



## SPX COMPRESSOR FLUIDS

### Introduction

Petro-Canada's SPX Compressor Fluids are specially formulated synthetic lubricants which provide enhanced lubrication protection in high temperature and high pressure gas compressor operations. Unlike standard mineral oils, these polyglycol synthetic lubricants have much lower gas solubility, which reduces viscosity dilution and greatly improves the separation of lubricant from the processed gas. Low ash content, high viscosity index, excellent lubricity and shear stability are additional benefits in selecting SPX 5000, SPX 7000 and SPX 7100 instead of standard mineral oils for use in flooded screw compressors in Natural Gas service.

### Features and Benefits

- **Helps to reduce frequency of expensive overhauls due to corrosion**
  - Protects equipment from corrosion due to high water and sour gas dilution
- **Extends equipment life**
  - Helps resist dilution by entrained hydrocarbons from process gases
- **Suitable for propane refrigeration and production**
  - Resists dilution when in contact with liquid propane
- **Improved energy efficiency**
  - High viscosity index provides a stronger lubricant film over a wide range of temperatures
  - Higher viscosity at operating temperature helps give greater volumetric efficiency in rotary screw compressors

### Applications

**SPX 5000** is recommended for:

- Compression of light hydrocarbon gases, propane and sweet natural gas.

**SPX 7000 and 7100** are recommended for:

- **Compression of hydrocarbon mixtures containing butane and other light hydrocarbon gases where the expected dilution by gases other than natural gas is greater than 10 wt%.**
- **Sour natural gas and acid gas compression**
  - SPX 7000/7100 will dissolve high levels of water at temperatures below 70°C, helping to prevent corrosion during compressor shutdown.
- **Gas re-injection service**
  - As SPX 7000/7100 and water are mutually soluble below 70°C, damage to producing gas reservoirs is minimized.

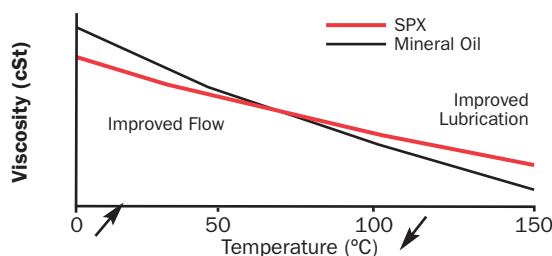
#### What is the HT difference?

Petro-Canada starts with the 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.



Contact a Petro-Canada Technical Services Advisor to determine which SPX fluid will meet your needs.

### Viscosity-Temperature Relationship SPX vs Mineral Oil



SPX Fluids' high viscosity index provide improved flow characteristics at low temperatures and provide better lubrication protection at high temperatures.

SPX 5000 and 7000 Compressor Fluids can also be used to lubricate reciprocating cylinder and packings. For more detailed recommendations for various gas streams and conditions, contact Petro-Canada. SPX

Compressor Fluids should not be mixed with mineral oil based lubricants. To convert to an SPX Compressor Fluid, please contact a Petro-Canada Technical Services Advisor.

## Typical Performance Data

PROPERTY	TEST METHOD	SPX 5000	SPX 7000	SPX 7100
Density, kg/L at 15°C	ASTM D4052	0.995	1.049	1.042
Appearance		Clear Brown	Clear Brown	Yellow
Flash Point COC, °C	ASTM D92	260	246	253
Kinematic Viscosity				
cSt at 40°C / 104°F	ASTM D445	153	141	94
cSt at 100°C / 212°F		23.5	27.4	19.2
Viscosity Index	ASTM D2270	196	233	227
Rust, Procedures A & B	ASTM D665	Pass A Only	Pass A & B	Pass A Only
Pour Point, °C	ASTM D5950	-33	-42	-48
Specific Heat				
BTU/(lb°F) @ 38°C / 100°F		0.48	0.47	0.48
BTU/(lb°F) @ 93°C / 200°F		0.51	0.51	0.51
Thermal Conductivity,				
BTU/hr.ft.°F @ 38°C / 100°F		0.096	0.096	0.095
BTU/hr.ft.°F @ 93°C / 200°F		0.091	0.091	0.090

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 for TechBulletin TB-1105 Cylinder Packing Lube Oil Recommendations.

## Health and Safety

To obtain Material Safety Data Sheet (MSDS), contact one of Petro-Canada's TechData Info Lines.

## TechData Info Lines

To reach a Customer Service Representative, please call:

**Canada (English)** . . . . . Phone 1-800-268-5850  
**(French)** . . . . . Phone 1-800-576-1686  
**United States** . . . . . Phone 1-877-730-2369  
**Latin America** . . . . . Phone +1-416-730-2369  
**Europe** . . . . . Phone +1-416-730-2389  
**Asia** . . . . . Phone +1-416-730-2372  
**China** . . . . . Phone +86 (21) 6362-0066

You can also e-mail us at [lubecsr@suncor.com](mailto:lubecsr@suncor.com)



To know more about how Petro-Canada lubricants, specialty fluids, oils and greases can help maximize your equipment performance, savings and productivity, please contact us at:

**North America** . . . . . Phone 1-866-335-3369  
**Europe** . . . . . Phone +44 (0) 121-781-7264  
**Germany** . . . . . Phone +49 (0)201 726 2913  
**Latin America** . . . . . Phone +1-416-730-2369  
**Asia** . . . . . Phone +1-416-730-2372  
**China** . . . . . Phone +86 (21) 6362-0066  
**E-mail** . . . . . [sales@suncor.com](mailto:sales@suncor.com)

Visit us on the web at [lubricants.petro-canada.ca](http://lubricants.petro-canada.ca)