



COMPRO™ XL-R COMPRESSOR FLUID

Introduction

Petro-Canada's COMPRO™ XL-R Compressor Fluid is premium quality, semi-synthetic lubricant specifically designed for use in single and multi-stage reciprocating compressors.

COMPRO XL-R starts with a blend of 99.9% pure base oils, produced using a patented HT purity process. These crystal clear fluids are free of impurities that can hinder lubricant performance. Utilizing more than 25 years of formulating experience, Petro-Canada blends these thermally stable fluids with synthetic esters, a patented anti-oxidant chemistry, and anti-wear and anti-corrosion agents.

As a result, COMPRO XL-R Compressor Fluid provides outstanding lubrication in reciprocating compressors and is particularly effective in systems operating at high discharge temperatures and at pressures as high as 6000 psi (413 bar).

Features and Benefits

- **Excellent lubrication at high temperatures and pressures**
 - extends compressor life by reducing piston-ring and cylinder wear
- **High thermal stability reduces carbon formation and lowers maintenance costs**
 - extends maintenance intervals for valves and intercoolers
 - valve carbon deposits are soft, so they are more easily removed
 - not prone to ester deposit formation within intercoolers, where removal is difficult and costly
- **Strong resistance to oxidative breakdown**
 - Keeps compressor components free of sludge and varnish to ensure trouble free operation and lower maintenance costs on fluid change-out
 - Reduces oil thickening, which can improve compressor efficiency and lower energy consumption costs.
- **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, especially when running intermittent service in high humidity conditions
- **Does not attack commonly used plastic and rubber components**
 - ensures longer lasting seals and hoses

What is the HT difference?

Petro-Canada starts with the patented HT purity process to produce water-white, 99.9% pure base oils. The result is a range of lubricants, specialty fluids and greases that deliver maximum performance for our customers.



Applications

COMPRO XL-R Compressor Fluid is recommended for lubrication and cooling of both single and multi-stage reciprocating air compressors which operate at high discharge temperatures.

COMPRO XL-R may be used in multi-stage, reciprocating compressors running with output pressures as high as 6000 psi (413 bar). In addition to the crankcase it is suitable for direct injection systems on cylinders of larger compressors. Due to its excellent resistance to water contamination, COMPRO XL-R may be used in high humidity conditions.

COMPRO XL-R 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 XL-R meets equipment manufacturers' requirements for ISO 68 and 100 viscosity grade oils. COMPRO XL-R meets or exceeds the industry standard (DIN 51506 VDL) for reciprocating compressor fluid.

- **COMPRO XL-R is compatible with:**
 - All mineral, ester and PAO based compressor fluids
 - All standard seal and hose materials except ethylene-propylene rubber (EPDM)
 - Polycarbonate filter bowls

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

Operational Considerations

The full benefits of a change to COMPRO XL-R will only be realized by minimizing contamination with the previously used oil. Used oil should be completely drained and all filters replaced before the unit is filled with COMPRO XL-R.

While COMPRO XL-R is fully compatible with most mineral and synthetic compressor fluids, it should not be mixed or contaminated with fluids containing polyalkylene glycols or silicones.

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

Typical Performance Data

PROPERTY	TEST METHOD	COMPRO XL-R COMPRESSOR FLUID
Density, kg/L at 15°C	ASTM D4052	0.897
Viscosity, cSt @ 40°C (SUS @ 100°F) cSt @ 100°C (SUS @ 210°F)	ASTM D445 ASTM D445	63 (292) 8 (52)
Viscosity Index	ASTM D2270	91
Flash Point, °C (°F)	ASTM D92	236 (457)
Pour Point, °C (°F)	ASTM D97	-18 (0)
Total Acid Number (TAN), mL KOH/g	ASTM D664	<0.1
Water Separability at 54°C (129°F), mL, fluid-water-emulsion (minutes to separation)	ASTM D1401	42-38-0 (15)
Wear Protection: Four Ball Wear, scar diam (mm)	ASTM D4172	0.45
Corrosion Protection: Copper Corrosion, 3h @ 100°C Rust A – Distilled Water	ASTM D130 ASTM D665	1b Pass
Residue & Ash: Conradson Carbon Residue, %	ASTM D189	0.01
Noack Volatility, % mass loss, 1hr @ 250°C	DIN 51581	5.7
Oxidation Stability, time to oxidation, min	ASTM D2272	1090
Thermal Conductivity, cal / hr.cm °C @ 38°C cal / hr.cm °C @ 204°C	ASTM D2717	1.07 1.18
Specific Heat, cal / g °C @ 38°C cal / hr.cm °C @ 204°C	ASTM D2766	0.45 0.61

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

Health and Safety

COMPRO XL-R 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 website at lubricants.petro-canada.ca.

TechData Info Lines

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

**Petro-Canada
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