RENISO PG 68

Fully synthetic, polyalkylene glycol (PAG)-based, NH_3-miscible refrigeration oil.

Description

Ammonia was previously used as a refrigerant only in large refrigeration units with complex oil recirculation systems.
The refrigeration industry now as well offers compact systems that require the use of an ammonia-soluble refrigeration oil. RENISO PG 68 refrigeration oil was developed using a carefully selected combination of PAGs and additives for this application. RENISO PG 68 is ultra-dried.
RENISO PG 68 refrigeration oil displays excellent lubrication properties, very good viscosity-temperature behaviour, and high chemical and thermal stability. RENISO PG 68 is used successfully in practical applications where the compressor is placed under high thermal loads and valve temperatures.

Application

RENISO PG 68 is designed for compressors in industrial and commercial refrigerating units using ammonia as a refrigerant for direct expansion systems.
This product is ultra-dried. RENISO PG 68 is highly hygroscopic. Minimize exposure of the product to ambient air. After opening a container, use the entire contents within one working day and ensure that the container is tightly sealed between uses. Please contact our application engineers. RENISO PG 68 is not miscible and compatible with mineral oil.

Advantages/Benefits

- **Excellent NH_3 solubility / miscibility**

  (miscibility gap 10% oil: -35 °C)
- **Excellent viscosity-temperature behaviour**
- **Excellent low temperature flowability**
- **High thermal and chemical stability in contact with NH_3**
- **High lubricity**

Specifications

DIN 51503: KAB, NH_3-miscible refrigeration oil, fully synthetic - PAG.

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Typical Data:

Product name		**PG 68**	
Classification according to DIN 51503		KAB - NH_3-miscible refrigeration oil	
Properties	**Unit**		**Test method**
Density at 15 °C	kg/m³	1044	DIN 51757
Kinematic viscosity at 40 °C at 100 °C	 mm²/s mm²/s	 70 14	 DIN EN ISO 3104
Viscosity index	-	210	DIN ISO 2909
Pourpoint	°C	- 52	DIN ISO 3016
Neutralization number	mgKOH/g	0.04	DIN 51558-1
Colour	-	0.5	DIN ISO 2049
Flashpoint	°C	250	DIN ISO 2592
Miscibility with NH_3, 10% oil with 90% NH_3	°C	- 35	DIN 51514
Water content	mg/kg	350	DIN 51777-2

Please note:
1) It is recommended to use steel materials (e.g. for the valves)
2) Equipment materials have to be compatible with polyglycols – PAGs (elastomers / plastic materials)
3) RENISO PG 68 is not compatible and miscible with mineral oils
4) RENISO PG 68 is a polar lubricant and hygroscopic
5) Ammonia (NH_3) can evaporate from the oil

