

Klüberalfa® HPX 93-1202

High-temperature lubricant for applications with extreme requirements

Benefits for your application

- Allows application at temperatures up to 300 °C*
 - Longer component life possible due to very low evaporation rate
 - NSF-H1-registered for use in the food-processing and pharmaceutical industries
-

Description

Klüberalfa® lubricants are highly advanced specialities based on selected raw materials and manufacturing processes, which are tailored to specific applications requiring lifetime lubrication.

Klüberalfa HPX 93-1202 contains a highly viscous base oil with an exceptionally low evaporation rate and a matching thickener without PTFE.

Due to its low evaporation rate, the grease retains its lubricity in the friction point longer. It also leads to better thermal stability, enabling extremely high service temperatures up to 300 °C*.

Klüberalfa HPX 93-1202 is the first high-temperature grease without PTFE of its type to be registered as *NSF-H1*. It therefore complies with FDA 21 CFR § 178.3570.

Application

Klüberalfa HPX 93-1202 is for applications with temperature ranges where normal PFPE/PTFE greases can be expected to fail.

This allows the user to attain long-term lubrication with good dampening even at extremely high temperatures.

Klüberalfa HPX 93-1202 is recommended for application e.g. in

- household baking ovens
- industrial baking ovens
- fire protection fittings

Klüberalfa HPX 93-1202 improves the function of slide rails, hinges, locking systems, joints, etc. at low speeds and very high temperatures.

Klüberalfa HPX 93-1202 can be regarded as resistant to most chemicals and solvents, so no negative effect of cleaning agents on the lubricant are to be expected.

However, lubricant compatibility should be verified in an approval process prior to series application.

Application notes

For optimum lubrication results, we recommend cleaning the friction point with white spirit 180/210 and then with Klüberalfa XZ 3-1 prior to initial lubrication. Then apply clean, dry compressed air or hot air to remove any spirit residues.

The friction point has to be bright (i.e. free of oil, grease and perspiration) and free of contamination particles.

To optimize service life, please contact our technical sales staff.

Minimum shelf life

The minimum shelf life is approx. 60 months if the product is stored in its unopened original container in a dry, frost-free place.

Pack sizes

- 800 g cartridge
- 1 kg can
- 10 kg bucket

Material safety data sheets

Material safety data sheets can be downloaded or requested via our website www.klueber.com. You may also obtain them through your contact person at Klüber Lubrication.



Klüberalfa® HPX 93-1202

High-temperature lubricant for applications with extreme requirements

Product data	Klüberalfa® HPX 93-1202
Article No.	090026
Chemical composition	perfluoropolyether oil, solid lubricant
Service temperature range, * [°C], approx.	-20 to 300
Density at 20 °C, [g/cm ³], approx.	1.90
Vapor pressure of base oil, 20 °C, [torr], approx.	4×10^{-17}
Consistency, DIN 51 818; NLGI class	2
Drop point, DIN ISO 2176**, [°C]	not measurable
Base oil viscosity, DIN 51 562, at 40 °C, [mm ² /s], approx. at 100 °C, [mm ² /s], approx.	1200 100
Apparent dynamic viscosity, Klüber viscosity grade***	ES
Water resistance, DIN 51 807, pt. 1, 3 h, 90 °C	1-90
NSF-H1 registration****, registration no.	138460

* 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.

*** Klüber viscosity grades: EL = extra light lubricating grease; L = light lubricating grease; M = medium lubricating grease; S = heavy lubricating grease; ES = extra heavy lubricating grease

**** This lubricant is registered as H1, which means that it has been designed for incidental, technically unavoidable food contact. Experience shows that it can be used for equivalent applications in the cosmetic and pharmaceutical industry under the conditions described in the product information leaflet. Specific test results as e.g. biocompatibility, which could be an additional requirement for applications in the pharmaceutical industry, are not available for this product. Therefore, before using the lubricant adequate risk analyses should be performed and, if necessary, suitable measures be taken by the manufacturer and user of installations in order to exclude the risk of health hazards and personal injuries.

Lubrication is our world

With more than 2000 products available around the world, you can be sure that Klüber has the right product for your application. Please contact Klüber Lubrication specialists worldwide to assist you in all matters regarding lubrication.

www.klueber.com

Klüber Lubrication München KG, Geisenhausenerstraße 7, 81379 München, Germany, phone +49 89 7876-0, fax +49 89 7876-333.

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 company of the Freudenberg Group

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