

PETAMO[®] GY 193

Lubricating grease for high-temperature and long-term lubrication of rolling bearings



Description

PETAMO GY 193 is a synthetic high-temperature grease based on a high-quality ester oil, polyurea thickener and special additives. The grease offers excellent water resistance and corrosion protection. With an above average base oil viscosity of approximately 160 mm²/s at 40°C, PETAMO GY 193 is the ideal selection for applications where high temperatures and medium to high load conditions apply.

Application

Depending on the service temperature, PETAMO GY 193 can be used for long-term lubrication and lifetime lubrication conditions as well as for applications requiring more frequent relubrication. Experience has shown that lifetime lubrication is possible with temperatures below 150°C, for example in electric motors, fans, carrier and guide rollers, chain wheels, sealed or shielded rolling bearings. In relubricatable rolling bearings subject to very high temperatures the grease can be used up to 180°C (e.g. driers). PETAMO GY 193 should be selected primarily for lubrication of bearings with point contact loading, but can also be used for bearings with linear contact loading and a high share of sliding friction.

Application notes

PETAMO GY 193 can be applied by spatula, grease gun or centralized lubrication systems.

Minimum shelf life

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

Pack sizes

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

PETAMO GY 193

- High temperature lubricant
- Long term and lifetime lubrication product
- Excellent resistance to water

Product data

Chemical structure, oil type	ester oil
Chemical structure, thickener	polurea
Service temperature range* [°C], approx.	-20 to 180
Colour	beige
Texture	homogeneous, fibrous
Drop point, DIN ISO 2176 [°C]	≥ 240
Cone penetration of lubricating greases, DIN ISO 2137, worked penetration, 25 °C, [0.1 mm]	270 to 310
Density at 20 °C [g/cm ³], approx.	1.03
Kinematic viscosity of the base oil, DIN 51562 pt. 01, Ubbelohde, 40 °C [mm ² /s], approx.	160
Speed factor** (n x dm) [mm/min], approx.	400,000
Flow pressure, DIN 51805, -20 °C, mbar	< 1400

* 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.

** 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® GY 193

Safety Data Sheet

1.1 Product name: PETAMO GY 193 Code-No.: 094 046 28.06.2001
1.2 Klüber Lubrication München KG Geisenhausenerstraße 7 81379 München, Germany ☎ +49 89 7876-0 telephone exchange Telefax +49 89 7876-333 Emergency telephone no.: +49 89 7876-0
2. Composition / information on ingredients Chemical characterization (preparation): Ester oil, polyurea 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: 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: 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
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

9. Physical and chemical properties Form: paste Colour: beige Odour: characteristic Drop point: > 240 °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. 1.03 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 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: 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 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: 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
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: Labelling according to the Swiss regulations: No toxicological class, BAGT-no. 617084
16. Other information Issue-department of Safety Data Sheet: Chemical Documentation, ☎ +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