

Klübersynth EG 4 oils

Synthetic high-performance gear oils



Benefits for your application

- **Synthetic high-performance gear oils**
 - **Scuffing load capacity conforms to API GL 4**
 - **Miscible with mineral oil**
 - **Excellent corrosion protection**
 - **Ageing resistance**
-

Description

The Klübersynth EG 4 oils are fully synthetic high-performance gear oils conforming to the demands of AGMA. They are also mineral oil miscible. In addition to their excellent anti-corrosion and anti-wear properties, these oils are very resistant to ageing and oxidation and offer exceptional service at low temperatures. They also show a low tendency to foam. In the FZG test (A10/16,6R/90) a scuffing load capacity of GL 4 was achieved.

Application

The Klübersynth EG 4 oils are particularly suitable for lubricating friction points subject to high loads over a wide temperature range. The oils can be used to lubricate spur, bevel and worm gears. Klübersynth EG 4 oils are stable under shear stress and offer excellent demulsifying properties. The oils react on the whole neutrally to common seal materials such as NBR or FPM and lacquers. Care should nevertheless be taken, as elastomers from different manufacturers can behave differently. Therefore the data given in the „compatibility with elastomers“ section should be used for reference purposes only. For this reason a compatibility test should always be carried out with the elastomers which are actually used.

Application notes

The oils can be applied using the immersion, immersion circulation and injection methods. Total loss lubrication is

possible with drip-feed, brush or oil feeder application. It is possible to apply the oils automatically, but attention should be paid to the maximum processable viscosity value in the manufacturer's instructions. Viscosity selection for rolling bearings and gears to determine the correct oil viscosity please refer to the bearing manufacturer's instructions or worksheet 3 from the Society of Tribology (GfT). The gear manufacturer's instructions always take priority when determining the oil viscosity for gears. If instructions are not available from the gear manufacturer then the viscosity can be determined from the „Klübersynth EG 4 oils – Selection of oil viscosity for gears“ worksheet. Operating temperature range operating temperature values are reference values which have been established according to the lubricant structure, desired application and application engineering. Gear and chain lubrication by immersion:

- Klübersynth EG 4-150 /...220 from approx. -35 °C to 140 °C
- Klübersynth EG 4-320 /...460 from approx. -30 °C to 140 °C
- Klübersynth EG 4-680 from approx. -25 °C to 140 °C
- Klübersynth EG 4-1000 from approx. -15 °C to 120 °C

