Klübersynth GE 14

Special greases for small gears operating under heavy loads and with a high percentage of sliding friction

Your benefits at a glance

- Excellent scuffing load strength and wear protection due to carefully selected additives
- Reliable lubricant film formation in a wide service temperature range due to fully synthetic base oils
- Excellent protection against tribo-corrosion due to good backflow behaviour
- Reliable operation due to tested and proven compatibility with seals

Your requirements - our solution

Do you need to design small, grease-lubricated gearboxes that are both efficient and powerful? Does increasing power density pose an additional challenge? If so, you will probably also have to observe a wide service temperature range as well as excellent wear protection. Our special greases of the Klübersynth GE 14 series are the right solutions for such tasks. Based on our many years of experience, we have developed these speciality greases consisting of synthetic hydrocarbons, ester oil and an aluminium complex soap thickener. With their precisely tuned additives and the solid lubricants contained, the products offer excellent wear protection over a wide service temperature range.

Application

Due to the excellent scuffing load strength and the good wear protection, the Klübersynth GE 14 series can be used for the lubrication of spur, bevel and planetary gears. The products are also suitable for lubricating rolling bearings, joints and slide rails performing oscillating movements, e.g. in power tools. Steel / steel, steel / aluminium and aluminium / aluminium material pairings are reliably protected against tribo-corrosion. Compatibility with seals has been proven in tests, which adds to operational reliability.

Application notes

Products of the Klübersynth GE 14 series are supplied ready for use. They can be applied using a spatula, brush or grease gun. Low-cost application with fully automatic standard (micro) metering systems is also possible. Please note, however, that due to different system configurations and application conditions the pumpability of the product used has to be confirmed. It should be noted that elastomers from one or several manufacturers can behave differently; therefore tests should be performed.

We will be glad to support you with application-specific advice.

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	Klübersynth GE 14-110	Klübersynth GE 14-111	Klübersynth GE 14-112
Can 1 kg	+	+	+
Bucket 25 kg	+	+	+
Drum 180 kg	+	+	+

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Characteristics	Klübersynth GE 14-110	Klübersynth GE 14-111	Klübersynth GE 14-112
Article number	012328	012253	012358
Composition	solid lubricant	solid lubricant	solid lubricant
Composition, thickener	aluminium complex soap	aluminium complex soap	aluminium complex soap
Composition, type of oil	ester oil , synthetic hydrocarbon oil	ester oil , synthetic hydrocarbon oil	ester oil , synthetic hydrocarbon oil
Colour space	yellow	yellow	yellow
Texture	fibrous , homogeneous	fibrous , homogeneous	fibrous , homogeneous
Service temperature, lower limit	-55 °C	-55 °C	-45 °C
Service temperature, upper limit	140 °C	140 °C	140 °C
Worked penetration, DIN ISO 2137 / ASTM D217, 25°C, lower limit	360 0.1 mm	320 0.1 mm	280 0.1 mm
Worked penetration, DIN ISO 2137 / ASTM D217, 25°C, upper limit	390 0.1 mm	360 0.1 mm	320 0.1 mm
Shear viscosity, Klüber method: PN 008@DIN 53019-1, equipment: rotational viscometer, 25°C, 300 s^{-1}	approx. 2000 mPas	approx. 3000 mPas	approx. 5000 mPas
Kinematic viscosity of the base oil, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 100°C	approx. 12 mm^2/s	approx. 16 mm^2/s	approx. 16 mm^2/s
Kinematic viscosity of the base oil, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 40°C	approx. 72 mm^2/s	approx. 110 mm^2/s	approx. 110 mm^2/s
Copper corrosion, DIN 51811, 24 h, 100°C	1 - 100 - 24 corrosion degree	1 - 100 - 24 corrosion degree	1 - 100 - 24 corrosion degree
SKF-EMCOR, DIN 51802, Klüber method: distilled water, 168 h	≤ 1 corrosion degree	≤ 1 corrosion degree	≤ 1 corrosion degree
Flow pressure, DIN 51805-2, -45°C			≤ 1400 mbar
Flow pressure, DIN 51805-2, -55°C	≤ 1400 mbar	≤ 1400 mbar	
Dropping point, DIN ISO 2176 / IP 396	≥ 200 °C	≥ 200 °C	≥ 200 °C
FAG FE9 rolling bearing test, DIN 51821-2, 1500 / 6000-140, service life F50	≥ 100 h	≥ 100 h	≥ 100 h
Four-ball tester, welding load, DIN 51350-4	≥ 4000 N	≥ 4000 N	≥ 4000 N
FZG scuffing test, DIN ISO 14635-3, A / 2.8 / 50, failure load stage	> 12	> 12	
FZG wear test, DGMK 377-01, based on standard, C / 0.05:0.57 / room temperature / 12, wear category	low	low	low
Compatibility with elastomers, HNBR	passed	passed	passed
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	12 months	24 months	24 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 90 years.

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