

PETAMO® GHY 133 N

Long-term and high-temperature grease for rolling bearings



Description:

PETAMO GHY 133 N is a high-performance lubricating grease for rolling bearings operating at high temperatures. It has the following advantages:

- resistance to temperatures up to 160 °C
- good resistance to oxidation
- efficient wear protection at high temperatures
- good corrosion protection
- good water resistance

This high performance level of PETAMO GHY 133 N is achieved by means of selected product constituents such as polyurea thickener, mineral oil, synthetic hydrocarbon oil and additives, as well as the production technology.

Application:

PETAMO GHY 133 N is suitable for long-term and lifetime lubrication in a variety of applications including:

- *Rolling bearings* in electric motors
- fan heaters
- drying installations
- textil machines
- paper machines

- *Automotive components*, e.g. belt tensioning rollers (rotating outer ring)
- clutches
- water pumps
- fans
- wheel bearings

Minimum shelf life:

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

Pack size:

- 400 g cartridge
- 1 kg can
- 25 kg bucket
- 180 kg drum

Behaviour towards elastomers and plastics:

The following elastomers were tested for resistance to PETAMO GHY 133 N over a period of 168 hours at 100 and 150 °C.

Material	70 FPM 175825	72 NBR 902	70 ACM 121433
Test temperature	150 °C	100 °C	150 °C
Change in volume (%)	+ 5.8	+ 5.5	+ 7.0
Change in hardness (SHA)	– 1	– 1	– 8
Tensile strength (%)	– 8	+ 11.4	– 23.3
Elongation at tear (%)	– 19	+ 3.0	+ 39.8

Prior to series application we recommend testing the compatibility of the grease and the pertinent materials. (Our test results were obtained with random samples and cannot substitute your own in-house tests.)

Product data:

Base oil / thickener	Mineral oil, synthetic hydrocarbon oil, polyurea
Service temperature range*, DIN 51 825/51 821/2, °C, approx.	– 30 to 160
FAG-FE 9 test, DIN 51 821/2, F _a = 4500 N, n = 3000 rpm, 160 °C L ₅₀ running time, h	> 100
Flow pressure, DIN 51 805, at – 30 °C, mbar, approx.	< 1400
Low-temperature torque in acc. with IP 186/85 at – 30 °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.	150 18
Worked penetration, DIN ISO 2137, at 25 °C; 0.1 mm	265 – 295
Speed factor** for deep groove ball bearings (n x dm), mm x min ⁻¹ , approx.	500,000
Drop point, DIN ISO 2176, °C	> 250
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.	0.88
Colour	beige

* 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** limit was determined in acc. with DIN 51 825 and DIN 51 821/2. The **lower** limit was determined in acc. with 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.

PETAMO® GHY 133 N

Safety Data Sheet

<p>1.1 Product name: PETAMO GHY 133 N Code-No.: 094 061 03.07.2000</p>	<p>9. Physical and chemical properties Form: paste Colour: beige Odour: characteristic Drop point: > 250 °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. 0.88 g/cm³, 20 °C Water solubility: insoluble pH value: not applicable Kinematic viscosity: not applicable Further information: none</p>
<p>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</p> <p>Emergency telephone no.: ++49 - 89 7876 - 0</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>2. Composition / information on ingredients Chemical characterization (preparation): Mineral oil, synthetic hydrocarbon oil, polyurea</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>3. Hazards identification No particular hazards known</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>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>13. Advice on Disposal Disposal: Can be incinerated, when in compliance with the national regulations Dispose of contaminated packaging and recommended cleaning: Offer rinsed packaging material to local recycling facilities</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>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>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>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>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>16. Other information Issue-department of Safety Data Sheet: Chemical Documentation, Tel.: ++49 - 89 7876 - 564</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>	

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