

Description:

Klüberpaste UH1 96-402 is a white, metal-free high-temperature lubricating and assembly paste authorized in accordance with USDA H1. It contains a fully synthetic base oil and a mixture of inorganic solid lubricants. The raw materials do not contain heavy metals or sulphur. Klüberpaste UH1 96-402 was especially developed as a lubricating and assembly paste for machines used in the food processing and pharmaceutical industries. Up to a temperature of 160 °C its tribological behaviour is mainly determined by the base oil.

In the normal temperature range Klüberpaste UH1 96-402 provides good protection against corrosion and is very resistant to water. The friction coefficient in accordance with Tannert is approx. 0.1 at 300 N. This paste adheres very well to metal surfaces and prevents stick slip when assembling pressfit machine elements. The solid lubricant particles become effective if the components are subject to increased temperatures for an extended period. In a dry condition Klüberpaste UH1 96-402 is suitable for temperature up to 1200 °C.

Application:

Klüberpaste UH1 96-402 is suitable for a variety of friction points in food processing machines which are subject to high loads.

As an assembly paste

– for bolts, pins, bushings, etc.

As a lubricating paste

– for guide rails, hinges, rollers, chains, etc.

As a lubricating paste preventing fretting corrosion

– for rolling and plain bearing seats, etc.

Application notes:

Before applying Klüberpaste UH1 96-402 it is important to clean and degrease the contact surfaces thoroughly. A thin layer of the paste is then applied by brush or synthetic sponge.

Klüberpaste UH1 96-402 spreads easily over the entire surface and thus prevents excess lubrication. We recommend carrying out compatibility tests before applying the paste to plastic materials.

Minimum shelf life:

The minimum shelf life is approx. 24 months if the product is stored in the original closed container in a dry place.

Klüberpaste UH1 96-402

- High-performance lubricating and assembly paste authorized in accordance with USDA H1
- Free from metals
- Excellent low-temperature behaviour
- Good corrosion protection
- Neutral towards alloyed steels
- Temperature limit 1200 °C
- Water pollution category 1

Pack sizes:

80 g tube
600 g cartridge
750 g can
30 kg drum

Product data:

Colour	white
Service temperature range*, °C, approx.	– 40 to 1200 > 200 °C dry lubrication
Density, DIN 51 757, at 20 °C, g/cm ³ , approx.	1.58
Base oil viscosity, DIN 51 561, at 40 °C, mm ² /s	400
Drop point, DIN ISO 2176, °C	> 250
Worked penetration, DIN ISO 2137 (ASTM D 271), at 25 °C; 0.1 mm	265 – 295
Corrosion behaviour, SKF Emcor test, DIN 51 802, 1 week, dist. water, rating	0/1
Pressfit, friction coefficient; no stick slip	0.10
Four-ball tester, welding load, DIN 51 350 pt 4, N	> 2500

* 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 mechanical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component.

Klüberpaste® UH1 96-402

Safety Data Sheet

1.1 Product name: Klüberpaste UH1 96-402 Code-No.: 005 116 26.06.2001
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): Polyalkylene glycol oil, silicate, solid lubricants
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: Water spray, foam, dry powder, carbon dioxide (CO ₂) Unsuitable extinguishing media: High volume water jet Special hazards: In case of fire the following can be released: Carbon monoxide, hydrocarbons 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: Store at room temperature in the original container Incompatible materials: Incompatible with oxidising agents Further information on storage conditions: None
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: Clean skin thoroughly after work; apply skin cream

9. Physical and chemical properties Form: paste Colour: white Odour: characteristic Drop point: > 250 °C, DIN ISO 2176 Flash point: > 200 °C (base oil) Ignition temperature: not applicable Lower explosion limit: not applicable Upper explosion limit: not applicable Vapour pressure-first: not applicable Density: approx. 1.58 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 oxidising agents Hazardous decomposition products: None under normal use Additional information: None
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: Health injuries are not known or expected under normal use
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 Code of waste: 120 112. Wastes from shaping and surface treatment of metals and plastics; wastes from shaping (including forging, welding, pressing, drawing, turning, cutting and filing); spent waxes and fats Disposal: Can be incinerated when in compliance with local, state and federal regulations. The code of waste has to correspond to the Council Directive 75/442/EEC and be specific as far as the related sector and process are concerned 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 USDA H1-approval 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