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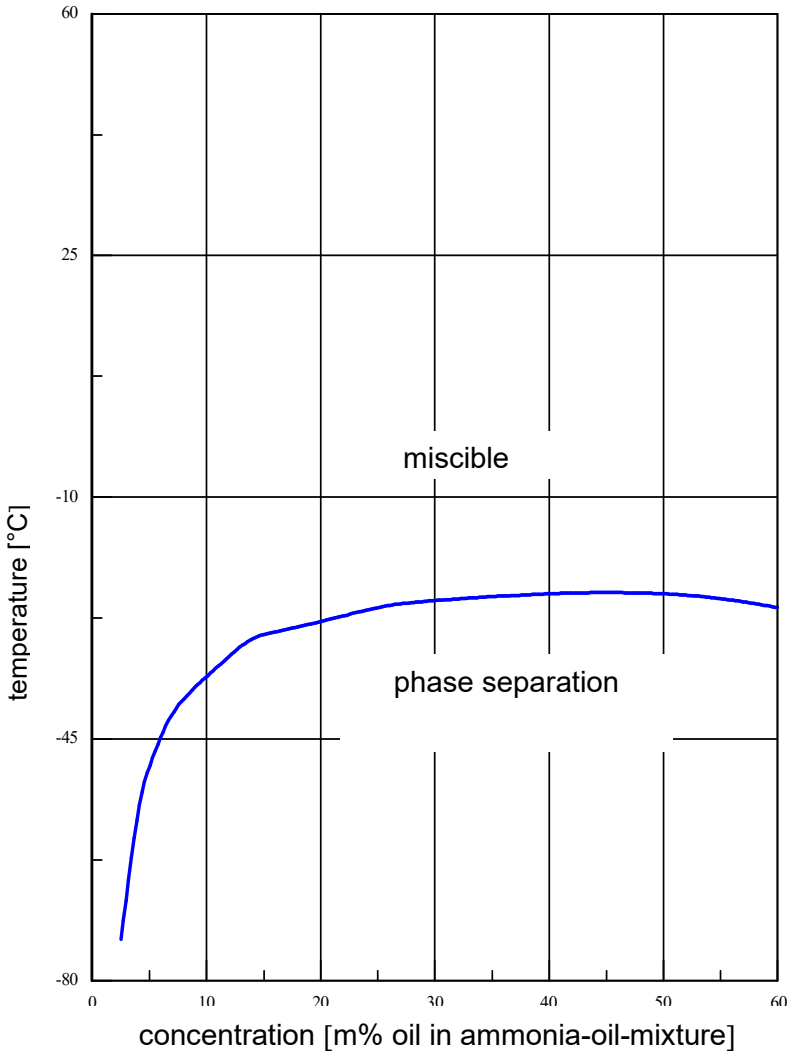
Miscibility behaviour (miscibility gap): RENISO PG 68 and ammonia R717



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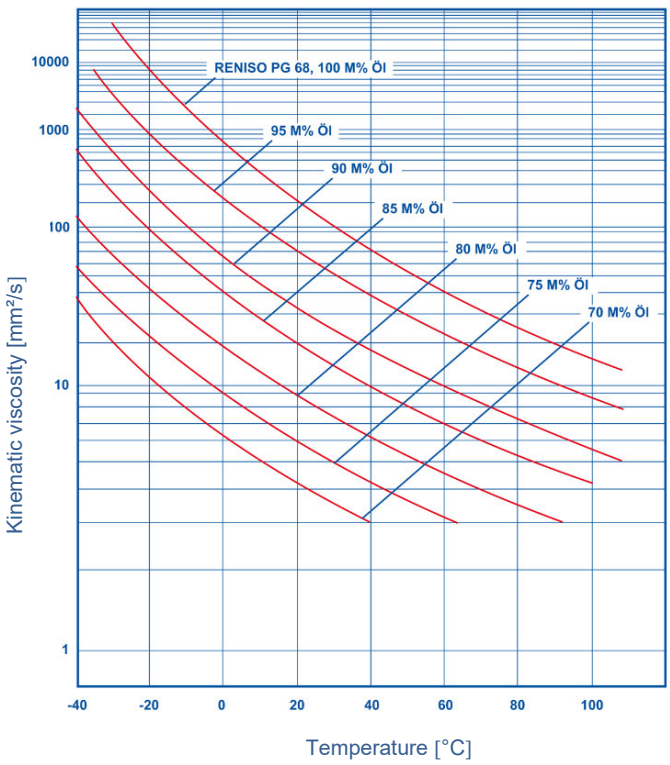
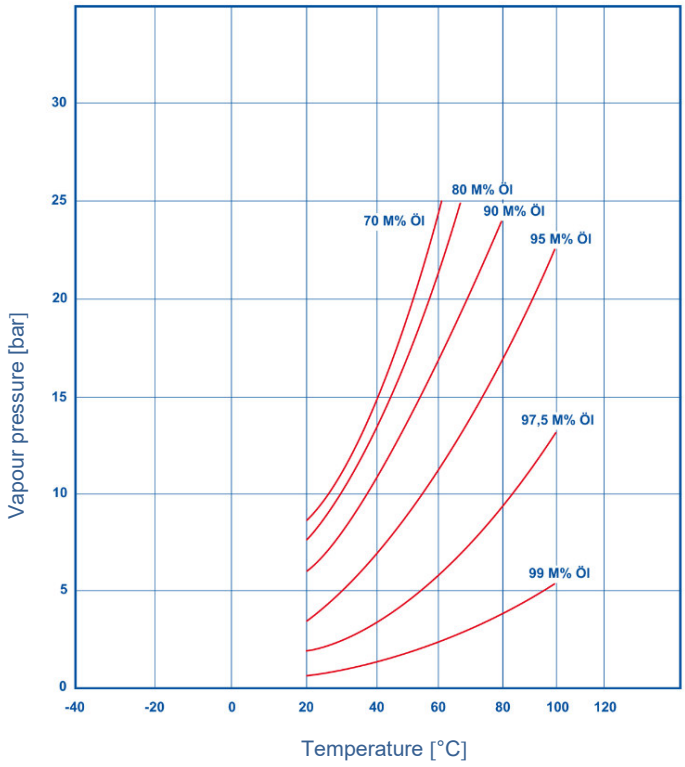
Kinematic viscosity and vapour pressure: RENISO PG 68 and ammonia