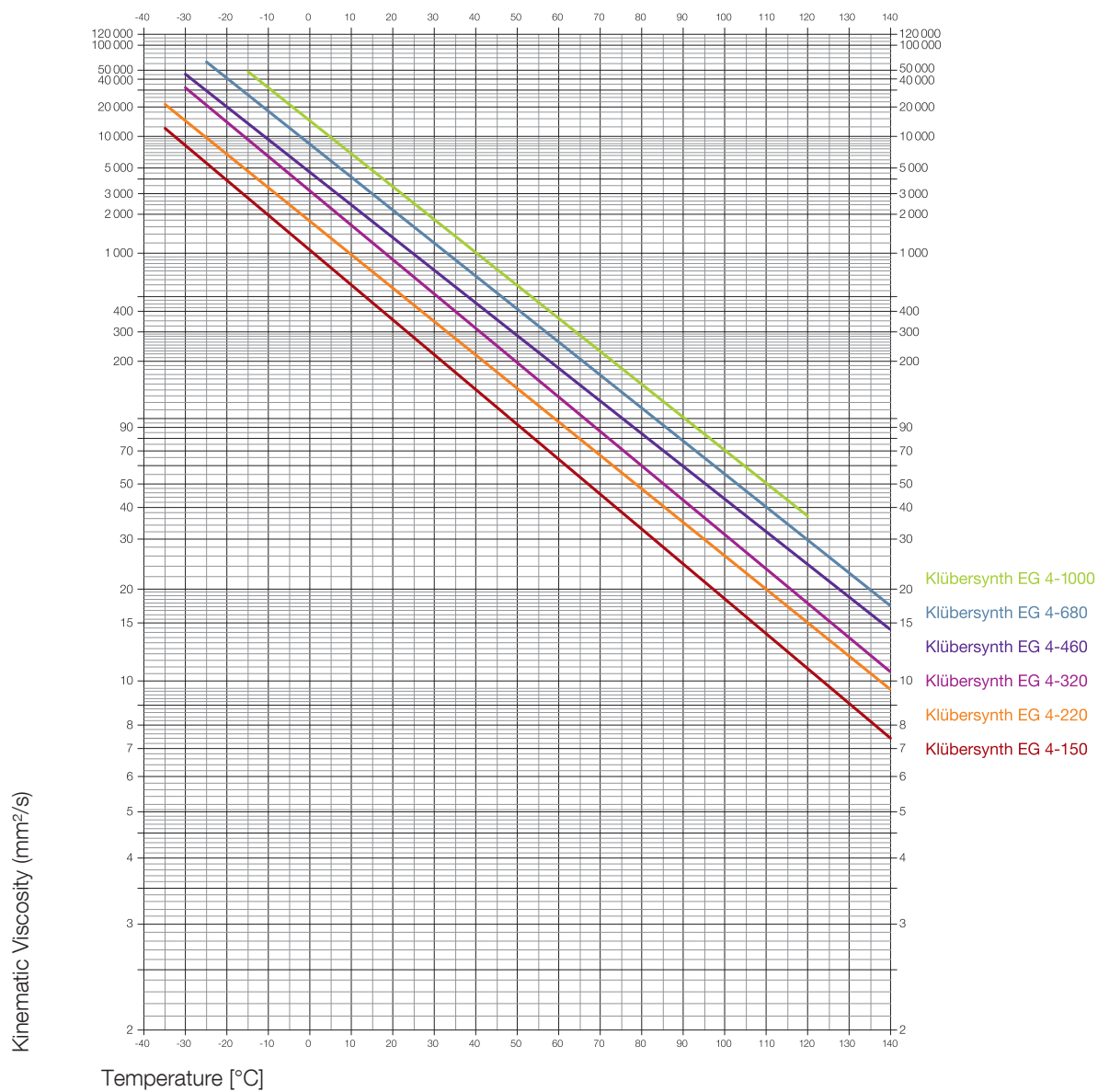
Material safety data sheets

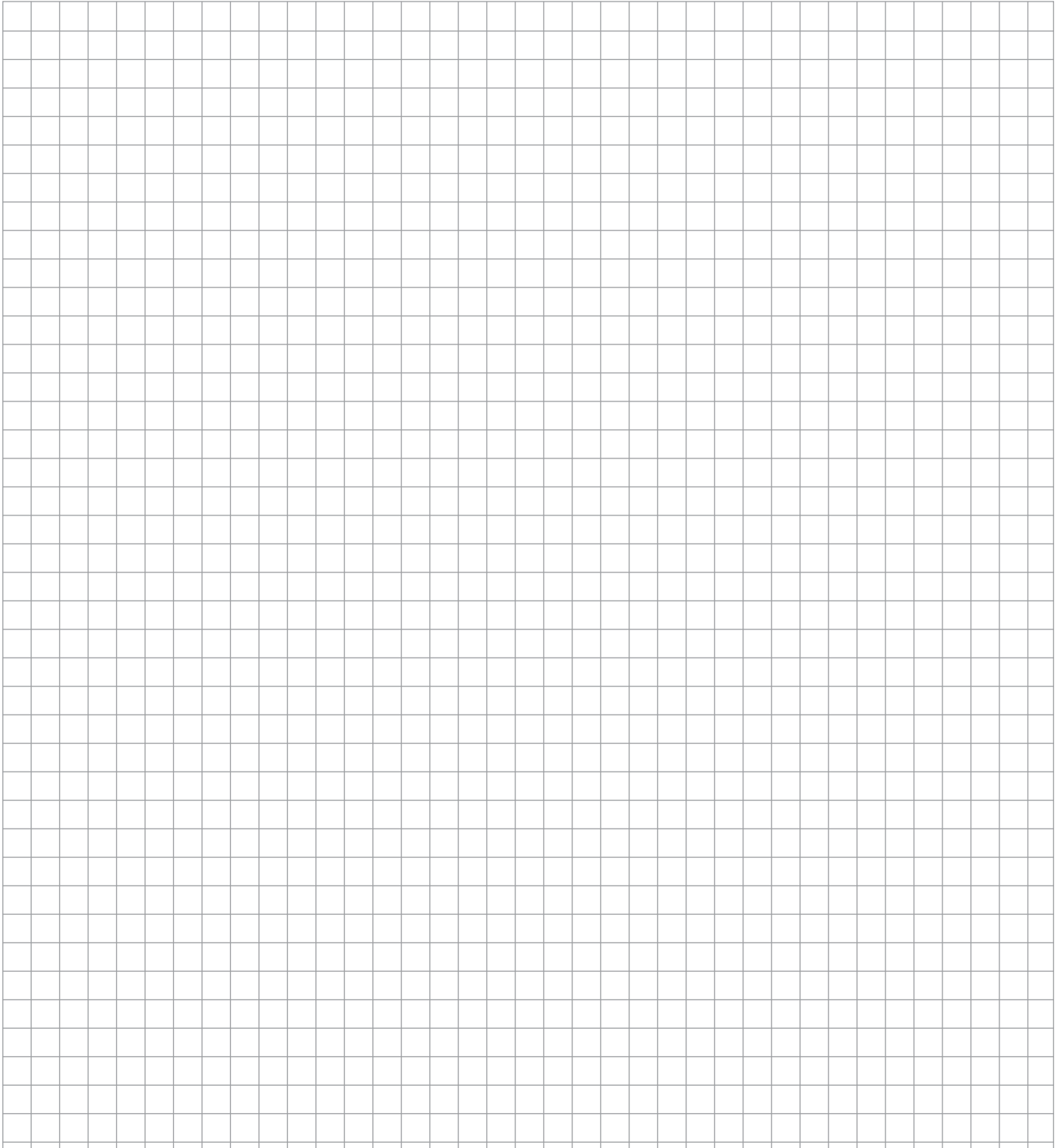
Material safety data sheets can be requested via our website www.klueber.com. You may also obtain them through your contact person at Klüber Lubrication.

