

# Klüberfluid C-F 3 M Ultra

Operational lubricant for large girth gear drives



## Your benefits at a glance

- 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

## Your requirements - our solution

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.

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.

## Material safety data sheets

Material safety data sheets can be requested via our website [www.klueber.com](http://www.klueber.com). You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	Klüberfluid C-F 3 M Ultra
Bucket 25 kg	+
Drum 180 kg	+
Characteristics	Klüberfluid C-F 3 M Ultra
Article number	039088
Colour space	brown

# Klüberfluid C-F 3 M Ultra

Operational lubricant for large girth gear drives



Characteristics	Klüberfluid C-F 3 M Ultra
Texture	homogeneous
Application, in automatic spray systems	25 - 100 °C
Functional lubricant film	approx. 0 °C
Thermal stability of the lubricating film, depends on the relubrication	≤ 120 °C
Density, DIN 51757, 20°C	approx. 0.95 g/cm <sup>3</sup>
Flash point, DIN EN ISO 2592, Cleveland open cup	≥ 200 °C
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 100°C	approx. 750 mm <sup>2</sup> /s
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 20°C	approx. 150 mm <sup>2</sup> /s
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 40°C	approx. 25500 mm <sup>2</sup> /s
Viscosity index, DIN ISO 2909	approx. 185
Pour point, DIN ISO 3016	≤ 10 °C
Four-ball tester, welding load, DIN 51350-2	≥ 7000 N
FZG scuffing test, DIN ISO 14635-1, A / 8.3 / 90, change of weight	≤ 0.2 mg/kWh
FZG scuffing test, DIN ISO 14635-1, A / 8.3 / 90, failure load stage	≥ 12
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx. 36 months	

## 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 90 years.

Klüber Lubrication München GmbH & Co. KG /  
Geisenhausenerstraße 7 / 81379 München / Germany /  
phone +49 89 7876-0 / fax +49 89 7876-333.

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.

Publisher and Copyright: Klüber Lubrication München GmbH & Co. KG. Reprints, total or in part, are permitted only prior consultation with Klüber Lubrication München GmbH & Co. KG and if source is indicated and voucher copy is forwarded.