



Energyn GCS-180

Synthetic Gas Compressor Lubricant

Description; Description

Energyn GCS 180 is a fully synthetic polyglycol lubricant. It has been developed to meet the demanding lubrication requirements of re-liquefaction compressors working on LPG (liquefied petroleum gases) such as butane, propane and propylene, on LNG (liquefied natural gas) such as methane, and on hydrocarbon and chemical

gases such as ethylene, vinyl chloride and butadiene. The lubricant contains oxidation and corrosion inhibitors, providing excellent thermal and oxidation stability, together with the necessary corrosion protection for the compressor.

Applications; Applications

Energyn GCS 180 is for use in the working sumps of both rotary and reciprocating compressors in which the lubricant is in continuous contact with gas. If mineral oils were to be used in these applications, the gas would dissolve readily in the oil and cause a drastic reduction in viscosity, thus introducing the possibility of compressor failure due to inadequate lubrication. Hydrocarbon gases dissolve to a much lesser extent in Energyn GCS 180, so the lubricant maintains a higher working viscosity than a mineral oil of the same initial viscosity, thereby ensuring adequate lubrication performance and a long working life. Energyn GCS 180 is approved by Sulzer, Sabroe and Atlas Copco Energas (formerly Linde Compressors).

Painted surfaces - Normal industrial paints are not compatible with this lubricant. Surfaces should be left unpainted internally, or alternatively should be painted with two-component coatings such as epoxy resins.
 Miscibility - This product is not miscible with mineral oils.
 Seal Materials - Care must be taken to ensure that seal materials are compatible with GCS 180. The recommended materials are nitrile rubber (NBR), fluoro-silicone rubber and vinyl-methyl-polysiloxane rubber (VMQ). Incompatible materials are likely to shrink or swell excessively, thus causing either severe leakage or seizure of the seal.

Main Benefits; Main Benefits

- Because of the low solubility of hydrocarbon chemical gases in GCS 180, foaming and viscosity-reduction are minimal; this ensures the maintenance of hydrodynamic lubrication, and hence protection against wear.
- Long working life resulting in lower maintenance costs.

- Multi-gas service obviates the need to change lubricants when handling different gases. This simplifies lubricant inventories and so reduces overall costs.

Storage; Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of

of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.; of drum markings. Products should not

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Health, Safety and Environment; Health, Safety and Environment

Health, safety and environmental information is provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products.; Health, safety and environmental information is provided for this product in the Materials Safety Data Sheet. This gives details of potential hazards, precautions and First Aid measures, together with environmental effects and disposal of used products.

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Typical Characteristics; Typical Characteristics

	Test Methods; Test Methods	Units; Units	Grade ; Grade :
Colour			180 pale yellow
Density at 15 °C	ISO 3675, ASTM D1298	kg/m ³	1057
Flash Point (COC)	ISO 2592, ASTM D92	°C	260
Viscosity KV @: 40 °C	ISO 3104, ASTM D445	mm ² /s	185 35
Viscosity Index	ISO 2909, ASTM D2270		200
Pour Point	ISO 3016, ASTM D97	°C	-30
Neutralisation value	ASTM D974	mgKOH/g	0.52
Corrosion test	DIN 51 355		0 (nil corrosion AL and Fe)
Refractive Index at 20 °C			1.464

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

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