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# Product Data Sheet



NOTE: The information in this publication is the result of careful testing in our laboratories, complemented by selected literature. It does not in any way constitute a guarantee, nor does it serve as a license to operate any patent. Due to widely varying conditions of product use, which are beyond our control, it is strongly recommended that the product be tested for suitability. Product typical properties in this publication are current as of January 27, 2011.

## SYNTHETIC NATURAL GAS COMPRESSOR

### NGL Series

The lubricant problems generally encountered with the compression of natural gas and CO<sub>2</sub> are related to the reaction of the gas stream with the lubricant. These include:

- Solubility of gas in the lubricant causes reduced lubricant viscosity resulting in cylinder scoring and high wear rates. Compensating for this with a higher viscosity lubricant can cause handling problems at lower temperatures.
- Absorption of lubricant into the gas stream results in high lubricant usage rates and a depletion of protective lubricant film in the cylinder.
- Condensed hydrocarbon liquids in the cylinder area can "wash" the lubricant from the cylinder walls causing severe mechanical damage.
- The carryover from increased lubricant feed rates or use of heavily compounded oils to compensate for hydrocarbon and CO<sub>2</sub> dilution and wash-out can damage the well formation and plug CO<sub>2</sub> injectors.
- Gases such as CO<sub>2</sub> and H<sub>2</sub>S may be corrosive to compressor components. NGL protects against the corrosive effect of these gases to compressor components while maintaining lubricating properties.

**Summit NGL Series** polyalkylene glycol lubricants were formulated to combat these problems associated with high pressure reciprocating compressors pumping natural gas, carbon dioxide, or process gases. **NGL Series** lubricants are extremely resistant to hydrocarbon and CO<sub>2</sub> dilution and absorption of the gas stream components. Any lubricant carryover will not impair the well formation as it is compatible with well-bore treatment fluids and soluble in water. The result is a lubricant maintaining the proper viscosity for wear protection, resisting wash-out and carryover, and posing no threat of damage to the well formation or CO<sub>2</sub> injectors.

The extremely high viscosity index of the **NGL Series** lubricants allows protection over a broad temperature range. The low pour point provides all-season ease of handling even in very cold climates. The use of pressurized and heated tanks as well as heat traced lines can be eliminated.

**Summit NGL Series** can offer these same advantages when compressing a number of other difficult gases including hydrogen, helium and nitrogen. Please contact your Summit representative with your specific gas application.

### Physical Properties

PRODUCT	NGL-444	NGL-555	NGL-777	NGL-888
ISO Grade	-	100	150	220
Viscosity:				
@ 40°C, cSt	79	105	150	209
@ 100°C, cSt	16.0	20.5	28.8	38.5
@ 100°F, SUS	397	113	753	1052
@ 210°F, SUS	83.5	21.0	140.0	185.0
Viscosity Index	218	222	233	236
Pour Point, °F (°C)	-55(-48)	-56(-49)	-44(-42)	-44(-42)
Flash Point, °F (°C)	450 (232)	505 (263)	500 (261)	515 (268)
Density, g/mL, 60°F	1.0426	1.0455	1.0517	1.0531
g/mL, 100°F	1.0247	1.0281	1.0338	1.0352
g/mL, 185°F	0.9865	0.9910	0.9957	0.9973