

Klüberplex AG 11-461,-462

White operating and priming lubricants for open drives



Benefits for your application

- **Reduced maintenance needs**
 - **low contamination of machine environment due to use of white solid lubricants and low lubricant consumption**
 - **very good adhesion even at low temperatures**
 - **product streamlining possible as the product is suitable for gear rim / pinion drives and bearings**
 - **Improved component performance**
 - **less wear due to selected solid lubricants and additives**
 - **very good corrosion protection also when exposed to saltwater**
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Description

Klüberplex AG 11-461 and 462 are spreadable adhesive lubricants based on mineral oil and an aluminium complex soap thickener, and contain white solid lubricants. Klüberplex AG 11-461 and 462 can withstand high loads with good corrosion protection properties.

Application

Klüberplex AG 11-461 and 462 are suitable as priming lubricants for large gear rim and pinion drives and serve as contrast lubricants for checking the drive's contact pattern. Klüberplex AG 11-461 and 462 are also suitable for the effective lubrication and protection of offshore and wind-energy applications such as open gears, slow-running rolling bearings, sliding and guide rails, steel cables of winches or cranes and similar components subject to saltwater influence in the marine sector.

Application notes

Priming lubrication

Klüberplex AG 11-461 and 462 can be applied by brush or spatula, ideally onto clean surfaces. To determine the right quantity for your application, please see the diagram overleaf.

Operational lubrication

Klüberplex AG 11-461 and 462 can be applied by manually operated grease guns. Both products are applicable through central lubricating systems and sprayable at temperatures down to 0 °C. Adhesion is sufficient at temperatures as low as -40 °C.

Provided sufficient relubrication is ensured, short-term thermal loads of up to 200 °C are permissible.

The lubricant quantities to be used depend on the operating conditions and must be determined for each application individually.

The product's surface colour may change slightly when exposed to intense sunlight for a longer time without affecting the product's performance.

Material safety data sheets

Material safety data sheets can be downloaded or requested via our website www.klueber.com. You may also obtain them through your contact person at Klüber Lubrication.

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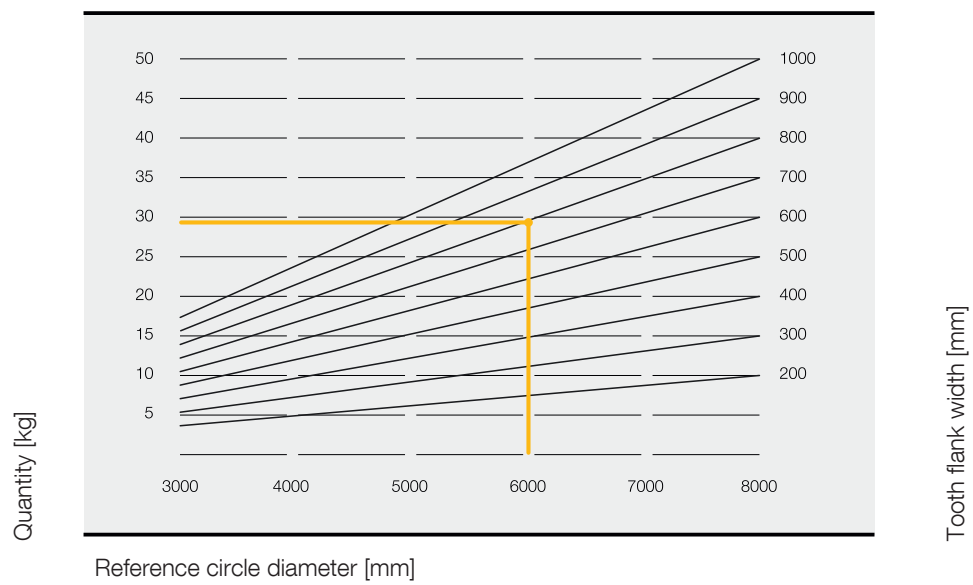
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| Pack sizes | Klüberplex AG 11-461 | Klüberplex AG 11-462Spray | Klüberplex AG 11-462 |
|--------------------|----------------------|---------------------------|----------------------|
| Aerosol can 400 ml | - | + | - |
| Cartridge 450 g | + | - | + |
| Can 1 kg | + | - | + |
| Bucket 5 kg | + | - | + |
| Bucket 25 kg | + | - | + |

| Product data | Klüberplex AG 11-461 | Klüberplex AG 11-462 | Klüberplex AG 11-462Spray |
|--|------------------------|------------------------|---------------------------|
| Article number | 039213 | 039091 | 081302 |
| Colour space | white | white | white |
| Texture | homogeneous | homogeneous | homogeneous |
| ISO viscosity grade of the base oil, DIN ISO 3448 | 460 | 460 | |
| Solid lubricants, percentage | approx. 20 % by weight | approx. 20 % by weight | approx. 20 % by weight |
| Density at 20 °C | approx. 1.07 g/cm³ | approx. 1.07 g/cm³ | |
| Upper service temperature | 150 °C / 302 °F | 150 °C / 302 °F | 150 °C / 302 °F |
| Lower service temperature | -20 °C / -4 °F | -10 °C / 14 °F | -10 °C / 14 °F |
| Functional lubricant film | approx. -40 °C | approx. -40 °C | |
| FZG scuffing test, based on DIN ISO 14635, A/2,76/room temperature, scuffing load stage | >= 12 | >= 12 | |
| Water resistance, DIN 51807 pt. 01, 3 h/90 °C, rating | 0 - 90 | 0 - 90 | 0 - 90 |
| Drop point, DIN ISO 2176 | >= 180 °C | >= 180 °C | >= 180 °C |
| Worked penetration, DIN ISO 2137, 25 °C, upper limit value | 340 x 0.1 mm | 295 x 0.1 mm | 295 x 0.1 mm |
| Worked penetration, DIN ISO 2137, 25 °C, lower limit value | 310 x 0.1 mm | 265 x 0.1 mm | 265 x 0.1 mm |
| Flow pressure of lubricating greases, DIN 51805, test temperature: -10 °C | | | <= 1 400 mbar |
| NSF-H2 registration | 145 947 | 145 949 | 145 950 |
| Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx. | 24 months | 24 months | 24 months |



Determining quantity required for priming lubrication





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Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 80 years.

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The data in this document is based on our general experience and knowledge at the time of publication 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 field tests with the product selected for a specific application. All data are guide values which depend on the lubricant's composition, the intended use and the application method. The technical values of lubricants change depending on the mechanical, dynamical, chemical and thermal loads, time and pressure. These changes may affect the function of a component. We recommend contacting us to discuss your specific application. If possible we will be pleased to provide a sample for testing on request. Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this document at any time without notice.

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