

Klüberplus SK 12-205

Lubricating Wax Emulsion for Screws, Nuts and Bolts



Description

Klüberplus SK 12-205 is an aqueous wax emulsion, free of solvents and silicone, suitable for dilution with water. Once dry, Klüberplus SK 12-205 provides a transparent, “dry-to-touch” lubricant film. This dry lubricant film has a very low friction coefficient, which varies depending on the water mix ratio. For coating inspection purposes, Klüberplus SK 12-205 includes a UV indicator, visible at 366 nm under a UV lamp.

Application

The dry, transparent and quick-drying lubricant film make Klüberplus SK 12-205 particularly suitable for coating mass produced parts. Using simple coating processes, components such as screws, bolts, nuts, pins and rivets can be treated with Klüberplus SK 12-205 thus minimising friction and friction dispersion. The adhesion of Klüberplus SK 12-205 on steels and plastics is very good. The “dry-to-touch” lubricant film ensures that dust and other forms of contamination will not adhere to the surface of coated parts in storage.

Application notes

Klüberplus SK 12-205 is delivered as a ready-to-use lubricating wax emulsion. It can be diluted with cold mains water if required. We recommend a mixing ratio of between 1:3 and 1:10 (Klüberplus to water) depending on the application. Stir continuously when adding water to Klüberplus SK 12-205 in order to achieve the desired mixing result. The lubricating wax emulsion will be “dry-to-touch” approximately 10 minutes after application at room temperature. The drying time can be considerably reduced using a warm air supply of up to 80°C. The best application of Klüberplus SK 12-205 is achieved using dip-feed baths or dip/spin processes. The bath should not spin too quickly otherwise the product is liable to foam. Spray centrifuges should not be used as foaming is also likely due to the air intake.

The concentration and pH-value should be monitored continuously when using large baths or the spin coating application method. A flat metal or glass dish can be used for the concentration measurement. The sample can be measured into the dish which is then evaporated at 95 °C. The difference in weight determines the content of solids in the bath. The parts to be coated must be free of fat and grease in order to ensure good surface adhesion. Soiling or cross-contamination with substances from other baths must be avoided at all times.

Klüberplus SK 12-205

- Low friction coefficient with very low dispersion
- Transparent, “dry-to-touch” lubricant film
- Water miscible
- Free from solvents
- Easy to use
- Suitable for self-tapping screws

Minimum shelf life

The minimum shelf life is approx. 24 months if the product is stored in its unopened original container in a dry place. Protect from frost.

Pack size

200 l plastic drum
15 l bucket

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Product Data for Original Product

Colour	beige
Texture	liquid
Density to DIN 51 757, at 20 °C, approx.	1.00
Calculation of pH-value to DIN 51 369, electromagnetic, undiluted, approx.	9

Product Data of Anhydrous Lubricant Film

Operating temperature range* [°C], approx.	– 40 to 90	
Friction coefficient measured on Erichsen AP 541 Test bench-screws M 10 x 40–10.9, black, DIN ISO 4017, nuts M 10–10, polished and degreased, number of screws – 20 (in each case)		
	Total friction coefficient μ_{total}	Standard deviation A
Mixing ratio 1 : 3	0.122	0.005
Mixing ratio 1 : 5	0.144	0.007
Mixing ratio 1 : 10	0.150	0.009

* 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 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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