

# Klüberfluid® C-F 3 M ULTRA

Operational lubricant for large girth gear drives



## Description

Klüberfluid C-F 3 M ULTRA is a newly developed transparent adhesive lubricant especially for the lubrication of medium-size to large girth gear drives. It is based on a mixture of synthetic hydrocarbons and mineral oil.

Klüberfluid C-F 3 M ULTRA provides extremely good adhesion, resistance to high pressure and exceptional wear protection. It is suitable for use at component temperatures up to 120 °C.

Klüberfluid C-F 3 M ULTRA is free from bitumen, solvents, heavy metals, chlorine and solid lubricants. Klüberfluid C-F 3 M ULTRA corresponds to ANSI/AGMA 9005-E02 annex D-2.

## Application

Klüberfluid C-F 3 M ULTRA is primarily used for the lubrication of rather large gear-rim/pinion drives. It can be used with all gear sizes and power ratings. A peripheral speed of 12 m/s should however not be exceeded.

Klüberfluid C-F 3 M ULTRA was especially developed for ships and the offshore sector, where most of such drives are found. However, application is also in other industries.

## Application notes

Klüberfluid C-F 3 M ULTRA can be applied to the tooth flanks by means of spray lubrication systems working with container or barrel pumps. For pumping, the lubricant temperature should be > 25 °C.

If customary spray systems are to be used, please contact Klüber Lubrication München KG, dept. MA-LSS, phone: +49 89 7876-0 for information on their suitability.

Klüberfluid C-F 3 M ULTRA can also be applied by brush or spatula.

The lubricant film on the tooth flanks can be made visible by using a UV lamp of at least 366 nm.

## 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; the container should not be exposed to direct sunlight.

## Pack size

25 kg bucket  
180 kg drum

## Klüberfluid C-F 3 M ULTRA

- Operational lubricant for open drives; spray or manual application
- For elevated component and ambient temperatures
- Free from heavy metals, chlorine, solvents, bitumen and solids
- Very good adhesion
- Easy application
- Optimum wear and tooth flank protection
- Low maintenance, lower disposal costs
- Light-coloured, transparent product

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## Product data

Colour	brown
Texture	homogeneous, highly viscous
Density (20 °C) DIN 51 757, g/cm <sup>3</sup> , approx.	0.95
Viscosity, DIN 51 562, pt. 1 20 °C, mm <sup>2</sup> /s, approx. 40 °C, mm <sup>2</sup> /s, approx. 100 °C, mm <sup>2</sup> /s, approx.	150 000 (extrapolation) 25 500 750
Viscosity index (VI), DIN ISO 2909, approx.	185
Four-ball tester welding load, DIN 51 350, pt. 4, N	≥ 6 000
FZG standard test A 8.3/90, DIN 51 354, pt. 2, Scuffing load stage Specific loss in weight, mg/kWh	> 12 < 0.2
Application via automatic spray systems, °C	25 to 100
Functional lubricant film, °C, approx.	0
Resistance to thermal loads, °C	up to 120
Flash point, DIN ISO 2592, °C	> 200
Pour point, DIN ISO 3016, °C	< 10

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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