

Klüberalfa GR ZLHT N

Long-term lubricating grease for a wide temperature range



Your benefits at a glance

- Versatile use for components under particularly demanding conditions
- over a wide service temperature range
- in contact with aggressive media
- where sensitive plastics are used
- under vacuum

Your requirements - our solution

Klüberalfa GR ZLHT-N is a white long-term grease based on perfluorinated polyether (PFPE) oil and a polytetrafluoroethylene (PTFE) thickener. The extremely high viscosity index, i.e. the very flat viscosity curve of the base oil, allows excellent sliding friction properties across a wide service temperature range.

Klüberalfa GR ZLHT was tested for use with selected nonferrous metals.

Application

Klüberalfa GR ZLHT-N is preferably used for the lubrication of plastics and seals where it shows exceptionally low friction values and a low tendency to stick-slip.

General behaviour towards materials:

Lubricants based on perfluorinated polyether oils and polytetrafluoroethylene are generally regarded as neutral towards most elastomers and plastics (possible exception: highly fluorinated rubber). Nevertheless, compatibility with the materials should be tested, especially prior to series application.

Application notes

For optimum lubrication results, we recommend cleaning the friction points with white spirit 180/210 followed by Klüberalfa XZ 3-1. Then blow the surfaces with clean, dry compressed air or hot air to remove solvent residues. For initial lubrication, the friction points must be clean and bright, i.e. free from oil, grease and perspiration. Klüberalfa GR ZLHT-N is applied directly or by means of brush, spatula or lubricant dispenser.

The technical sales departments at Klüber Lubrication may be contacted at any time for advice to ensure optimum service life results.

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 | Klüberalfa GR ZLHT N |
|--------------|----------------------|
| Tube 100 g | + |
| Can 1 kg | + |
| Bucket 10 kg | + |

| Product data | Klüberalfa GR ZLHT N |
|---------------------------------------|----------------------|
| Article number | 090211 |
| Chemical composition, type of oil | PFPE |
| Chemical composition, solid lubricant | PTFE |
| Lower service temperature | -65 °C / -85 °F |
| Upper service temperature | 200 °C / 392 °F |
| Colour space | white |



Klüberalfa GR ZLHT N

Long-term lubricating grease for a wide temperature range

| Product data | Klüberalfa GR ZLHT N |
|------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| Texture | homogeneous |
| Density at 20 °C | approx. 1.93 g/cm ³ |
| 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. 90 mm ² /s |
| Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C | approx. 25 mm ² /s |
| NLGI grade, DIN 51818 | 2 |
| Evaporation loss, ASTM D 2595 22h/204°C | <= 6 % by weight |
| Copper corrosion, DIN 51811, (lubricating grease), 24h/100°C | 1 - 100 corrosion degree |
| Oil separation, based on ASTM D 6184 [FTMS 791 C 321], after 30 h/200 °C | <= 12 % by weight |
| Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx. | 60 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.

Klüber Lubrication München SE & Co. KG / Geisenhausenerstraße 7 / 81379 München / Germany / phone +49 89 7876-0 / fax +49 89 7876-333.

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.

Publisher and Copyright: Klüber Lubrication München SE & Co. KG. Reprints, total or in part, are permitted only prior consultation with Klüber Lubrication München SE & Co. KG and if source is indicated and voucher copy is forwarded.