All % figures represent m% oil in the refrigerant-oil-mixture.

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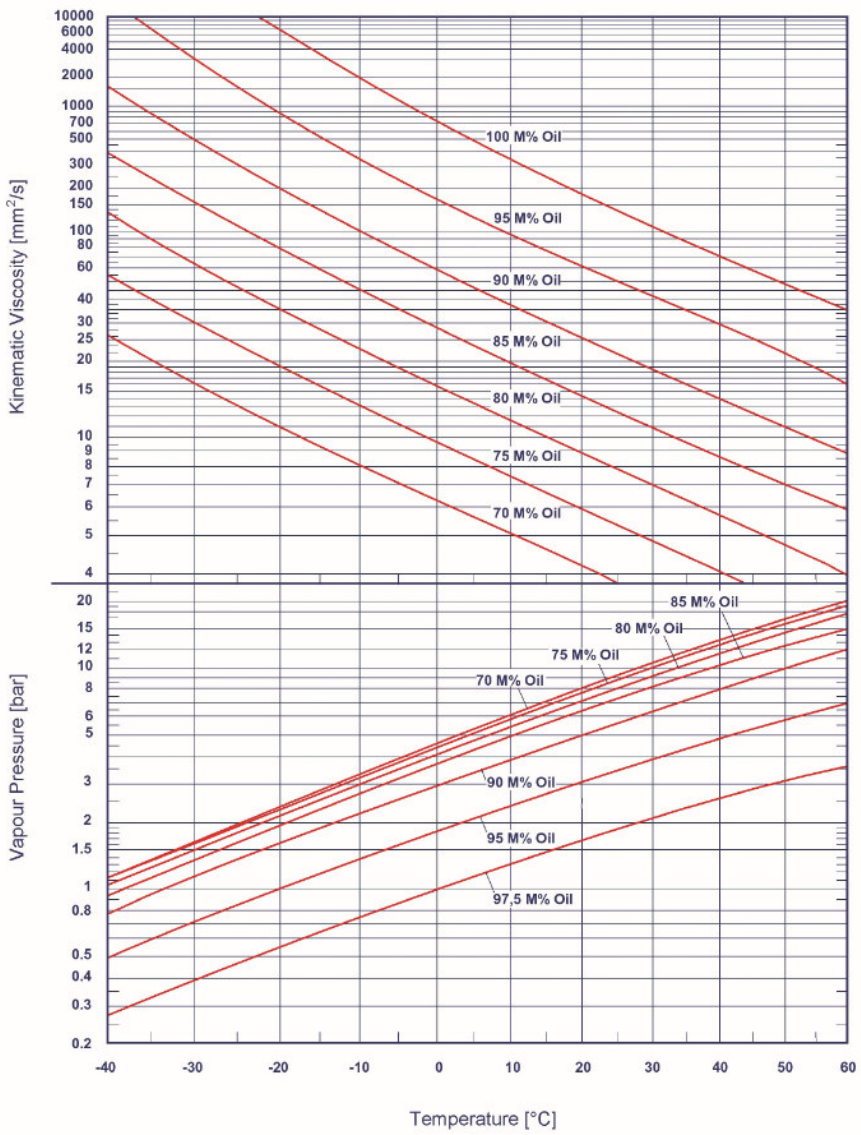
Kinematic viscosity and vapour pressure: RENISO PG 68 and R290



