Klüber Summit HySyn FG 15 … 100

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

Your benefits at a glance

- 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
- 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.

Your requirements - our solution

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.

MOSH-MOAH Hint

The chromatographic measurement of MOSH can also detect saturated hydrocarbons of form other sources than mineral oil so it may be possible for chromatographic MOSH peaks to be detected in some Klüber Lubrication H1 products.

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.

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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).

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. You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	Klüber Summit HySyn FG 22	Klüber Summit HySyn FG 15	Klüber Summit HySyn FG 32	Klüber Summit HySyn FG 46
Canister 1 l			+	+
Canister 5 l		+	+	+
Canister 20 l		+	+	+
Bucket 19 l			+	+
Drum 200 l		+	+	+
Drum 208 l		+	+	+

Pack sizes	Klüber Summit HySyn FG 68	Klüber Summit HySyn FG 100
Canister 1 l	+	+
Canister 5 l		
Canister 20 l	+	+
Bucket 19 l	+	+
Drum 200 l	+	+
Drum 208 l	+	+

Characteristics	Klüber Summit HySyn FG 22	Klüber Summit HySyn FG 15	Klüber Summit HySyn FG 32	Klüber Summit HySyn FG 46
Article number	050260	050039	050013	050014
Mineral Oils associated with MOSH (Mineral Oil Saturated Hydrocarbons) / MOAH (Mineral Oil Aromatic Hydrocarbons), (Information based on recipe. The presence of impurities, cannot be ruled out.)	-	Intentionally added	Intentionally added	Intentionally added
Colour space	yellow	colourless	yellow	yellow
Service temperature, lower limit	-45 °C	-45 °C	-45 °C	-40 °C
Service temperature, upper limit	°C	100 °C	135 °C	135 °C

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Characteristics	Klüber Summit HySyn FG 22	Klüber Summit HySyn FG 15	Klüber Summit HySyn FG 32	Klüber Summit HySyn FG 46
NSF H1 registration number	171828	129191	133733	133734
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 54°C	40-37-3 (30) ml (min)	40-37-3 (30) ml (min)	40-37-3 (30) ml (min)	40-37-3 (30) ml (min)
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 82°C	-	-	-	-
Density, DIN 51757, 20°C	approx. 0.82 g/cm³	approx. 0.82 g/cm³	approx. 0.83 g/cm³	approx. 0.83 g/cm³
Flash point, DIN EN ISO 2592, Cleveland open cup	≥ 200 °C	≥ 180 °C	≥ 230 °C	≥ 240 °C
Foam test, ISO 6247 / ASTM D892, 24°C, sequence I	≤ 150/10 ml	≤ 150/10 ml	≤ 150/10 ml	≤ 150/10 ml
Foam test, ISO 6247 / ASTM D892, 24°C, sequence III	≤ 150/10 ml	≤ 150/10 ml	≤ 150/10 ml	≤ 150/10 ml
Foam test, ISO 6247 / ASTM D892, 93.5°C, sequence II	≤ 75/10 ml	≤ 75/10 ml	≤ 75/10 ml	≤ 75/10 ml
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 100°C	approx. 4.5 mm²/s	approx. 3.5 mm²/s	approx. 5.8 mm²/s	approx. 7.7 mm²/s
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 40°C	approx. 22 mm²/s	approx. 15 mm²/s	approx. 32 mm²/s	approx. 46 mm²/s
Viscosity index, DIN ISO 2909	≥ 115	≥ 105	≥ 120	≥ 120
Copper corrosion, DIN EN ISO 2160, 24 h, 100°C	1 - 100 - 24 corrosion degree	1 - 100 - 24 corrosion degree	1 - 100 - 24 corrosion degree	1 - 100 - 24 corrosion degree
Pour point, DIN ISO 3016, ASTM D97, ASTM D5950, ASTM D7346	≤ -60 °C	≤ -65 °C	≤ -50 °C	≤ -45 °C
FZG scuffing test, DIN ISO 14635-1, A / 8.3 / 90, failure load stage	-	-	≥ 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

Characteristics	Klüber Summit HySyn FG 68	Klüber Summit HySyn FG 100
Article number	050015	050016
Mineral Oils associated with MOSH (Mineral Oil Saturated Hydrocarbons) / MOAH (Mineral Oil Aromatic Hydrocarbons), (Information based on recipe. The presence of impurities, cannot be ruled out.)	Intentionally added	Intentionally added
Colour space	yellow	yellow
Service temperature, lower limit	-40 °C	-35 °C
Service temperature, upper limit	135 °C	135 °C

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Characteristics	Klüber Summit HySyn FG 68	Klüber Summit HySyn FG 100
NSF H1 registration number	133735	133736
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 54°C	40-37-3 (30) ml (min)	-
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 82°C	-	40-37-3 (60) ml (min)
Density, DIN 51757, 20°C	approx. 0.83 g/cm³	approx. 0.84 g/cm³
Flash point, DIN EN ISO 2592, Cleveland open cup	≥ 240 °C	≥ 240 °C
Foam test, ISO 6247 / ASTM D892, 24°C, sequence I	≤ 150/10 ml	≤ 150/10 ml
Foam test, ISO 6247 / ASTM D892, 24°C, sequence III	≤ 150/10 ml	≤ 150/10 ml
Foam test, ISO 6247 / ASTM D892, 93.5°C, sequence II	≤ 75/10 ml	≤ 75/10 ml
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 100°C	approx. 10.4 mm²/s	approx. 13.8 mm²/s
Kinematic viscosity, DIN EN ISO 3104 / DIN 53000-1, based on standard / ASTM D445 / ASTM D7042, 40°C	approx. 68 mm²/s	approx. 100 mm²/s
Viscosity index, DIN ISO 2909	≥ 120	≥ 120
Copper corrosion, DIN EN ISO 2160, 24 h, 100°C	1 - 100 - 24 corrosion degree	1 - 100 - 24 corrosion degree
Pour point, DIN ISO 3016, ASTM D97, ASTM D5950, ASTM D7346	≤ -45 °C	≤ -40 °C
FZG scuffing test, DIN ISO 14635-1, A / 8.3 / 90, failure load stage	≥ 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

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 95 years.

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