### Petro-Canada

## **TechData**





# COMPROTM SYNTHETIC COMPRESSOR FLUID

#### Introduction

Petro-Canada's COMPRO™ Synthetic Compressor Fluid is a premium quality lubricant specifically designed for rotary screw compressors running at very high or very low temperatures, or in severe service applications where there can be no risk of varnish or carbon residue on compressor components.

COMPRO Synthetic is formulated from a custom blend of polyalkylene glycol (PAG) and ester fluids, and is fortified with anti-wear and anti-corrosion additives.

#### Features and Benefits

- Will not form varnish or carbon residue on compressor even at very high operating temperatures
  - Better resistance, versus all hydrocarbon based fluids, to oxidative breakdown caused by exposure to air at high discharge temperatures
  - Keeps compressor components completely free of carbon, sludge and varnish
  - Ensures trouble free operation and lower maintenance costs on fluid change-out
  - Extends oil change intervals to 8,000 hours service in rotary screw compressors, even at air discharge temperatures as high as 105°C (221°F)



COMPRO Synthetic

MPRO Mineral Oil

Unlike hydrocarbon based compressor oils, COMPRO Synthetic's chemistry will not form carbon or varnish residue on compressor components. This ultimate level of performance provides up to 8,000 hours of continuous, worry-free service and the opportunity to significantly reduce operating costs, even at air discharge temperatures as high as 105°C (221°F).

Image: Glassware from the IP 48/97 (modified)
Oxidation Test at 200°C (392°F).

#### Operates at very high and very low temperatures

- Provides worry free service, even in extreme operating conditions
- Allows quick start-up, in low ambient temperature applications
- Ideal for compressors operating in remote environments where the risk of compressor downtime is critical

#### Excellent protection against wear

- Prolongs the service life of working components
- Can extend the time between compressor overhauls
- · Reduces overall maintenance costs
- Protects against rust and corrosion
  - Helps to extend component life
- Low volatility reduces oil carry-over into the air system
  - Reduces fluid consumption

#### **Applications**

COMPRO Synthetic Compressor Fluid is specifically designed for rotary screw air compressors operating in severe applications, including high and low temperature extremes. It is available in an ISO 32 viscosity grade.

COMPRO Synthetic is suitable for use in compressors that handle air and inert gases such as nitrogen, argon, hydrogen, neon, helium, carbon dioxide, carbon monoxide and blast furnace gas.

COMPRO Synthetic is compatible with standard seal and hose materials used in most compressors.

NOTE: COMPRO Synthetic should not be used in systems compressing wet or sour hydrocarbon gases. For these applications, Petro-Canada's Compressor Oil RP, SPX Fluid or NGS Fluid is recommended.

NOTE: COMPRO Synthetic must not be used in the compression of oxygen, or other chemically active gases such as chlorine or hydrogen chloride.

#### **Compressor Fluid Grade Selection & Service Life**

Compressor Type	Recommended Viscosity Grades	Max	ervice Life at kimum Air e Temperature
Rotary Screw	COMPRO Synthetic 32/46	8,000 Hours	105ºC (221ºF)

Note: The above are general guidelines only. Consult your OEM service manual for specific make/model recommendations.

#### **Operational Considerations**

COMPRO Synthetic's polyalkylene glycol (PAG) chemistry has a natural tendency to dissolve or absorb water. For this reason, COMPRO Synthetic is not recommended in compressor applications where there is the potential for excessive water contamination or exposure to corrosive environments.

While COMPRO Synthetic is compatible with other polyalkylene glycol (PAG) based fluids, it is not compatible with mineral oil based fluids, or other synthetic compressor fluid chemistries and should not be mixed or contaminated with these fluids.

Certain makes of compressors do not permit complete draining, so if the drained oil is not compatible with COMPRO Synthetic, flushing and/or cleaning must be performed at the time of fluid change-over.

For complete instructions on cleaning varnished compressors, or the flushing and recharging of your compressor with COMPRO Synthetic Compressor Fluid, consult with a Petro-Canada Technical Services Advisor.

#### **Typical Performance Data**

PROPERTY	TEST METHOD	COMPRO SYNTHETIC COMPRESSOR FLUID	
Density, kg/L at 15°C	ASTM D4052	0.987	
Viscosity, cSt @ 40°C (SUS @ 100°F) cSt @ 100°C (SUS @ 210°F)	ASTM D445 ASTM D445	40.7 (207) 7.6 (52)	
Viscosity Index	ASTM D2270	157	
Flash Point, °C (°F)	ASTM D92	257 (495)	
Pour Point, °C (°F)	ASTM D97	-51 (-60)	
Total Acid Number (TAN), mL KOH/g	ASTM D664	<0.1	
Wear Protection: Four Ball Wear, scar diam (mm)	ASTM D4172	0.6	
Corrosion Protection: Copper Corrosion, 3h @ 100°C Rust A – Distilled Water	ASTM D130 ASTM D665	1b Pass	
Residue & Ash: Conradson Carbon Residue, %	ASTM D189	0.2	
Foam Sequence II	ASTM D892	25/0	

The values quoted above are typical of normal production. They do not constitute a specification.

#### **Health and Safety**

COMPRO Synthetic Compressor Fluid has no adverse affect on health provided it is used as directed. To obtain Material Safety Data Sheets (MSDS), contact one of our TechData Info Lines or visit our Web site at lubricants.petro-canada.ca

#### **TechData Info Lines**

If you would like to know more about COMPRO Synthetic Compressor Fluid or any other product in our complete line of quality lubricants, please contact us at:

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 - East (English)
 Phone 1-800-268-5850

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