

# Klüberalfa GR ZLHT

Long-term lubricating grease for a wide temperature range



## Benefits for your application

- **Long component life**
  - over a wide service temperature range
  - in contact with aggressive media
  - where sensitive plastics are used
  - under vacuum

## Description

Klüberalfa GR ZLHT 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.

## Application

Klüberalfa GR ZLHT is preferably used for the lubrication of plastics and seals where it shows exceptionally low friction values and a low tendency to stick-slip. This leads, for example, to a lower frictional heating of elastomers subject to dynamic loads and hence longer component life.

General behaviour towards elastomers and plastics:

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 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](http://www.klueber.com). You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	Klüberalfa® GR ZLHT
Tube 100 g	+
Can 1 kg	+
Bucket 10 kg	+

Product data	Klüberalfa® GR ZLHT
Article number	090181
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



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Product data	Klüberalfa® GR ZLHT
Texture	homogeneous
Density at 20 °C	approx. 1.90 g/cm <sup>3</sup>
NLGI grade, DIN 51818	2
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 <sup>2</sup> /s
Oil separation, based on ASTM D 6184 [FTMS 791 C 321], after 30 h/200 °C	<= 12 % by weight
Evaporation loss, ASTM D 2595 22h/204°C	<= 6 % 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.

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