

Klübersynth® HLR 46-371

Lubricating and assembly grease for elastomer/metal sliding material combinations (sensitive to mineral oil)



Description:

Klübersynth HLR 46-371 is an adhesive, pliant and high-temperature resistant special lubricating grease. Due to the product composition (base oil: polyalkylene glycol oil; thickener: special lithium soap) it is possible to use it in context with many elastomers which are sensitive to mineral oil (particularly EPDM) and plastics.

Outstanding performance data:

- very wide service temperature range
- good corrosion protection
- good water resistance
- excellent oxidation stability

Application:

Elastomer/metal or plastic/metal sliding material combinations, eg in car components

- brake boosters
- drum brakes
- disc brakes
- main brake cylinders
- ABS
- small gears (metal/plastic)
- rolling bearings with EPDM sealing disks
- radial shaft seals with EPDM elastomer

Minimum shelf life:

The minimum shelf life is approximately 36 months when stored in a dry place and in closed original containers.

Pack sizes:

25 kg bucket
180 kg drum

Compatibility with elastomers and plastics:

The following elastomers were tested 168 h for compatibility with Klübersynth HLR 46-371 at 100 and 150 °C.

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- Lubricating and assembly paste
- Service temperature range – 40 / 150 °C
- For elastomer/metal sliding material combinations

Material Time / test temperature	70 EPDM 281 168 h / 150 °C	72 NBR 872 168 h / 150 °C
Change in volume (%)	– 1.1	– 5.5
Change in hardness (SHA)	0	3
Tensile strength (%)	5	5
Elongation at tear (%)	– 4	– 15

We recommend checking the compatibility of the lubricating grease and the contacting material, especially prior to series applications

(our test results were obtained with samples and are not a substitute for your own testing).

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Product data:

Oil type//thickener	polyalkylene glycol oil, special lithium soap
Service temperature range*, [°C], approx.	- 40 to 150
Flow pressure, DIN 51 805, at - 40 °C	≤ 1400
Colour	red
Texture	homogeneous, fibrous
Drop point, DIN ISO 2176, [°C]	≥ 220
Worked penetration, DIN ISO 2137, at 25 °C; 0.1 mm	280 – 310
Speed factor for deep groove ball bearings (n x dm), mm x min ⁻¹ , approx.	300,000
Water resistance, DIN 51 807, pt. 1, 3 h / 90 °; rating	≤ 1 - 90
Corrosion protection (Emcor test) DIN 51 802, 1 week, distilled water, corrosion rating	≤ 1
Base oil viscosity, DIN 51 562 at 40 °C, [mm ² /s], approx. at 100 °C, [mm ² /s], approx.	360 55
Density, at 20 °C, [g/cm ³], approx.	0.97

* Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component.

** Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.

The data in this product information is based on our general experience and knowledge at the time of printing 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 tests with the selected product. We recommend contacting our Technical Consulting Staff to discuss your specific application. If required and possible we will be pleased to provide a sample for testing. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this product information at any time without notice.



Klüber Lubrication, a member of the Freudenberg group