

# Klüber Summit HySyn FG 15 ... 100

Fully synthetic compressor oils for the food-processing and pharmaceutical industry



## Benefits for your application

- Klüber Summit HySyn FG oils are NSF H1 registered for use in the food-processing and pharmaceutical industry and comply with FDA 21 CFR Sec 178.3570
- ISO 21469 certified – supports compliance with the hygienic requirements of your production. You will find further information about ISO Standard 21469 on our website [www.klueber.com](http://www.klueber.com)
- Low maintenance and operating costs due to extended oil change intervals up to 4,000 operating hours in oil-injected screw-type compressors
- Easy compressor conversion from mineral to the synthetic Klüber Summit HySyn FG oils due to miscibility and compatibility with common seal materials
- Low tendency to evaporation and thus low impact of the oil vapour on the compressed air
- Long service of oils filters, activated carbon filters and oil separators
- Also suitable for the lubrication of gears due to the high scuffing load capacity
- Used and approved by Aerzener, Air Liquide, Boge, CompAir, Worthington, Getriebebau Nord, Lenze etc.

## Description

Klüber Summit HySyn FG oils are air compressor oils based on synthetic hydrocarbon oils. They can be mixed with mineral oils and other synthetic hydrocarbon oils.

Klüber Summit HySyn FG oils offer good oxidation stability due to the synthetic base oil, thus minimizing oxidation residues in the compressors and extending oil change intervals and the service life of oil filters and separators.

Klüber Summit HySyn FG oils are NSF H1 registered and therefore comply with FDA 21 CFR § 178.3570. The lubricants were developed for incidental contact with products and packaging materials in the food-processing, cosmetics, pharmaceutical or animal feed industries. The use of Klüber Summit HySyn FG oils can contribute to increase reliability of your production processes. We nevertheless recommend conducting an additional risk analysis, e.g. HACCP.

## Application

Klüber Summit HySyn oils can be used for oil-injected screw-type compressors, reciprocating piston compressors and centrifugal compressors.

Klüber Summit HySyn FG oils are intended for use in compressors of the food-processing and pharmaceutical industry requiring oil-free compressed air (without oil vapour which cannot be removed by the oil separator).

Klüber Summit HySyn FG oils can also be used for the lubrication of gears in oil-free screw-type compressors.

Owing to their good stability, these oils are also suitable for low-temperature applications in industrial gears. Furthermore, Klüber Summit HySyn FG 32-46-68 oils are used in chains, particularly those operating at low temperatures, e.g. in freezing tunnels.

## Application notes

When selecting the oil viscosity for air compressors, please observe the manufacturers' instructions.

For oil-injected screw-type compressors normally the viscosity grades ISO VG 32, 46 and 68 are used, for reciprocating piston compressors ISO VG 68 and 100 and for centrifugal compressors ISO VG 32.

In addition Klüber Summit HySyn FG 68 can be used for the IS machine plunger lubrication in the glass industry.

### Notes on switching from mineral to synthetic oils :

When switching a used compressor to a Klüber Summit HySyn FG oil, drain old oil from whole circuit of compressor while still warm.

We also recommend changing all oil filters and separators. Then refill the compressor with Klüber Summit HySyn FG oil.

When switching from mineral oil to a synthetic Klüber Summit HySyn FG oil please consider that the compressor may contain oxidation residues in the form of blackened or contaminated oil. As such residues can affect the service life of the fresh Klüber Summit HySyn FG oil, the compressor should be cleaned using the Klüber Summit Varnasolv conditioner (cf. product information leaflet).

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After switching to a Klüber Summit HySyn FG oil we recommend determining the oil change interval through an oil analysis or the Klüber Summit TAN Kit after approx. 500 to 1000 operating hours.

Your contact person at Klüber Lubrication would be pleased to provide further information.

