requirements

Main Properties	PR-OLEO® C-MH68A	PR-OLEO® C-MH68A-FG
Viscosity @ 40 °C (cSt)	64	62
Viscosity @ 100 °C (cSt)	8.7	8.57
Viscosity Index	108	107
Pour Point °C	-42	-42
Flash point °C	245	240



PR-OLEO® is available in either 19 liter pails (pictured) or 208 liter drums.

A wide variety of applications

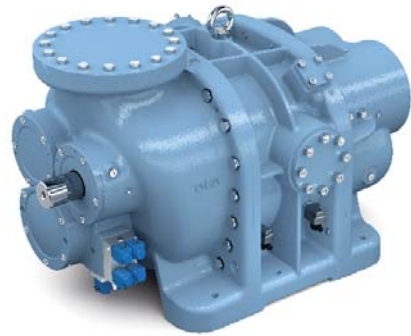
Applications and compatibility

Two versions of PR-OLEO® C-MH68A are available

- PR-OLEO® C-MH68A – For use in new applications or when replacing other lubricants, contains seal conditioner.
- PR-OLEO® C-MH68A-FG – NSF H1 registered Food Grade for use in new applications where food safety is of critical importance.

The versatility of both PR-OLEO® versions means they are suitable for use with most compressor brands and for a wide range of applications and temperatures.

PR-OLEO® lubricants are compatible with many other ammonia refrigeration oils, so upgrading is not complicated. When replacing such oils, flushing is typically not required.



Recommended for GEA Grasso screw compressors



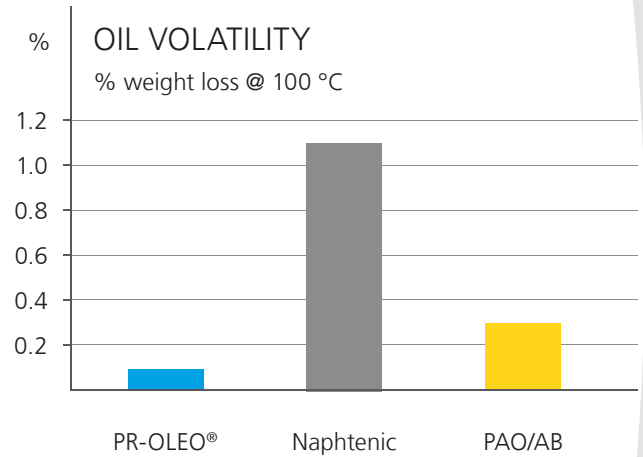
Less oil carryover

Naphthenic ammonia refrigeration oils utilize base oils that contain higher quantities of aromatic molecules. The 2-stage hydrocracked base oils used in PR-OLEO® are stripped of over 99.99 % of their aromatic molecules, leading to a far more stable lubricant.

Naphthenic oils, because of their higher concentration of aromatic molecules, are also more volatile and typically have 50–80 % higher oil carryover rates, resulting in more oil in evaporators.

PAO based formulations also have higher oil carryover rates, due to the presence of alkylbenzene base oils, which also are comparatively more volatile.

Oil carried over into the refrigeration system not only results in greater oil make-up rates, but has been shown to significantly impede thermal transfer in evaporators as the lubricant tends to act as an insulating layer. As an example a 0.01 mm layer of oil in an evaporator can result in over 50 % decrease in heat transfer efficiency.



Oils with a higher vapor concentration typically lead to higher rates of oil carryover



*Recommended for
GEA Grasso piston compressors*

For more efficient plant operation

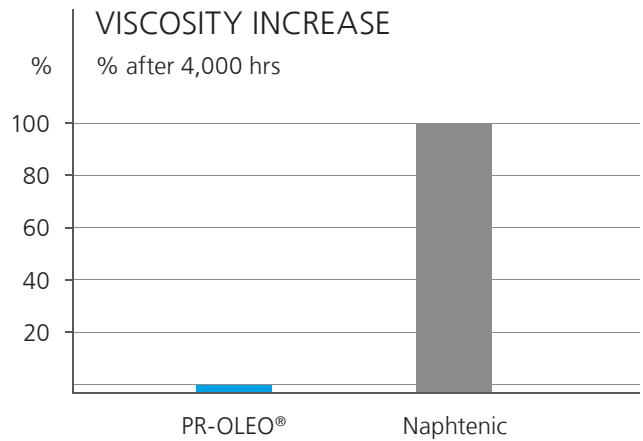
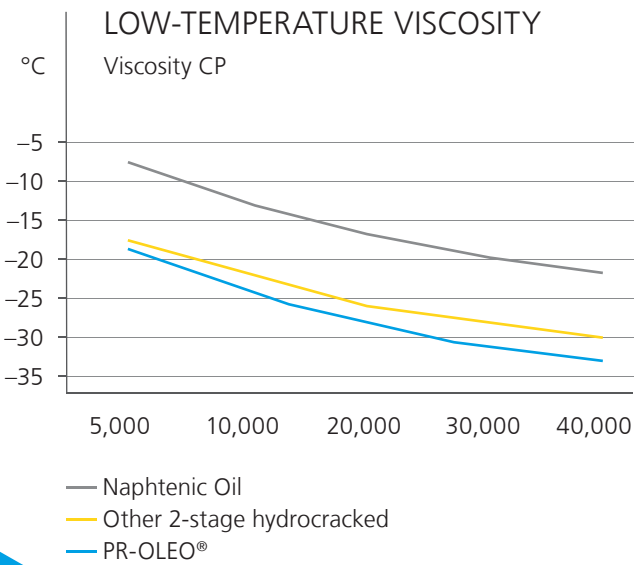
Better cold-temperature fluidity

