



LUBRICANTS

AN HF SINCLAIR BRAND

TECH DATA

PC GasComp SP SERIES

SYNTHETIC PAG

COMPRESSOR FLUIDS

INTRODUCTION

Petro-Canada Lubricants PC GasComp SP Compressor Fluids are specially formulated synthetic lubricants that provide enhanced lubrication protection in high temperature, high pressure and high specific gravity gas compressor applications. Unlike standard mineral oils, these polyalkylene glycol (PAG) synthetic lubricants offer much lower gas solubility which reduces viscosity loss from hydrocarbon dilution and greatly improves the operational viscosity and fluid film during operation. The high viscosity index, excellent lubricity and thermal stability are additional benefits in selecting PC GasComp SP 100, 150 and 220 instead of standard mineral oils for flooded screw and reciprocating compressors.

FEATURES AND BENEFITS

Extends equipment life

- Resists lubricant dilution by entrained hydrocarbons from process gases.
- High viscosity index provides a stronger lubricant film over a wide range of temperatures.

Helps to reduce frequency of expensive overhauls due to corrosion

- The novel corrosion inhibition additive package protects equipment from corrosion due to water and/or sour gas entrainment.
- Corrosion prevention during shutdown due to reduction of potential free water.

Excellent low temperature properties

- Ensures smooth start-up in cold climates

APPLICATIONS

SCREW COMPRESSORS

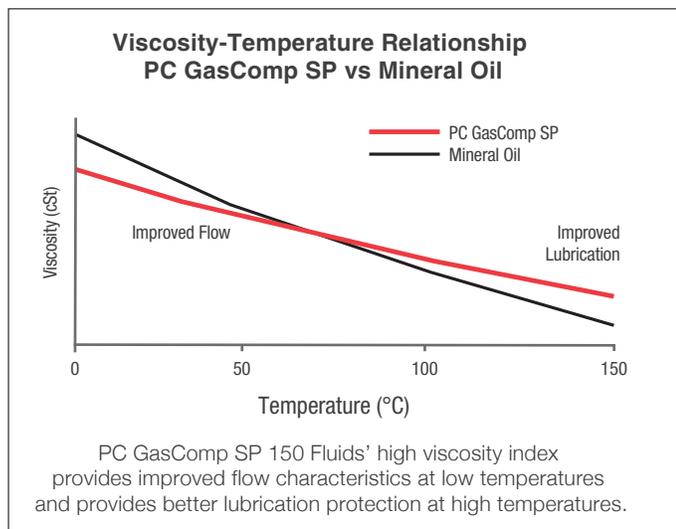
PC GasComp SP 100 and 150 are used for flooded screw compressors in heavy and elevated pressure hydrocarbon gas applications. They are widely used for applications involving harsh acidic chemical environments where high resistance to hydrocarbon dilution is required.

PC GasComp SP 100 and 150 are recommended for:

- Compression of hydrocarbon mixtures containing higher molecular weight gases where the expected dilution is greater than 10 wt%.

Sour natural gas and acid gas compression

- PC GasComp SP 100 and 150 will dissolve high levels of water at temperatures below 70°C/158°F, helping to prevent corrosion during compressor shutdown.
- PC GasComp SP 100 and 150 become water insoluble at temperatures greater than 70°C/158°F reducing the amount of dissolved water in the lubricant during operation.



RECIPROCATING COMPRESSORS

PC GasComp SP 100, 150 and 220 are available for force feed system, once through rod packing and cylinder lubrication in reciprocating compressors at high pressures. Due to its ideal viscosity profile and dilution resistance PC GasComp SP 100 is suitable both as a reciprocating compressor frame lubricant and as a once through rod/packing and cylinder lubricant. PC GasComp SP 100 offers low lubricant cylinder wash off when comparing to mineral oil and PAO lubricants. PC GasComp SP 100 also protects reciprocating compressor running gear surfaces from corrosion due to sour gas ingress. Its use as a frame lubricant is for compressor models that allow use of a PAG fluid; it is recommended to confirm suitability with paints and seals used in your model of compressor. PC GasComp SP 100 is not compatible with mineral or PAO based frame lubricants, so a flush would need to be performed before using PC GasComp SP 100 in a compressor frame.

PC GasComp SP 100, 150 and 220 are recommended for:

- Compression of heavy hydrocarbon and water contaminated natural gas streams
- High pressure reciprocating gas compression
- Compression of Natural gas with CO₂
- Compression of Natural gas with H₂S
- Compression of acid gas

TYPICAL PERFORMANCE DATA

Property	ASTM Test Method	PC GasComp SP 100	PC GasComp SP 150	PC GasComp SP 220
ISO Grade		100	150	220
Appearance	Visual	Colourless-yellow	Colourless-yellow	Yellow
Density, kg/L at 15°C	ASTM D4052	1.05	1.05	1.05
Kinematic Viscosity, cSt at 40°C cSt at 100°C	ASTM D445	103 21	159 30	233 41
Viscosity Index	ASTM D2270	224	228	238
Flash point, COC, °C / °F	D92	240/464	250/482	260/500
Pour Point, °C / °F	ASTM D5950	-51/-60	-51/-60	-51/-60
Foam control Seq. 1 Seq. 2 Seq. 3	ASTM D892	0/0 20/0 0/0	0/0 20/0 0/0	0/0 10/0 0/0
Specific Heat BTU/(lb°F) @ 38°C / 100°F BTU/(lb°F) @ 93°C / 200°F		0.47 0.50	0.46 0.49	0.46 0.49
Thermal Conductivity, BTU/hr.ft.°F @ 38°C / 100°F BTU/hr.ft.°F @ 93°C / 200°F		0.12 0.11	0.12 0.11	0.12 0.11

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

For more detailed recommendations on reciprocating cylinder packing lubrication for various gas stream components, contact Petro-Canada Lubricants for TechBulletin TB-1105 Cylinder Packing Lube Oil Recommendations.

Learn more about us: lubricants.petro-canada.com

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Committed to the disciplined operation of our business.



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