

# Klüber Summit HySyn FG-32 ... 100

Mineral oil free compressor oils for the food processing and pharmaceutical industries



## Description

Klüber Summit HySyn FG oils are mineral oil free compressor oils based on synthetic hydrocarbons. They comply with the German law on food products and associated ancillaries (LMBG, § 5, section 1, sentence 1) and meet the requirements specified in the "guidelines of sec. 21 CFR 178.3570 of FDA regulations".

Klüber Summit HySyn FG oils also meet VDL requirements. They are extremely resistant to oxidation, have a good low-temperature behavior, and reduce friction and wear.

In addition to their excellent anti-corrosion properties, Klüber Summit HySyn FG oils have a very good air and water separating behavior.

## Application

Being free from mineral oil, Klüber Summit HySyn FG compressor oils can be used in the food processing and pharmaceutical industries.

ISO VG 32, 46 and 68 types are particularly suitable for rotary screw and vane compressors.

Klüber Summit HySyn FG-100 is suitable for reciprocating and rotary vane compressors.

## Application notes

We recommend using Klüber Summit Varnasolv to completely remove varnish and carbon residues from the system.

Add Klüber Summit Varnasolv to the compressor oil at a ratio of 10 % (i.e. add 1 liter of Klüber Summit Varnasolv to 9 liters of compressor oil).

Be sure to drain enough compressor oil to allow for the additional quantity.

Let the compressor continue operating for an additional 40 to 60 hours to dissolve all varnish and carbon residues.

Completely drain the unit while the oil is still hot in order to prevent the dissolved residues from settling.

Then exchange the filters and refill the unit with the appropriate Klüber Summit HySyn FG oil.

## Minimum shelf life

The minimum shelf life is approx. 60 months if the product is stored in its unopened original container in a dry place.

## Klüber Summit HySyn FG-32 ... 100

- Free from mineral oil
- USDA H1 authorized
- Meet VDL requirements
- Excellent low-temperature behavior
- Very wide service temperature range
- Excellent oxidation stability

## Pack size

19 l canister  
208 l drum

## Compatibility

According to our knowledge, Klüber Summit HySyn FG oils are compatible with all materials resistant to mineral oil, e.g. Neoprene, NBR, FPM, PTFE, acrylic and epoxide resin paints, Nylon (polyamide) and PVC.

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## Product data

	Klüber Summit HySyn FG-32	Klüber Summit HySyn FG-46	Klüber Summit HySyn FG-68	Klüber Summit HySyn FG-100
Color, aspect	colorless, slightly turbid	colorless, slightly turbid	colorless, slightly turbid	colorless, slightly turbid
Service temperature range*, °C, approx.	– 45 ... 135	– 40 ... 135	– 40 ... 135	– 35 ... 135
ISO VG DIN 51 519	32	46	68	100
Density, DIN 51 757 at 20 °C, g/ml, approx.	0.83	0.84	0.83	0.84
Kinematic viscosity, DIN 51 562, approx. at 40 °C, mm <sup>2</sup> /s at 100 °C, mm <sup>2</sup> /s	33 6.1	50 7.9	70 9.9	95 12.7
Flash point, DIN ISO 2592, °C	> 230	> 240	> 240	> 240
Pour point, DIN ISO 3016, °C	≤ – 50	≤ – 45	≤ – 45	≤ – 40
Steel corrosion, DIN 51 585, rating	0 – A	0 – A	0 – A	0 – A
Copper corrosion, DIN EN ISO 2160 (24 h at 100 °C) rating	2 – 100	2 – 100	2 – 100	2 – 100
Foaming tendency, ASTM-D 892 sequ. I (23.5 °C), ml sequ. II (93.5 °C), ml sequ. III (23.5 °C after 93.5 °C), ml	< 150 / 0 < 75 / 0 < 150 / 0	< 150 / 0 < 75 / 0 < 150 / 0	< 150 / 0 < 75 / 0 < 150 / 0	< 150 / 0 < 75 / 0 < 150 / 0
Demulsification DIN 51 599, 54 °C during 30 min	40 / 38 / 2	40 / 38 / 2	40 / 39 / 1	40 / 38 / 2
Conradson carbon residues DIN 51 551 T 01, % by weight	≤ 0.02	≤ 0.02	≤ 0.02	≤ 0.02

\* Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component.

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Elastomers	Klüber Summit HySyn FG-32	Klüber Summit HySyn FG-46	Klüber Summit HySyn FG-68	Klüber Summit HySyn FG-100
<b>SRE NBR 1</b> (100 °C / 168 h)				
Change in volume in %	+ 4	+ 3	+ 2	+ 2
Change in hardness (Shore A)	– 2	– 2	– 1	± 0
<b>72 NBR 902</b> (100 °C / 168 h)				
Change in volume in %	– 3	– 3	– 4	– 4
Change in hardness (Shore A)	+ 5	+ 5	+ 5	+ 5
<b>90 NBR 108</b> (100 °C / 168 h)				
Change in volume in %	– 1	– 1	– 1	– 1
Change in hardness (Shore A)	+ 2	+ 2	+ 3	+ 3
<b>75 FKM 585</b> (100 °C / 168 h)				
Change in volume in %	± 0	± 0	± 0	± 0
Change in hardness (Shore A)	± 0	± 0	± 0	± 0

## Elastomer compatibility

Owing to the many different compounds within a family of elastomers, we recommend checking elastomer compatibility prior to any series application.

The data in this product information is based on our general experience and knowledge at the time of printing and is intended to give information of possible applications to a reader with technical experience. It constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary tests with the selected product. We recommend contacting our Technical Consulting Staff to discuss your specific application. If required and possible we will be pleased to provide a sample for testing. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this product information at any time without notice.



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