Both PR-OLEO® C-MH68A and C-MH68A-FG utilize an advanced series of additives to ensure optimum fluidity at ultra-low temperatures.

When compared to other semi-synthetic oils, PR-OLEO® has a lower corresponding viscosity at low temperatures. As a result, PR-OLEO® helps oil return, leading to improved evaporator efficiency.

Longer oil life

PR-OLEO® lubricants contain a robust anti-oxidant package that actively works to slow the rate of oil degradation. This, combined with the purity and stability of the base oil, contributes to a very long oil lifetime. In addition, the stability of the lubricant also contributes to less carbon build-up and a cleaner system. With Naphtenic and other more volatile ammonia oils a significant viscosity increase can occur within less than 4,000 hours.



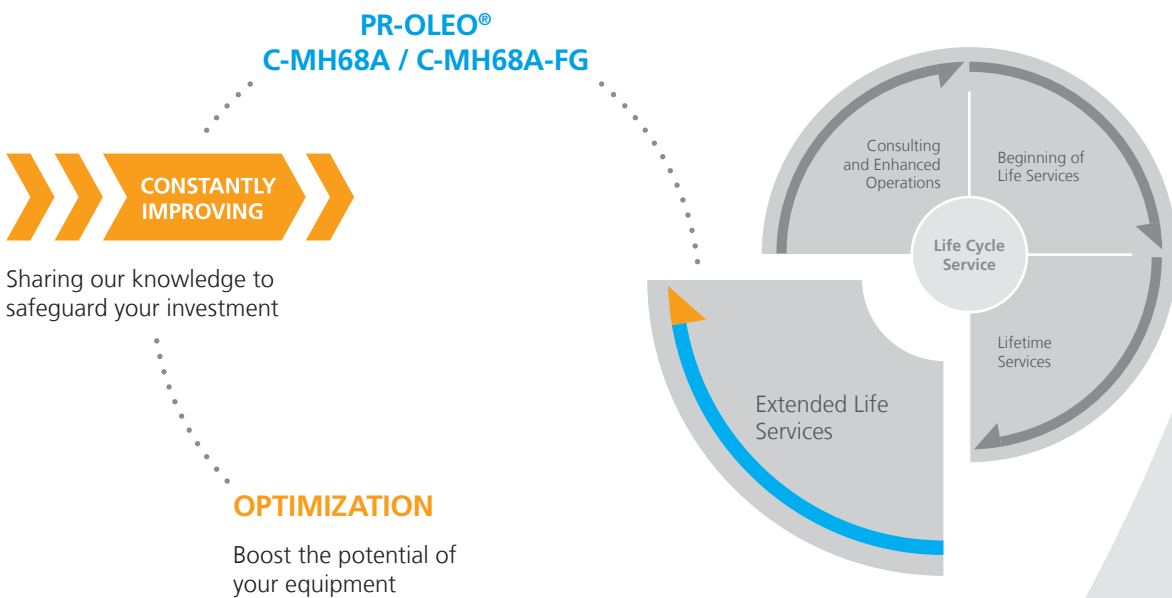
Food grade formulation

Both PR-OLEO® C-MH68A and PR-OLEO® C-MH68A-FG are non-toxic, non-hazardous formulations. PR-OLEO® C-MH68A-FG utilizes premium food-grade base oils and additives in its formulation. This NSF H1 registered product can be used in applications where there is the possibility of incidental food contact. In a food processing or storage plant this means that this lubricant can be stored in the same location as other food grade oils without the concern of cross contamination.



PR-OLEO® C-MH68A-FG is registered by NSF International, Category Code H1 (incidental food contact), NSF Registration Number 155239.

GEA Service – For your continued success





We live our values.

Excellence • Passion • Integrity • Responsibility • GEA-versity

GEA is a global technology company with multi-billion euro sales operations in more than 50 countries. Founded in 1881 the company is one of the largest providers of innovative equipment and process technology. GEA is listed in the STOXX® Europe 600 Index. In addition, the company is included in selected MSCI Global Sustainability Indexes.

GEA Service

GEA Group

Peter-Müller-Str. 12

40468 Düsseldorf, Germany

gea.com/contact

gea.com/service