

## Klübersynth BR 46-32 F

Special grease for actuators, threaded spindles and ball screws

### Your benefits at a glance

- Wear reduction
- For-life lubrication at medium to high speeds
- Suitable for both sliding and rolling motion
- Optimum base oil combination for low starting torque at low temperatures

#### Your requirements - our solution

Speed or acceleration may be high in rolling and ball screws. As a result, operating temperature can be very high or start-up temperature very low. A lubricant providing for-life lubrication under the described conditions is a particular requirement of the automotive industry, e.g. in clutch or break actuators.

Klübersynth BR 46-32 F is a special lubricating grease designed to meet these requirements. It offers you the solution for lifetime lubrication in challenging applications in the automotive and other industries.

Klübersynth BR 46-32 F is based on a polyglycol / ester mixture, with a lithium complex soap that is resistant to temperature and ambient media, and selected solid lubricants. The product offers you very good smooth running properties at low temperatures owing to its low base oil viscosity. The oil's excellent oxidation stability ensures safe use at high temperatures. Its additives and selected solid lubricants contribute to high wear protection.

Klübersynth BR 46-32 F is compatible with EPDM elastomers and other materials. Please note that elastomer qualities of one or several manufacturers may vary. General compatibility with these materials cannot be guaranteed and has to be checked in each case.

### Application

Klübersynth BR 46-32 F was developed for the long-term lubrication of highly loaded sliding and rolling contacts, e.g. in actuators used in the automotive industry. This includes ball screws, planetary screws and similar tribo-contacts.

### Application notes

Klübersynth BR 46-32 F may be applied by brush, spatula or grease gun. We recommend checking pumpability in automatic lubricating systems and compatibility of the lubricant with all contact materials in the process, especially prior to series application.

### 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 BR 46-32 F
Can 1 kg	+

Product data	Klübersynth BR 46-32 F
Article number	012300
Chemical composition, type of oil	ester oil
Chemical composition, type of oil	PAG
Chemical composition, thickener	special lithium soap
Chemical composition	solid lubricant
Lower service temperature	-45 °C / -49 °F
Upper service temperature	130 °C / 266 °F
Colour space	beige





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Product data	Klübersynth BR 46-32 F
Density at 20 °C	approx. 1.00 g/cm <sup>3</sup>
Worked penetration, DIN ISO 2137, 25 °C, lower limit value	265 x 0.1 mm
Worked penetration, DIN ISO 2137, 25 °C, upper limit value	295 x 0.1 mm
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 29 mm²/s
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 6 mm²/s
Copper corrosion, DIN 51811, (lubricating grease), 24h/100°C	1 - 100 corrosion degree
Corrosion inhibiting properties of lubricating greases, DIN 51802, (SKF-EMCOR), test duration: 1 week, distilled water	<= 1 corrosion degree
Flow pressure of lubricating greases, DIN 51805, test temperature: -40 °C	<= 1 000 mbar
Drop point, DIN ISO 2176	>= 190 °C
Water resistance, DIN 51807 pt. 01, 3 h/90 °C, rating	<= 2 - 90
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 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 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 any time without notice.

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