Product Information

RENISO SYNTH 68

Fully synthetic PAO-based refrigeration oil,

· **for highly stressed ammonia (NH_3) compressors**

· **for CO_2 applications (R 744) – not miscible with CO_2**

Description

RENISO SYNTH 68 is based on polyalphaolefins (PAO) with excellent chemical and thermal stability. It was developed especially for applications where ammonia is used as refrigerant.

RENISO SYNTH 68 has a better lifetime compared to mineral oil-based refrigeration oils, lower evaporating losses due to the synthetic components, and an excellent low temperature flowability.

RENISO SYNTH 68 can also be used in CO_2 systems – not miscible with CO_2.

RENISO SYNTH 68 is approved according to NSF H1 (USA 2005). (NSF H1 describes lubricants of the highest quality and purity which can safely come into occasional contact with products - food or confectionary - during manufacturing).

Advantages/ Benefits

- **Extreme chemical and thermal stability with NH_3**
- **High stability with CO_2 (R 744)**
- **High viscosity index, good viscosity-temperature behaviour**
- **Excellent low temperature flowability, excellent cold flowing properties (especially in evaporators)**
- **Extremely low pourpoint**
- **Low evaporating losses**
- **High flashpoint**
- **Good lubricity**
- **NSF H1 - approval (USA 2005)**

The above information is supplied to the best of our knowledge and belief on the basis of the current state-of-the-art and our own development work. Subject to amendment.

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Application

RENISO SYNTH 68 is recommended instead of mineral oil-based or alkylbenzene-based products especially in highly stressed ammonia applications and / or for deep evaporating temperatures. RENISO SYNTH 68 can be used in piston as well as in oil-injected screw compressors.

RENISO SYNTH 68 can also be used in CO_2 applications as a not miscible CO_2 refrigeration oil.

Specifications

RENISO SYNTH 68 meets and exceeds the requirements of DIN 51 503-1, Category KAA: refrigeration oils which are not miscible with ammonia (NH_3).

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Typical technical data:

Product name		**SYNTH 68**	
Characteristics	**Unit**		**Test method**
Density at 15 °C	kg/m³	835	DIN 51 757
Flashpoint, Cleveland open cup	°C	260	DIN ISO 2592
Colour		0.5	DIN ISO 2049
Kinematic viscosity at 40 °C at 100 °C	 mm²/s mm²/s	 68 10.5	 DIN 51 562-1
Viscosity index	-	142	DIN ISO 2909
Pour point	°C	-57	DIN ISO 3016
U-tube flowing	°C	-42	DIN 51 568
Neutralization number	mgKOH/g	0.01	DIN 51 558-4
Water content	mg/kg	30	DIN 51 777-2

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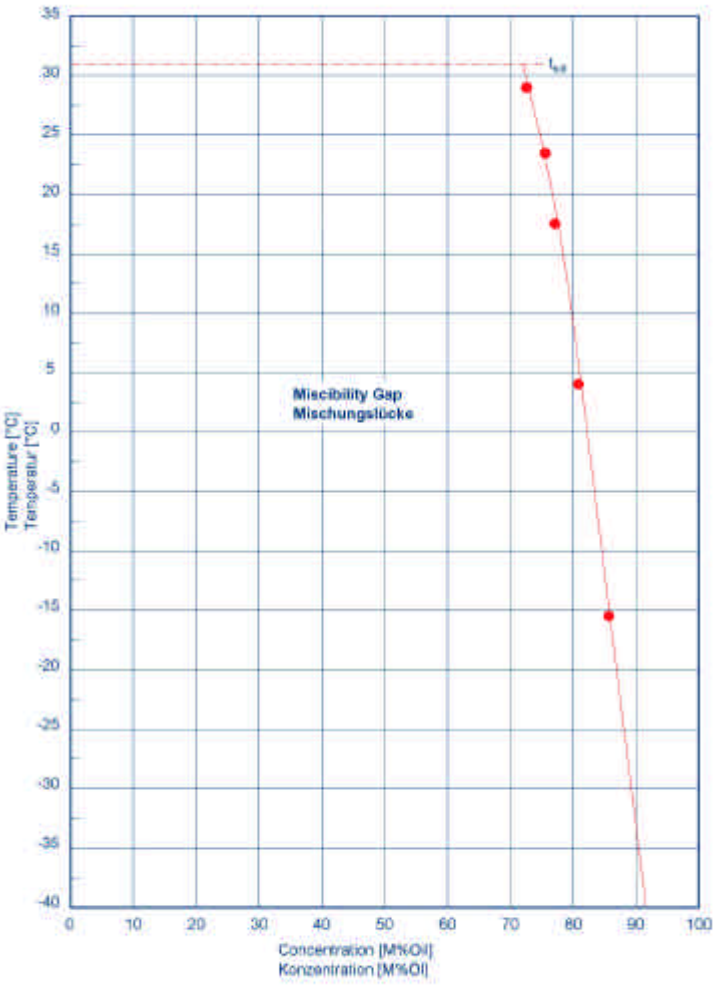
Miscibility gap: RENISO SYNTH 68 – CO_2



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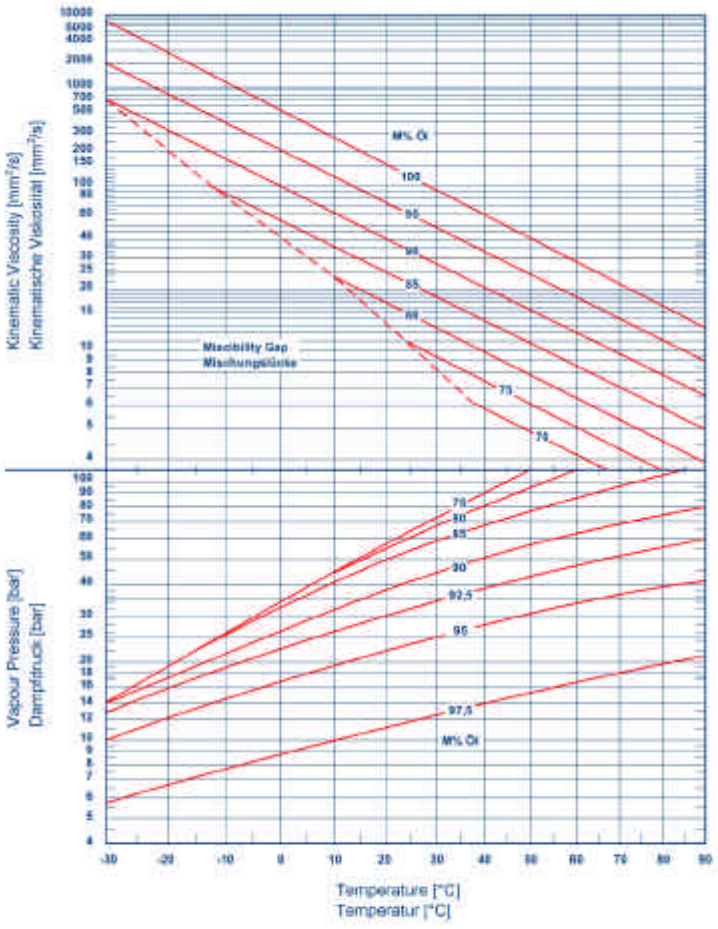
Kinematic viscosity and vapour pressure: RENISO SYNTH 68 – CO_2



M%Öl = Mass Percent Oil in CO_2
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