

Klübersynth RA 44-702, -1502, -3500, -3502

for noise reduction and mechanical damping



Your benefits at a glance

- Soft feel effect (haptics)
- Noise reduction
- Good compatibility with plastics
- Low oil separation

Your requirements - our solution

Klübersynth RA 44-702, RA 44-1502, RA 44-3500 and RA 44-3502 are fully synthetic special greases of high viscosity providing haptic and acoustic damping to your components for a better touch-feel. This enables you to provide mechanical damping to slow-moving components and hence reduce noises, e.g. inside cars.

Application

Klübersynth RA 44-702, RA 44-1502, RA 44-3500 and RA 44-3502 are preferably used for plastic/plastic and plastic/metal material pairings. These products enable you to set defined shifting forces and compensate for tolerances. All products of the Klübersynth RA series have a wide service temperature range from -40 °C to 130 °C (Klübersynth RA 44-702 even offers down to -50 °C). When applied to enclosed systems such as car seat backrest fittings, short-term peaks of up to 180 °C can be tolerated, e.g. in drying ovens.

Applications in motor cars:

mechanical switches and rotary controls, ventilation flaps, sun visors, ashtrays, cup holders, storage boxes, window lifter guide rails, armrest and seat adjustment mechanisms (vertical and horizontal), sunroofs, etc.

Further applications:

precision engineering and optical instruments, fasteners, household appliances and white goods, office machinery and computers, pneumatics and O-rings, sports equipment.

Compatibility with elastomers:

Klübersynth RA 44-702, RA 44-3500 and RA 44-3502 were especially developed for the lubrication of plastic parts inside cars. For this reason, comprehensive tests were performed according to DIN EN ISO 22088 (stress cracking). The results show that these greases are neutral to most plastic materials. Owing to the many different plastic compositions, we recommend checking the material's compatibility with the grease prior to series application.

Application notes

These products can be applied by means of grease gun, brush or spatula as well as via automatic lubricating systems. Klübersynth RA 44-702 and RA 44-3502 contain a UV indicator for easy quality inspection of minimum quantity lubrication. The UV check can be made with a wavelength of 366 nm.

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 RA 44-702	Klübersynth RA 44-1502	Klübersynth RA 44-3500	Klübersynth RA 44-3502
Cartridge 400 g	+	-	-	+
Can 1 kg	+	+	+	+
Bucket 25 kg	+	+	+	+
Drum 170 kg	+	+	+	+

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Product data	Klübersynth RA 44-702	Klübersynth RA 44-1502	Klübersynth RA 44-3500	Klübersynth RA 44-3502
Article number	012264	012263	012311	012262
Chemical composition, type of oil	synthetic hydrocarbon oil	synthetic hydrocarbon oil	synthetic hydrocarbon oil	synthetic hydrocarbon oil
Chemical composition, thickener	lithium soap	lithium soap	lithium soap	lithium soap
Lower service temperature	-50 °C / -58 °F	-40 °C / -40 °F	-40 °C / -40 °F	-40 °C / -40 °F
Upper service temperature	130 °C / 266 °F	130 °C / 266 °F	130 °C / 266 °F	130 °C / 266 °F
Colour space	beige	beige	beige	beige
Density at 20 °C	approx. 0.87 g/cm ³	approx. 0.87 g/cm ³	approx. 0.85 g/cm ³	approx. 0.88 g/cm ³
Worked penetration, DIN ISO 2137, 25 °C, lower limit value	265 x 0.1 mm	285 x 0.1 mm	340 x 0.1 mm	275 x 0.1 mm
Worked penetration, DIN ISO 2137, 25 °C, upper limit value	295 x 0.1 mm	315 x 0.1 mm	370 x 0.1 mm	305 x 0.1 mm
Shear viscosity at 25 °C, shear rate 300 s ⁻¹ , equipment: rotational viscometer, lower limit value	6 000 mPas	8 000 mPas	12 000 mPas	16 000 mPas
Shear viscosity at 25 °C, shear rate 300 s ⁻¹ , equipment: rotational viscometer, upper limit value	12 000 mPas	15 000 mPas	18 000 mPas	23 000 mPas
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ ASTM D-445/ASTM D 7042, 40 °C	approx. 720 mm ² /s	approx. 1 500 mm ² /s	approx. 3 500 mm ² /s	approx. 3 500 mm ² /s
Corrosion inhibiting properties of lubricating greases, DIN 51802, (SKF-EMCOR), test duration: 1 week, distilled water	<= 1 corrosion degree	<= 1 corrosion degree		<= 1 corrosion degree
Oil separation, DIN 51817 N, after 7 d/40 °C	<= 3 % by weight	<= 3 % by weight	<= 5 % by weight	<= 3 % by weight
Flow pressure of lubricating greases, DIN 51805, test temperature: -40 °C		<= 1 400 mbar	<= 1 400 mbar	<= 1 400 mbar
Flow pressure of lubricating greases, DIN 51805, test temperature: -50 °C	<= 1 400 mbar			
Low-temperature torque, IP 186, -40 °C, start	approx. 150 mNm			approx. 510 mNm
Low-temperature torque, IP 186, -40 °C, running	approx. 140 mNm			approx. 290 mNm
Drop point, DIN ISO 2176, IP 396	>= 180 °C	>= 180 °C	>= 180 °C	>= 180 °C
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	36 months	24 months	24 months	36 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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