

# CPI Fluid Engineering

## Lubricants for Ammonia Compressors



# Why Use Semi-Synthetics and Synthetics?

Semi-synthetic and synthetic lubricants provide improved performance over traditional mineral oils with ammonia. Benefits include:

## Cleaner operation

- Oxidatively stable-reduced sludge and varnish build-up, longer system life
- Corrosion protection-enhanced system reliability, reduced down-time

## Low volatility

- Decreased maintenance
- Significantly reduced lubricant consumption

## Low carryover

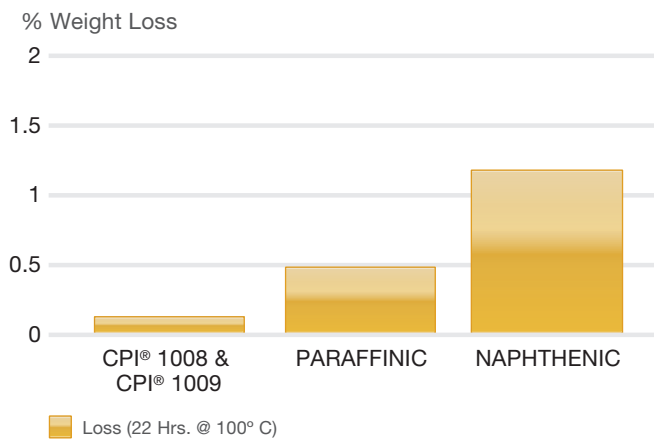
- Improved evaporator efficiency

## Low pour point

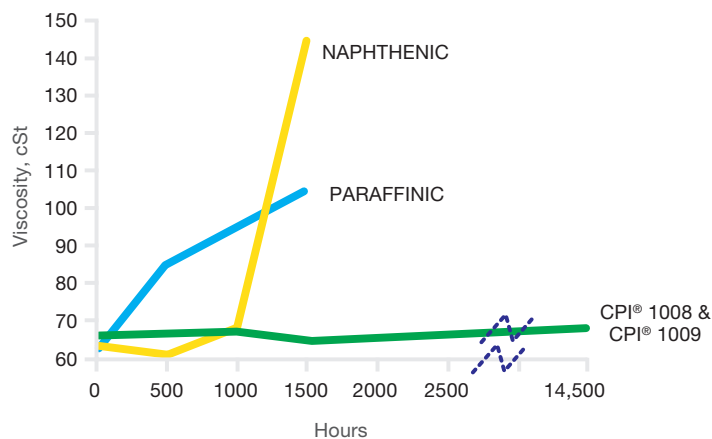
- Easier oil removal  
Cost savings
- Longer oil life
- Reduced oil changes
- Extended drain interval



## Volatility of Various Refrigeration Oils ISO 68



## Viscosity as a Function of Time






# Lubricants for Ammonia Compressors

CPI's line of ammonia lubricants have been extensively tested in our laboratories and have proven field performance, as well as OEM approvals.

CPI Engineering Services is your one-stop shop for all of your ammonia lubricant needs.

We have ammonia lubricants for every application, whether you have a system that runs at low temperatures or direct expansion. To minimize ammonia leaks, we offer patented seal swell technology in many of our products.

All of our ammonia lubricants are acceptable for use in food processing facilities, so you can feel confident that the products can be used in your food processing application as part of your HACCP plan.

Product	Viscosity @ 40° cSt ASTM D445	Viscosity Index ASTM D2270	Pour Point (°C) ASTM D97	Description/Recommended Application	NSF Registered
CPI®-1009-68	68	100	-39	Formulated with high quality hydrotreated mineral oil, combined with an excellent performance additive package.  Recommended for screw and reciprocating compressors.	 Nonfood Compounds Program Listed (R2) (Registration 131851)
CPI®-1008-68	68	111	-39	Provides all of the performance expected from CPI®-1009-68, but is additionally formulated with a patented seal swell technology.  Recommended for screw and reciprocating compressors.	 Nonfood Compounds Program Listed (R2) (Registration 142654)
CPI®-4614-68-F	62.9	134	-54	Formulated with polyalphaolefin basestock. Exhibits excellent performance in systems where the evaporator temperature is below -40° C.  Recommended for screw compressors with low evaporator temps and food grade applications.	 Nonfood Compounds Program Listed (R1) (Registration 134656)
CPI®-4628-68	59.1	131	-54	Combines excellent low temp performance with our patented seal swell technology.  Recommended for screw compressors with low evaporator temps.	
CPI®-4647-68	64.3	110	-45	Formulated with polyalphaolefin and alkylbenzene base stocks.  Recommended for screw and reciprocating compressors with evaporator temps above -45° C.	
CPI®-412-100DX	98.1	108	-32	Provides the miscibility necessary for direct expansion systems.  Recommended for direct expansion evaporators.	

# Who is CPI?

CPI Fluid Engineering is a division of The Lubrizol Corporation. The Lubrizol Corporation, a Berkshire Hathaway company, is an innovative specialty chemical company that produces and supplies technologies to customers in the global transportation, industrial and consumer markets.

CPI Fluid Engineering is a world leader in synthetic lubricants for compressors and specialty industrial applications. Our formulation and technical application expertise, combined with our flexibility and responsiveness, enhance the quality and value of our customers' products. CPI delivers fluid performance, technology support and customer service to meet customer needs.

## **Tribo-Synthetics Ltd**

1 Belasis Court  
Belasis Hall Technology Park  
Biltingham  
TS23 4AZ England  
Telephone: +44 1642 370771  
Email: [sales@tribo-synthetics.co.uk](mailto:sales@tribo-synthetics.co.uk)



The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom.

E-mail: [sales@cpifluideng.com](mailto:sales@cpifluideng.com)  
[www.cpifluideng.com](http://www.cpifluideng.com)  
A Lubrizol Company