

# KLÜBERBIO RM 8-100 200 LTR

Product group: **681** Product number: **210069** 

KLÜBERBIO RM 8-100 is a synthetic Environmentally Acceptable Lubricant (EAL) designed to endure the high loads in your stern tube. Equipped with good shear stability, it forms a strong, hydrodynamic oil film even under tough conditions, helping you keep your parts protected.



#### **Product information**

The stern tube is essential to the operation of any ship — as is the proper lubrication of its propellor shaft and seals. Importantly, lubricants for stern tubes need to be both strong and environmentally-compatible, because it is firstly, subject to rigorous conditions during voyages, and secondly, almost always prone to leakage into the ocean.

As such, KLÜBERBIO RM8-100 was formulated to take on the high loads that stern tubes face regularly at sea — all while being environmentally compatible.

Boasting good shear stability, it forms a strong, hydrodynamic oil film that helps prevent abrading contact between your parts, protecting your bearings from damage, even under high loads.

KLÜBERBIO RM8-100 also possesses excellent ageing and oxidation stability, helping the lubricant maintain its viscosity and performance.

In contact with the sea, KLÜBERBIO RM8-100 is non-toxic to marine organisms, and ultimately biodegradable. It is composed of carefully selected raw materials and was designed to minimise environmental harm during oil loss/leakage as far as possible. For the lubricant, its high resistance to contact with water also prevents decomposition that water tends to cause.

KLÜBERBIO RM8-100 is fully compliant with the U.S. Environmental Protection Agency's requirements for classification as an Environmentally Acceptable Lubricant (EAL). Meeting the EPA's Vessel General Permit (VGP)'s biodegradability, toxicity and bioaccumulation standards, it adheres to your commitment and ours to keep our waters safe.

Compatible with various FKM elastomers from leading propeller shaft seal manufacturers, KLÜBERBIO RM8-100 is a safe and trusted lubricant solution for reduced leakage and contamination.

#### Features

- Compliant with the requirements for Environmentally Acceptable Lubricants (EAL) as defined by the EPA 2013 Vessel General Permit
- Biodegradable and non-toxic to marine organisms
- Shear stability
- · Ageing stability
- Oxidation stability
- Water resistant
- Compatible to use with standard FKM elastomers

## Benefits

- Environmentally-friendly
- Minimises harm to the marine environment in the event of leaks
- High-performing under high loads
- High-performing under high ageing and oxidation conditions
- Protects your stern tube from damage
- Prevents lubricant decomposition caused by water
- Reduces leakage and contamination

## **Specification**

## General

Invent Hazard Material (IMO/EU) classification	C-3	
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## Physical properties

Appearance	Slightly turbid
Biodegradability of the base oil, acc. to OECD 301 F, (within 28 days) $[\%]$	≥60
Density at 20°C [g/cm³]	~0.93
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D7042, 100 °C [mm²/s]	~ 14
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D7042, 40 °C [mm²/s]	~ 100

## Dimensions/Weight

Pack	ing Size	200 ltr
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#### Technical data

Chemical composition, type of oil	Ester oil
ISO viscosity grade of the base oil, DIN ISO 3448	100
Shelf life [months]	36
Viscosity index, DINISO 2909	~ 140

#### Performance data

Anticorrosive properties on steel, DIN ISO 7120, method A, steel, 24 h/60 $^{\circ}\text{C}$	no rust corrosion degree
Copper corrosion, DIN EN ISO 2160, 24 h/100°C	1 - 100 corrosion degree
Flash point, DIN EN ISO 2592, Cleveland, open-cup apparatus [°C]	≥265
Foam test, ASTM-D 892, ISO 6247, sequence I/24 °C [ml]	≤100/10
Foam test, ASTM-D 892, ISO 6247, sequence II/ 93.5 °C [ml]	≤100/10
Foam test, ASTM-D892, ISO 6247, sequence III/24°C [ml]	≤100/10
Lower service temperature	-25°C/-13°F
Pour point, DIN ISO 3016 [°C]	≤-30
Upper service temperature	120°C/ 248°F

# **Documents**

SDoC and MD for IHM

# Directions for use

KLÜBERBIO RM8-100 is ideal for lubricating propeller bushes made of white metal and propeller shaft seals.

Though it is generally miscible with stern tube oils based on mineral or ester oil, we recommend that you still perform a miscibility test beforehand to completely rule out the possibility of any incompatibility between different additives. You are also advised to flush the stern tube with KLÜBERBIO RM8-100 before the changeover.

Please ensure that KLÜBERBIO RM8-100 is approved by the OEM of your propellor shaft seal or bearing. If it is not, or the seal or bearing's specification has been changed, consult the OEM prior to changing the oil.