Klübersynth® UH1 14-151
Lubricating grease for the food-processing industry

Description:
Klübersynth UH1 14-151 was especially developed for the food processing and pharmaceutical industry.
This lubricant fulfills the requirements of the German law governing food products and associated ancillaries and complies with the “guidelines of sec. 21 CFR 178.3570 of FDA regulations”. It has been authorized by the USDA for use in federally inspected meat and poultry plants (USDA H1).
Klübersynth UH1 14-151 shows good anti-wear properties, water resistance and corrosion protection as well as a high ageing and oxidation stability.

Application:
Used for machines and equipment in the food-processing and pharmaceutical industry, particularly for lubrication points that may have incidental and technically unavoidable contact with the food product. However, we recommend using Klübersynth UH1 14-151 at all lubrication points, in order to avoid problems due to lubricant contamination.
This special grease lubricates rolling and sliding bearings, lifting cylinders, joints, guide bars, cams, etc.

Application notes:
Klübersynth UH1 14-151 is applied by brush, spatula, grease gun and grease cartridge or by means of centralized lubrication systems.

Before substituting other greases with Klübersynth UH1 14-151 the bearings have to be cleaned and greased. If the greases are miscible, the grease can be exchanged by means of relubrication.

Minimum shelf life:
The minimum shelf life is approx. 12 months if the product is stored in the original closed container in a dry place.

Package sizes:
400 g grease cartridge
1 kg tin
25 kg bucket

Product data:

<table>
<thead>
<tr>
<th>Colour</th>
<th>beige</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texture</td>
<td>homogeneous</td>
</tr>
<tr>
<td>Density, DIN 51 757, at 20 °C, g/cm³, approx.</td>
<td>0.92</td>
</tr>
<tr>
<td>Drop point, DIN ISO 2176, °C</td>
<td>&gt; 220</td>
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<tr>
<td>Worked penetration at 25 °C, DIN ISO 2137; 0.1 mm, approx.</td>
<td>310 to 340</td>
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<tr>
<td>Speed factor, (n x dₘ), approx.</td>
<td>3 x 10⁵</td>
</tr>
<tr>
<td>Consistency, NLGI grade, DIN 51 818</td>
<td>1</td>
</tr>
<tr>
<td>Service temperature range*, °C</td>
<td>– 45 to 120</td>
</tr>
<tr>
<td>Flow pressure, DIN 51 805, at – 45 °C, mbar</td>
<td>&lt; 1 400</td>
</tr>
</tbody>
</table>

* 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.

Klübersynth UH1 14-151
• Synthetic
• Good wear resistance
• Can be used in centralized lubrication systems
• Good water resistance
• High ageing and oxidation stability
• Good corrosion protection
• USDA H1 registration
1.1 Product name: Klübersynth UH1 14-151
   Code-No.: 096 037
   06.09.2001

1.2 Klüber Lubrication München KG
   Emergency telephone no.: +49 - 89 7876 - 0
   Geisenhausenstraße 7
   D-81379 München
   Tel. +49 - 89 78 76 - 0 telephone exchange
   Fax: +49 - 89 78 76 - 333

2. Composition / information on ingredients
   Chemical characterization (preparation): Synthetic hydrocarbon oil, aluminium complex soap

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 (CO₂)
   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 oxidizing 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 thoroughly after work; apply skin cream

9. Physical and chemical properties
   Form: paste
   Colour: beige
   Odour: characteristic
   Drop point: > 220 °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. 0.92 g/cm³, 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 oxidizing 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: LD₅₀/oral/rat = > 2 kg/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 filling); spent waxes and fats
    Disposal: 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. Can be incinerated when in compliance with local, state and federal regulations
    Disposed of contaminated packaging and recommended cleaning: Offer rinsed packaging material to local recycling facilities

14. Transport information
    GGVS / GGVE: not applicable
    ADN / ADNR: 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