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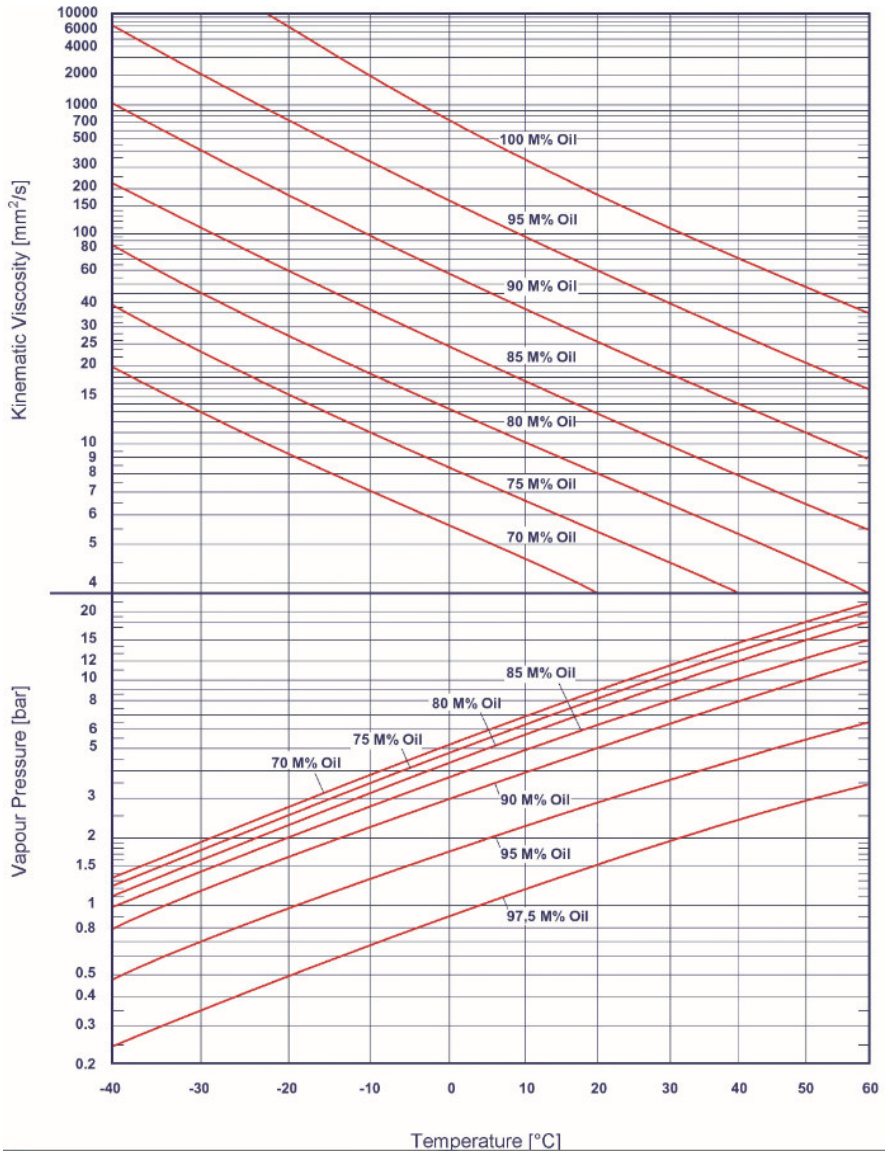
Kinematic viscosity and vapour pressure: RENISO PG 68 and propene R1270



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