



Vacutop DI Special

Synthetic di-ester based vacuum pump lubricants

Description

Vacutop DI Special series synthetic vacuum pump lubricants are a combination of high grade synthetic ester base fluids and specially engineered additive systems. They are used successfully for the long term lubrication all kinds of mechanical vacuum pumps, such as screw, rotary vane or reciprocating (piston type), roots (lobe), claw etc. vacuum pumps.

Vacutop DI Special synthetic vacuum pump lubricants can be used successfully in presence of the following gases, such as:

Air, Butadiene, Carbon Dioxide (dry), Carbon Monoxide, Ethylene, Furnace (crack) Gas, Helium, Hydrogen, Hydrogen Sulphide (dry), Natural Gas, Methane, Nitrogen, Propane, Oxygen, Synthesis Gas, Sulphur Hexafluoride etc.

The nominal operating range is -15°C to 230°C . Vacutop DI Special series synthetic vacuum pump lubricants offer high performance protection of vacuum pumps operating under extreme conditions: high load and temperatures, compressing reactive and dirty gases, intermittent operation, in warm or cold climates and in mobile applications.

Benefits

Vacutop DI Special series synthetic vacuum pump lubricants have a multitude of advantages over mineral oils and other synthetic oils:

- Reduced compressor maintenance with very long drain intervals. Up to 8 times the service life of mineral oils.
- Low friction properties and resistance to viscosity increase from oxidation. This helps to improve operating efficiency and saves money on electrical energy consumption.

- Excellent foam control, reducing heat, oxidation and wear. High contact regions are protected against wear for increased equipment life and efficiency.
- Enhanced water separation. Water from condensation can cause unwanted oil/water emulsions, environmental discharge hazards and rust. Vacutop DI Special series synthetic vacuum pump lubricants resists acid formation, readily separates from water and is anti-rust fortified. Water can be easily drained off for simplified environmental discharge and increased oil life.
- Increased resistance to varnish, carbon and acid formation. Providing better protection and longer service life than petroleum oils, especially during hot operating conditions.
- Low volatility, resulting in lower evaporation losses and fewer problems with the oil getting into air tools, instruments or even the production process. It also means there is less oil to remove in the air/oil separators and fewer air filter changes.
- Fire and explosion possibilities are greatly reduced due to the low carbon forming tendencies and due to the relatively high flash, fire and auto ignition points.
- Operating temperature reduction. Vacutop DI Special series synthetic vacuum pump lubricants cools and removes heat more efficiently.

These benefits mean for the user of Vacutop DI Special series synthetic vacuum pump lubricants synthetic compressor lubricants: higher reliability and lower operational costs. The reliability is also supported by our own oil analysis program.

All performance data on this Technical Data Sheet are indicative only and can vary during production

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Gas type suitability

Vacutop DI Special synthetic di-ester based vacuum pump lubricants are suitable for successfully pumping the following gas types:

Air	CO ₂ (dry)	H ₂ S (dry)	Propane
Butadiene	Ethylene	Natural gas	Synthesis gas
Carbon monoxide	Helium	Methane	SF ₆
Furnace gas	Hydrogen	Nitrogen	Halogen compounds
	NO _x	O ₂	

Typical performance data

Vacutop DI Special Synthetic di-ester based vacuum pump lubricants

Property	Test method	DI 100 Special	DI 135 Special	DI 150 Special	DI 220 Special
ISO Viscosity Grade		100	135	150	220
Viscosity Index	ASTM D-2270	72	73	70	69
Viscosity @ 40 °C, cSt	ASTM D-445	95	135	155	225
Viscosity @ 100 °C, cSt	ASTM D-445	9.6	12.1	13.1	16.4
Flash point, COC °C	ASTM D-92	260	250	270	270
Pour point, °C	ASTM D-97	-33	-30	-30	-27
Auto ignition point, °C	ASTM E-659	>400	>400	>400	>400
Copper strip corrosion, 24 hrs @ 100 °C	ASTM D-130	1a	1a	1a	1a
Evaporation 22 hrs @ 99 °C, wt % g/10g	ASTM D-972	<1	<1	<1	<1
Demulsibility @ 54 °C, ml oil/water/emulsion (min)	ASTM D-2711	39/39/1 (60)	excellent	excellent	excellent
Density @ 15 °C, kg/l	ASTM D-4052	0.95	0.95	0.95	0.95

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