

Klüberplex® BEM 34-132

Special lubricating grease for extreme demands



Description:

Klüberplex BEM 34-132 has the following characteristics:

- excellent wear protection
- good resistance to temperatures up to 140 °C
- excellent resistance to water and ambient media
- good corrosion protection
- particularly good effect against micro motion
- excellent resistance to ageing.

Klüberplex BEM 34-132 is a special grease for many applications where extreme demands have to be met. It is particularly suitable for long-term and lifetime lubrication.

Application:

Klüberplex BEM 34-132 is especially suitable for **long-term and lifetime lubrication** of

rolling bearings, e.g. in

- textile machines (wet section)
- spinning machines (upper and lower rolls)
- paper machines (wet section)
- conveyors (wet section)
- electric motors, fans, pumps

or *automotive components*, such as

- hub units
- water pumps
- universal joint bushings.

Klüberplex BEM 34-132 is especially suitable for rolling bearings subject to oscillating movements, and as a lubricating and sealing grease for labyrinth seals.

Klüberplex BEM 34-132 meets the requirements of TL 9150-0072 (saltwater-resistant lubricating grease for rolling bearings) of the German Armed Forces' Office for Military Technology and Procurement.

Other applications include:

- plain bearings
- spur and involute gear teeth arrangements
- gears in power tools with steel/ steel, steel/plastic and plastic/ plastic components.

Minimum shelf life:

The minimum shelf life is approx. 36 months if the product is stored in the original closed container in a dry place.

In contrast to many calcium greases and calcium complex greases, Klüberplex BEM 34-132 has a particularly stable structure.

Pack sizes:

- 1 kg can
- 25 kg bucket
- 180 kg drum

Resistance to water and ambient media

Klüberplex BEM 34-132 is very resistant to water, steam up to a temperature of 130 °C, as well as many diluted alkaline solutions and acids, for example:

- 10% caustic potash solution up to 90 °C,
- 10% sulphuric acid up to 70 °C,
- 10% nitric acid up to 40 °C,
- 1% hydrochloric acid up to 40 °C (test based on DIN 51 807/1 with V 2 A steel strips).

Behaviour towards elastomers and plastics:

The following elastomers were tested 168 h for compatibility with Klüberplex BEM 34-132 at 100, 120, and 140 °C.

Material Time/Test temperature	72 NBR 902 168 h / 100 °C	81 VMQ 542 168 h / 140 °C	75 FPM 585 168 h / 120 °C	75 FPM 595 168 h / 140 °C
Change in volume (%)	4	4	1	12
Hardness (Shore A)	– 3	0	2	0
Tensile strength (%)	– 15	– 27	+ 8	– 80
Elongation at tear (%)	8	– 5	– 33	– 95

Before using the grease in series applications, we recommend a test for compatibility with all materials involved. (Our test results were obtained with samples and are not substitute for your own testing).

Klüberplex BEM 34-132

- For rolling and plain bearings and small gears
- For long-term and lifetime lubrication
- Excellent wear protection
- Particularly good effect against tribo-corrosion

Dynamic water washout test (based on DIN 51 807/2)

Water / glycol mixture: 1 : 1
Test duration: 60 min at 80 °C

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Product data:

Base oil / thickener	Synth. hydrocarbon oil, mineral oil, special calcium soap
Service temperature range*, DIN 51 825/51 821/2, °C, approx.	– 35 to 140
FAG-FE 9 test, DIN 51 821/2, F _a = 1500 N, n = 6000 rpm L ₅₀ operating time, h / °C	> 500 / 140
Flow pressure, DIN 51 805, at – 35 °C, mbar, approx.	< 1400
Low-temperature torque in acc. with IP 186/85 at – 35 °C starting torque, Nmm running torque, Nmm	< 1000 < 100
Base oil viscosity, DIN 51 561 at 40 °C, mm ² /s, approx. at 100 °C, mm ² /s, approx.	130 15.5
Worked penetration, DIN ISO 2137, at 25 °C; 0.1 mm	265 – 295
Speed factor** for deep-groove ball bearings (n x d _m), mm x min ⁻¹ , approx.	400,000
Apparent viscosity, Klüber viscosity grade***	L / M
Drop point, DIN ISO 2176, °C	> 220
Corrosion protection (Emcor test), DIN 51 802, 1 week, distilled water, corrosion rating	≤ 1
Density, DIN 51 757 at 20 °C, g/cm ³ , approx.	0.9
Colour	light brown

* 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.

The **upper** service temperature is specified based on DIN 51 825 and DIN 51 821/2;
the **lower** service temperature is specified based on DIN 51 825 and 51 805 as well as IP 186/85.

** 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

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Antiwear tests

FAG-FE 8 rolling bearing grease tester

Angular contact ball bearing 7312 B.TP $F_a = 80 \text{ kN}$; [P/C = 0.54] $n = 7.5 \text{ min}^{-1}$ Test duration: 500 h	Constant temperature*, °C	32
	Friction moment*, Nm	16.5
	Rolling element wear* , mg	5

FAG-FE 8 rolling bearing grease tester

Taper roller bearing 31312 A $F_a = 50 \text{ kN}$; [P/C = 0.24] $n = 75 \text{ min}^{-1}$ Test duration: 500 h	Constant temperature*, °C	37
	Friction moment*, Nm	1.3
	Rolling element wear* , mg	9

* Mean values (FAG specifies $\leq 35 \text{ mg}$)

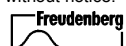
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Safety Data Sheet

<p>1.1 Product name: Klüberplex BEM 34-132 Code-No.: 017 141 25.06.1999</p>
<p>1.2 Klüber Lubrication München KG Emergency telephone no.: Geisenhausenerstraße 7 ++49 - 89 7876 - 0 D-81379 München Tel. ++49 - 89 78 76 - 0 telephone exchange Fax: ++49 - 89 78 76 - 333</p>
<p>2. Composition / information on ingredients Chemical characterization (preparation): Synthetic hydrocarbon oil, mineral oil, special calcium soap, polyurea Additional information: No hazardous ingredients</p>
<p>3. Hazards identification No particular hazards known</p>
<p>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</p>
<p>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</p>
<p>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</p>
<p>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: Incompatible with oxidizing agents. Do not store together with food Further information on storage conditions: Store at room temperature in the original container</p>
<p>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</p>

<p>9. Physical and chemical properties Form: paste Colour: light brown Odour: characteristic Drop point: > 220 °C, DIN ISO 2176 Flash point: > 200 °C (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. 0.9 g/cm³, 20 °C Water solubility: insoluble pH value: not applicable Kinematic viscosity: not applicable Further information: none</p>
<p>10. Stability and reactivity Conditions to avoid: None Materials to avoid: Strong oxidizing agents Hazardous decomposition products: None under normal use Additional information: None</p>
<p>11. Toxicological information The toxicological data has been taken from products of similar composition Acute toxicity: LD₅₀/oral/rat = > 2 g/kg (literature data) Chronic toxicity: None Human experience: Prolonged skin contact may cause skin irritation and/or dermatitis</p>
<p>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</p>
<p>13. Advice on Disposal Disposal: Can be incinerated, when in compliance with local, state and federal regulations Dispose of contaminated packaging and recommended cleaning: Offer rinsed packaging material to local recycling facilities</p>
<p>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</p>
<p>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</p>
<p>16. Other information Issue-department of Safety Data Sheet: Chemical Documentation, Tel.: ++49 - 89 7876 - 564</p>

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