Klüberpaste 46 MR 401

Light-coloured high-pressure lubricating paste

Benefits for your application

- **Easy assembly and disassembly of highly loaded frictional connections**
- **Prevents premature material ageing caused by tribo-corrosion and stick slip**
- **Can be used with many material combinations, including plastics and elastomers**

Description

Klüberpaste 46 MR 401 is a multipurpose lubricating paste with selected base oils, lithium soap and special solid lubricant additives.

This versatile multipurpose paste has a wide service temperature range and shows good pressure absorption capacity as well as neutral behaviour towards non-ferrous metals, many plastics and elastomers.

Application

Klüberpaste 46 MR 401 is especially suitable as an assembly lubricant in frictional connections and for thin-film lubrication of all friction points subject to very high pressure loads, low sliding speed, high wear, Stick-Slip and tribo-corrosion.

Typical applications include: press fit assembly of pins and bolts, mounting of rolling bearings, wheels and flanges, lubrication of rolling and plain bearings operating at very low speeds.

Klüberpaste 46 MR 401 is also suitable to prevent running-in damage and stick-slip in components such as threaded spindles, spline shafts, ball and socket joints and rod end bearings.

Its good compatibility with plastics facilitates the lubrication of radial shaft seals (o-rings, v-rings, sealing cups) made of rubber-elastic materials for extended lifetime.

Owing to the many different elastomer and plastic compositions, we recommend compatibility be checked prior to series application.

Application notes

Before applying Klüberpaste 46 MR 401 it is important to clean the contact surfaces and remove any solvent residues with a lint-free, dry cloth.

Klüberpaste 46 MR 401 can be easily applied to the entire surface in a thin layer with a spatula. It is important to avoid overlubrication. Before applying the paste to a plastic material we recommend undertaking a materials compatibility test.

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	Klüberpaste 46 MR 401
Tube 60 g	+
Can 750 g	+
Cartridge 500 g	+
Bucket 30 kg	+

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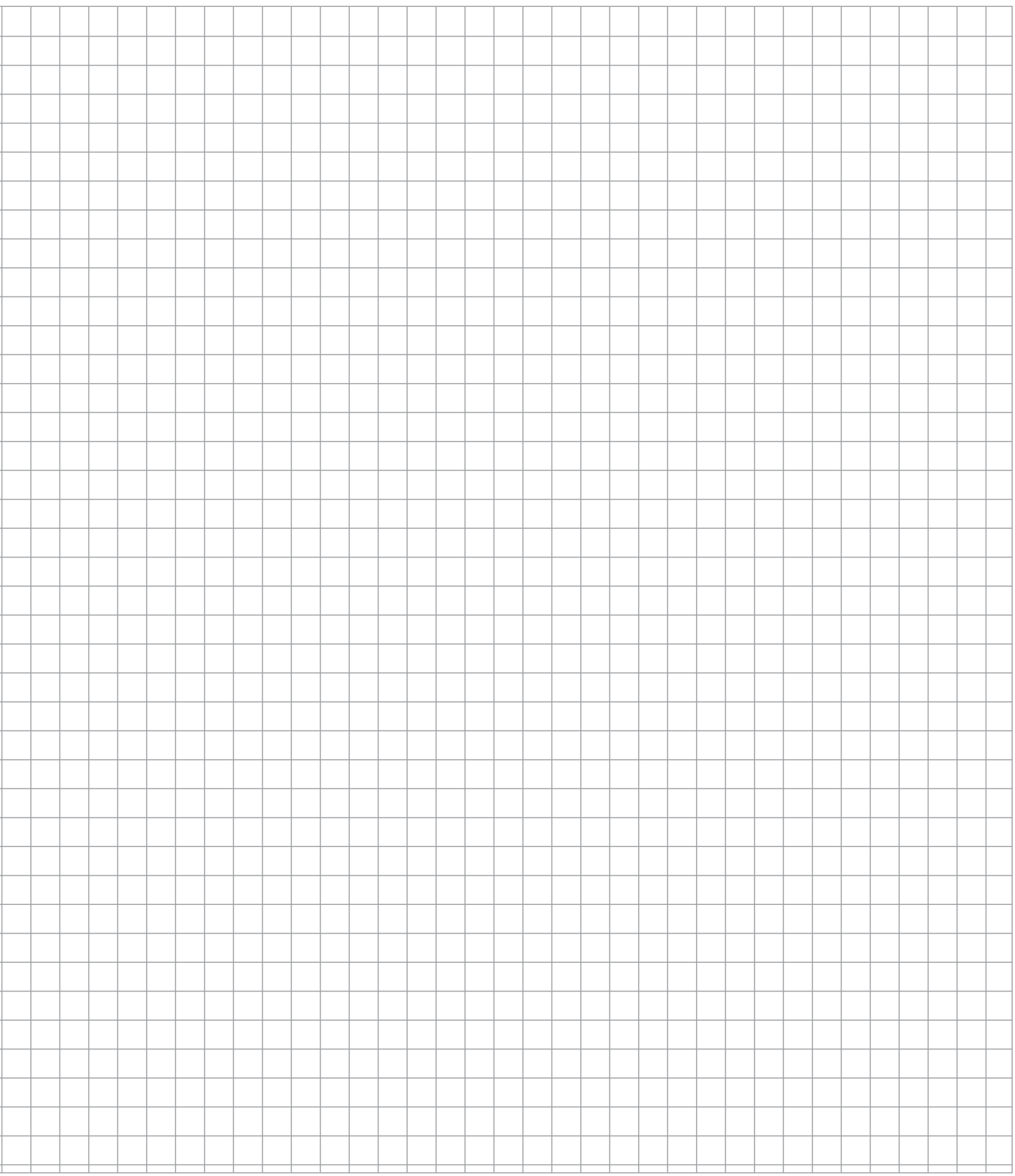
Product data	Klüberpaste 46 MR 401
Article number	005108
Lower service temperature	-40 °C / -40 °F
Upper service temperature	150 °C / 302 °F
Colour space	white
Density at 20 °C	approx. 1.23 g/cm³
Worked penetration, DIN ISO 2137, 25 °C, lower limit value	300 x 0.1 mm
Worked penetration, DIN ISO 2137, 25 °C, upper limit value	340 x 0.1 mm
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	<= 1 600 mbar
Drop point, DIN ISO 2176	>= 185 °C
Four-ball tester, welding load, DIN 51350 pt. 04	>= 4 600
Friction values (head and thread) and standard deviation for the first tightening of screw, "standard screw material", external test	in accordance
Friction coefficients screw test, screws M 10x30-8.8, DIN EN ISO 4017, black and nut M 10-8, DIN EN ISO 4032, bright, averaged head friction coefficient (first-time tightening)	0.17
Friction coefficients screw test, screw M 10x30-8.8, DIN EN ISO 4017, black and nut M 10-8, DIN EN ISO 4032, polished, standard deviation head friction coefficient (first-time tightening)	0.011
Friction coefficients screw test, screw M 10x30-8.8, DIN EN ISO 4017, black and nut M 10-8, DIN EN ISO 4032, polished, averaged thread friction coefficient (first-time tightening)	0.15
Friction coefficients screw test, screw M 10x30-8.8, DIN EN ISO 4017, black and nut M 10-8, DIN EN ISO 4032, polished, standard deviation thread friction coefficient (first-time tightening)	0.024
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months



Product information

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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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