

Description:

Klüberplus SK 11-299 is a lubricating wax based on wax-like hydrocarbons and a synthetic hydrocarbon oil. It protects reliably against wear, shows excellent adhesion and is extremely resistant to water, thus providing excellent corrosion protection also when in contact with water. Once applied to the component surface, the lubricant leaves a "quasi-dry" non-tacky lubricant film.

Application:

Klüberplus SK 11-299 was especially developed for the initial lubrication of steel chains. It is particularly suitable for chains exposed to dust, dirt, lint or water. This product makes it possible to lubricate chains which, due to the operating conditions, could not be lubricated in the past. Klüberplus SK 11-299 ensures long-term and in some cases even lifetime lubrication in transport, drive and control chains subject to low loads, which operate at a chain temperature of 60 °C maximum and under moderate ambient conditions.

Application notes:

Klüberplus SK 11-299 has been especially designed for the initial lubrication of chains by hot dipping. When applied by hot dipping, we recommend an immersion bath temperature of 90 °C to 100 °C. Chains should remain in the bath until bubbling has stopped. We recommend preheating the components in order to reduce the period in the immersion bath. Excess wax can be blown off with hot air (80 to 90 °C) after the bath.

Service temperature range:

The indicated service temperatures are guide values depending on the

lubricant's composition, the intended use and the application method. For chain lubrication we recommend a service temperature range between – 40 and 120 °C. In the low-temperature range, higher starting torques are possible after longer periods of chain standstill. Shorter relubrication intervals may be required at temperatures above 80 °C, depending on the chain load and speed. Chains can be relubricated with any chain lubricant suiting the individual requirements (except for polyalkylene glycol oils).

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.

Klüberplus SK 11-299

- Lubricating wax for chains
- "Quasi-dry", non-tacky lubricant film
- Wear protection
- High corrosion protection
- Good adhesion
- Excellent water resistance

Pack sizes:

25 kg bucket

Product data:

Colour	light yellow
Texture	solid
Density, at 20 °C, g/cm ³	approx. 0.89
Drop point, DIN ISO 2176, °C	70 – 80
Flash point, based on DIN ISO 2592, °C	> 200
Needle penetration, DIN 51 579, 0.1 mm	70 – 100
Steel corrosion (RST 37-2), DIN 50 017, condensation water in alternating atmospheres, after 20 cycles (480 h), 40 °C, rating	0
Water resistance, based on DIN 51 807/1, 5 h / 60 °C	0 – 60

Klüberplus® SK 11-299

Safety Data Sheet

1.1 Product name: Klüberplus SK 11-299 Code-No.: 012 219 10.7.1998	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
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	9. Physical and chemical properties Form: paste Colour: light yellow Odour: characteristic Drop point: ~ 75 °C, DIN ISO 2176 Flash point: > 200 °C (base oil) Flammability: not applicable °C Ignition temperature: not applicable °C Autoflammability: not applicable Lower explosion limit: not applicable Upper explosion limit: not applicable Vapour pressure-first: not applicable Density: approx. 0.89 g/cm ³ , 20 °C Water solubility: insoluble, g/l pH value: not applicable Kinematic viscosity: not applicable Further information: None
2. Composition / information on ingredients Chemical characterization (preparation): Synthetic hydrocarbon oil, wax Additional information: No hazardous ingredients	10. Stability and reactivity Conditions to avoid: None Materials to avoid: Strong oxidizing agents Hazardous decomposition products: None under normal use Additional information: None
3. Hazards identification No particular hazards known	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
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	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
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	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
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	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
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	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
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	16. Other information 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.



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