## Material safety data sheets

Material safety data sheets can be requested via our website [www.klueber.com](http://www.klueber.com). You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	Klüber Summit HySyn FG 15	Klüber Summit HySyn FG 32	Klüber Summit HySyn FG 46	Klüber Summit HySyn FG 68	Klüber Summit HySyn FG 100
Canister 20 l	+	+	+	+	+
Drum 200 l	+	+	+	+	+

Product data	Klüber Summit HySyn FG 15	Klüber Summit HySyn FG 32	Klüber Summit HySyn FG 46	Klüber Summit HySyn FG 68	Klüber Summit HySyn FG 100
Article number	050039	050013	050014	050015	050016
NSF-H1 registration	129 191	133 733	133 734	133 735	133 736
Lower service temperature	-45 °C / -49 °F	-45 °C / -49 °F	-40 °C / -40 °F	-40 °C / -40 °F	-35 °C / -31 °F
Upper service temperature	100 °C / 212 °F	135 °C / 275 °F	135 °C / 275 °F	135 °C / 275 °F	135 °C / 275 °F
Density, DIN 51757, 20 °C	approx. 0.82 g/cm <sup>3</sup>	approx. 0.83 g/cm <sup>3</sup>	approx. 0.83 g/cm <sup>3</sup>	approx. 0.83 g/cm <sup>3</sup>	approx. 0.84 g/cm <sup>3</sup>
Foam test, ASTM-D 892, ISO 6247, sequence I/24 °C	<= 150/10 ml	<= 150/10 ml	<= 150/10 ml	<= 150/10 ml	<= 150/10 ml
Foam test, ASTM-D 892, ISO 6247, sequence II/ 93.5 °C	<= 75/10 ml	<= 75/10 ml	<= 75/10 ml	<= 75/10 ml	<= 75/10 ml
Foam test, ASTM D 892, ISO 6247, sequence III/24°C	<= 150/10 ml	<= 150/10 ml	<= 150/10 ml	<= 150/10 ml	<= 150/10 ml
Demulsifying capacity, DIN 51599, ASTM D 1401, at 54 °C	40/37/3 ml	40/37/3 ml	40/37/3 ml	40/37/3 ml	
Demulsifying capacity, DIN ISO 6614, ASTM D 1401 at 82 °C					40/37/3 ml
Flash point, DIN EN ISO 2592, Cleveland, open-cup apparatus	>= 180 °C	>= 230 °C	>= 240 °C	>= 240 °C	>= 240 °C
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 15 mm <sup>2</sup> /s	approx. 32 mm <sup>2</sup> /s	approx. 46 mm <sup>2</sup> /s	approx. 68 mm <sup>2</sup> /s	approx. 100 mm <sup>2</sup> /s
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 3.5 mm <sup>2</sup> /s	approx. 5.8 mm <sup>2</sup> /s	approx. 7.7 mm <sup>2</sup> /s	approx. 10.4 mm <sup>2</sup> /s	approx. 13.8 mm <sup>2</sup> /s
Viscosity index, DIN ISO 2909	>= 105	>= 120	>= 120	>= 120	>= 120
Copper corrosion, DIN EN ISO 2160, 24 h/100°C	1 - 100 corrosion degree	1 - 100 corrosion degree	1 - 100 corrosion degree	1 - 100 corrosion degree	1 - 100 corrosion degree



<b>Product data</b>	<b>Klüber Summit HySyn FG 15</b>	<b>Klüber Summit HySyn FG 32</b>	<b>Klüber Summit HySyn FG 46</b>	<b>Klüber Summit HySyn FG 68</b>	<b>Klüber Summit HySyn FG 100</b>
Pour point, DIN ISO 3016	<= -65 °C	<= -50 °C	<= -45 °C	<= -45 °C	<= -40 °C
FZG scuffing test, DIN ISO 14635-1, A/8.3/90, scuffing load stage		>= 12	>= 12	>= 12	>= 12
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	60 months	60 months	60 months	60 months	60 months



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### Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 80 years.

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The data in this document is based on our general experience and knowledge at the time of publication 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 field tests with the product selected for a specific application. All data are guide values which depend on the lubricant's composition, the intended use and the application method. The technical values of lubricants change depending on the mechanical, dynamical, chemical and thermal loads, time and pressure. These changes may affect the function of a component. We recommend contacting us to discuss your specific application. If possible we will be pleased to provide a sample for testing on request. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this document at any time without notice.

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