

Klüberalfa PI 83-271

Inert grease for sensitive friction pairings



Benefits for your application

- **Accurate positioning and sliding motion over long operating times**
 - due to low breakaway torques over a wide temperature range
 - due to "smart" oil release reducing stick-slip
- **Longer service life to be expected also under critical operating conditions, e.g.**
 - contamination with aggressive chemicals
 - extreme temperature differences from -60 to 200 °C
 - contact with sensitive (seal) materials

Description

Klüberalfa lubricants based on perfluorinated polyethers (PFPE) were especially developed with a set of characteristics to suit demanding lifetime lubrication requirements. Klüberalfa PI 83-271 is a white long-term grease that is neutral in odour and offers "smart" oil release in sliding contact.

This reduces undesirable stick-slip to enable high accuracy of motion in sensitive precision mechanisms.

Application

Klüberalfa PI 83-271 is suitable for applications under the influence of media, such as:

- automatic lifting and metering systems in labs
- pneumatic cylinders and valves
- seals and plastic guides operating under dynamic loads

The flat viscosity-temperature curve of the base oils and the softness of the grease ensure a constant friction coefficient over a wide temperature range.

Klüberalfa PI 83-271 is compatible with a wide range of materials, which allows multiple uses.

Behaviour towards elastomers and plastics

Perfluorinated polyether oils (PFPE) are generally regarded as neutral towards elastomers and plastics (possible exception: perfluorinated 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 and then Klüberalfa XZ 3-1. Upon cleaning apply clean dry compressed air or hot air to remove any remaining white spirit residues.

For initial lubrication, the friction point must be clean and bright (i.e. free from oil, grease or perspiration) and free from particles. The various technical sales departments at Klüber Lubrication may be contacted at any time to ensure optimum service lives with this special lubricating grease.

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 PI 83-271
Can 1 kg	+
Bucket 45 kg	+

Product data	Klüberalfa PI 83-271
Article number	090107
Chemical composition, type of oil	PFPE
Chemical composition, solid lubricant	PTFE



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Product data	Klüberalfa PI 83-271
Lower service temperature	-60 °C / -76 °F
Upper service temperature	200 °C / 392 °F
Colour space	white
Density at 20 °C	approx. 1.94 g/cm ³
NLGI grade, DIN 51818	1
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 280 mm ² /s
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 80 mm ² /s
Flow pressure of lubricating greases, DIN 51805, test temperature: -60 °C	<= 1 400 mbar
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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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.

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