



Coolmax PAO

Synthetic ammonia refrigeration compressor fluid

Description

Coolmax PAO series are PAO based synthetic compressor fluids. They are specially formulated to lubricate compressors used in ammonia refrigeration systems. The problems normally seen (high oil consumption-reduced efficiency due to pipe clogging) will be history when Coolmax PAO series is used. Coolmax PAO series are fully miscible with conventional mineral oils, therefore a change-over procedure is fairly easy. High concentrations of mineral based product will however reduce the performance. Coolmax PAO series in its compatibility with paints, seals, gaskets and hoses, is similar to mineral oils. No special precautions related to compatibility are required when changing over from a mineral oil lubricant.

Gas type compatibility

Coolmax PAO is suitable for processing the following gases:

R717 (ammonia)

R290 (propane)

R22

Applications

Reciprocating and rotary screw compressors used in ammonia systems as well as gas compressors and vacuum pumps in process systems where ammonia vapours occur.

Advantages

- Fully compatible with ammonia
- Contains a minimum of additives
- Prevent deposit formation in low temperature systems
- Reduces discharge valve deposits
- Excellent lubricity
- High film strength
- Zero wax content
- Improves compressor efficiency
- Low volatility
- Very low vapour pressure



Typical performance data

	Test method	PAO 32	PAO 46	PAO 68	PAO 100	PAO 220	PAO 400
Density @ 15 °C, gr/l		0,842	0,850	0,860	0,860	0,850	0.850
Viscosity @ 40 °C	ASTM D445	34	45	67	104	220	400
Viscosity @ 100 °C	ASTM D445	6,1	7,42	9,94	13,77	25,0	40
Viscosity Index	ASTM D2270	128	129	131	130	149	150
Pour point, °C	ASTM D97	-30	-30	-30	-30	-39	-39
Flash point, °C	ASTM D92	227	232	233	246	260	280
Auto ignition point, °C		340	346	348	357	360	370
TAN, mg KOH/g	ASTM D664	<0,01	<0,01	<1,0	<1,0	<1.0	<1.0
Water content, ppm	ASTM D1744	<50	<50	<50	<50	<50	<5
4-ball wear test	ASTM D2793						
• Welding load, kg		100	100	110	150	na	na
• Scar mm, 1200 RPM 75 °C 20 kg/hr		0,4	0,4	0,4	0,4	na	na
Steel corrosion 24hrs @ 100 °C	ASTM D665A	None	None	None	None	None	None
Falex mm, 250 lbs for 10 min.	ASTM D3233	0,3	0,3	0,3	0,3	na	na
Foaming tendency ml, sequence I	ASTM D892	20	20	20	20	10/0	na
Demulsibility, 55 °C, 30 min		40/40/0	40/40/0	40/40/0	40/40/0	40/40/0	40/40/0
Copper corrosion, 24 hr		1a	1a	1a	1a	1a	1a

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

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