Klübersynth EG 4 oils

Synthetic high-performance gear oils

Viscosity Temperature Diagram





Klübersynth EG 4 oils

Synthetic high-performance gear oils

Pack sizes	Klübersynth EG 4- 150
Canister 19 l	+
Drum 208 l	+

Product data	Klübersynth EG 4- 150
Article number	012220
ISO viscosity grade, DIN ISO 3448	150
AGMA number	4 EP
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 18 mm ² /s
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 150 mm ² /s
Viscosity index, DIN ISO 2909	>= 130
Density, DIN 51757, 20 °C	approx. 0.87 g/cm ³
Pour point, DIN ISO 3016	<= -39 °C
Flash point, DIN EN ISO 2592, Cleveland, open-cup apparatus	>= 200 °C
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	60 months



Klübersynth EG 4- 220	Klübersynth EG 4- 320	Klübersynth EG 4- 460	Klübersynth EG 4- 680	Klübersynth EG 4-1000
+	+	+	+	+
+	+	+	+	+

Klübersynth EG 4- 220	Klübersynth EG 4- 320	Klübersynth EG 4- 460	Klübersynth EG 4- 680	Klübersynth EG 4-1000
012221	012222	012223	012224	012225
220	320	460	680	1 000
5 EP	6 EP	7 EP	8 EP	8 A EP
approx. 25.8 mm ² /s	approx. 33.9 mm ² /s	approx. 43.3 mm ² /s	approx. 53.4 mm ² /s	approx. 71.3 mm ² /s
approx. 220 mm ² /s	approx. 320 mm ² /s	approx. 460 mm ² /s	approx. 680 mm ² /s	approx. 1 000 mm ² /s
>= 130	>= 130	>= 130	>= 130	>= 130
approx. 0.87 g/cm ³	approx. 0.87 g/cm ³	approx. 0.88 g/cm ³	approx. 0.89 g/cm ³	approx. 0.89 g/cm ³
<= -36 °C	<= -36 °C	<= -36 °C	<= -30 °C	<= -24 °C
>= 200 °C	>= 200 °C	>= 200 °C	>= 200 °C	>= 200 °C
60 months	60 months	60 months	60 months	60 months



Klübersynth EG 4 oils

Synthetic high-performance gear oils



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.

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



a company of the Freudenberg Group