

Klüberalfa® HPX 93-1202

High-temperature, long-term and lifetime lubricating grease



Description:

Klüberalfa HPX 93-1202 is a white, high-temperature and long-term grease which is neutral in odour. It is based on a new solid lubricant combination and a perfluorinated polyether. The product shows good high-temperature stability, low evaporation loss at temperatures up to 300 °C and low vapour pressure. The high-viscosity base oil and special additives ensure good adhesion and dampening properties on ferrous metals as well as efficient corrosion protection.

Application:

Klüberalfa HPX 93-1202 has been especially designed for friction points subject to high temperatures. Due to its low vapour pressure it is also suitable for lubrication points in high-vacuum applications.

The product is used for the lubrication of rolling and plain bearings, slideways, hinges, locks, joints in

- industrial and domestic baking ovens
- kiln carts
- kitchen appliances
- fire-proof fittings and drives
- vacuum pumps.

Application notes:

Prior to first application, clean all friction points with white spirit 180/210 and then with Klüberalfa XZ 3-1. The application point has to be bright (i.e. there must not be any oil, grease or traces of perspiration) and free from contamination particles.

To remove lubricants based on perfluorinated polyether oil, such as Klüberalfa HPX 93-1202, use Klüberalfa XZ 3-1.

Minimum shelf life:

The minimum shelf life is approx. 60 months if the product is stored in the closed original container in a dry place.

Pack sizes:

1 kg can
800 g cartridge
10 kg bucket

Klüberalfa HPX 93-1202

- High-temperature and lifetime lubricant
- Neutral in odour
- Good dampening properties
- Low evaporation loss
- Low vapour pressure
- Upper service temperature 300 °C

Product data:

Base	Solid lubricants/ perfluorinated polyether
Colour	white
Service temperature range*, °C, approx.	– 20 to 300
Worked penetration, DIN ISO 2137, at 25 °C; 0.1 mm	265 – 295
Density at 20 °C, DIN 51 757, g/ml	1.92
Vapour pressure of the base oil, 20 °C, mbar	4×10^{-17}
Base oil viscosity, DIN 51 562, mm ² /s at 40 °C at 100 °C	approx. 1200 approx. 100
Water resistance, DIN 51 807, part 1, 3 h, 90 °C	1/90

* 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.

Klüberalfa® HPX 93-1202

Safety Data Sheet

1.1 Product name: Klüberalfa HPX 93-1202 Code-No.: 090 026 08.03.2000
1.2 Klüber Lubrication München KG Geisenhausenerstraße 7 D-81379 München Tel. ++49 - 89 78 76 - 0 telephone exchange Fax: ++49 - 89 78 76 - 333 Emergency telephone no.: ++49 - 89 7876 - 0
2. Composition / information on ingredients Chemical characterization (preparation): Fluorinated polyether oil, solid lubricants Additional information: No hazardous ingredients
3. Hazards identification No particular hazards known
4. First aid measures After inhalation: Not applicable After contact with skin: Wash off with soap and plenty of water After contact with eyes: Rinse with plenty of water After ingestion: Do not induce vomiting. Obtain medical attention Advice to doctor: Treat symptomatically
5. Fire-fighting measures Suitable extinguishing media: The product itself does not burn. Use extinguishing measures that are appropriate to the environment Special Hazards: In case of fire the following can be released: Traces of fluorinated products Special protective equipment for firefighters: Standard procedure for chemical fires Additional information: Water mist may be used to cool closed containers. In the event of fire and/or explosion do not breathe fumes
6. Accidental release measures Personal precautions: Not required Environmental precautions: Do not flush into surface water or sanitary sewer system Methods for cleaning up / taking up: Use mechanical handling equipment. Dispose of absorbed material in accordance with the regulations Additional information: None
7. Handling and storage Advice on safe handling: No special handling advice required Advice on protection against fire and explosion: No special precautions required Requirements on storage rooms and vessels: No special storage conditions required Incompatible materials: Do not store together with food Further information on storage conditions: Store at room temperature in the original container
8. Exposure controls / personal protection Additional advice on system design: Not applicable Ingredients and specific control parameters: None Respiratory protection: No special protective equipment required Hand protection: No special protective equipment required Eye protection: No special protective equipment required Body protection: No special protective equipment required Other protection measures: No special protective equipment required General protection and hygiene measures: Avoid prolonged and/or repeated contact with skin. Remove soiled or soaked clothing immediately. Clean skin thoroughly after work; apply skin cream. Keep away from tobacco products

9. Physical and chemical properties Form: paste Colour: white Odour: none Drop point: not melting °C, DIN ISO 2176 Flash point: none (base oil) Flammability: not applicable Ignition temperature: not applicable Autoflammability: not applicable Lower explosion limit: not applicable Upper explosion limit: not applicable Vapour pressure-first: not applicable Density: approx. 1.90 g/cm ³ , 20 °C Water solubility: insoluble pH value: not applicable Kinematic viscosity: not applicable Further information: none
10. Stability and reactivity Conditions to avoid: None Materials to avoid: Strong bases, alkali metals, alkaline earth metals, Lewis acids Hazardous decomposition products: 280 °C traces of fluorinated products Additional information: Some materials (e.g. titanium, aluminium or alloys of these materials) may cause lower decomposition temperatures
11. Toxicological information The toxicological data has been taken from products of similar composition Acute toxicity: LD ₅₀ /oral/rat = > 2 g/kg (literature data) Chronic toxicity: None Human experience: Prolonged skin contact may cause skin irritation and/or dermatitis
12. Ecological information Information on elimination (persistence and degradability): Product is insoluble in water. May be separated out mechanically in purification plants Behaviour in environmental compartments: Ecological injuries are not known or expected under normal use Ecotoxic effects: Aquatic toxicity is unlikely due to low solubility Additional information: Should not be released into the environment
13. Advice on Disposal Disposal: Can be incinerated when in compliance with local, state and federal regulations. Contains halogens Dispose of contaminated packaging and recommended cleaning: Offer rinsed packaging material to local recycling facilities
14. Transport information GGVS / GGVE: not applicable ADN / ADN: not applicable IMDG-Code: not applicable ICAO / IATA-DGR: not applicable Further information: Not classified as dangerous in the meaning of transport regulations
15. Regulatory information Labelling according to EU-guidelines: The product does not require a hazard warning label in accordance with EC-directives/German regulations on dangerous substances National regulations
16. Other information Issue-department of Safety Data Sheet: Chemical Documentation, Tel.: ++49 - 89 7876 - 564

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 München KG, a member of the Freudenberg group