

# Klübersynth GE 14-110, GE 14-111

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



## Your benefits at a glance

- Excellent wear protection and high pressure absorption capacity
- Reliable lubricant film formation in a wide service temperature range
- Excellent protection against tribo-corrosion
- High scuffing-load strength with minimum-quantity lubrication

## 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 Klübersynth GE 14-110, GE 14-111 special greases are the right solution 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. We are pleased to discuss application details with you.

## Application

You may use Klübersynth GE 14-110, GE 14-111 for the lubrication of gears, bearings, joints or slideways in small gears that are subject to heavy loads, e.g. in household or workshop power tools. Due to its good scuffing load strength and backflow characteristics, Klübersynth GE 14-110, GE 111 can also be applied in toothed gears with a high percentage of sliding friction. Depending on temperature, loads and sliding speeds, steel/steel, steel/aluminium and aluminium/aluminium

combinations can be lubricated with these greases. Additionally, Klübersynth GE 14-110, GE 14-111 offer smooth running and excellent wear protection when used for lubricating trapezoidal spindles.

## Application notes

Klübersynth GE 14-110, GE 14-111 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 products has to be confirmed.

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](http://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
Can 1 kg	+	+
Bucket 25 kg	+	+
Drum 180 kg	+	+

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Product data	Klübersynth GE 14-110	Klübersynth GE 14-111
Article number	012328	012253
Chemical composition	solid lubricant	solid lubricant
Chemical composition, thickener	aluminium complex soap	aluminium complex soap
Chemical composition, type of oil	ester oil	ester oil
Chemical composition, type of oil	synthetic hydrocarbon oil	synthetic hydrocarbon oil
Lower service temperature	-55 °C / -67 °F	-55 °C / -67 °F
Upper service temperature	140 °C / 284 °F	140 °C / 284 °F
Colour space	yellow	yellow
Texture	fibrous	fibrous
Texture	homogeneous	homogeneous
Worked penetration, DIN ISO 2137, 25 °C, lower limit value	360 x 0.1 mm	320 x 0.1 mm
Worked penetration, DIN ISO 2137, 25 °C, upper limit value	390 x 0.1 mm	360 x 0.1 mm
Shear viscosity at 25 °C, shear rate 300 s <sup>-1</sup> ; equipment:rotational viscometer	approx. 2 000 mPas	approx. 3 000 mPas
Drop point, DIN ISO 2176, IP 396	>= 200 °C	>= 200 °C
Anti-brinelling test, acc. to SNR FEB 2, frequency 24 Hz, deflection 3, load 8000 N, 50 h at 25 °C, wear		<= 5 mg
Flow pressure of lubricating greases, DIN 51805, test temperature: -55 °C	<= 1 400 mbar	<= 1 400 mbar
Four-ball tester, welding load, DIN 51350 pt. 04	>= 4 000 N	>= 4 000 N
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	12 months	12 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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