Klübersynth EG 4

Synthetic high-performance gear oil

Your benefits at a glance

- **High scuffing protection**
- **Good wear protection**
- **Excellent ageing and oxidation resistance**
- **Wide service temperature range due to good viscosity-temperature behaviour**
- **Low foaming tendency**
- **Energy savings due to optimised friction behaviour**
- **Very good corrosion protection**

Your requirements – our solution

Klübersynth EG 4 is a fully synthetic high-performance gear oil based on polyalphaolefin satisfying the requirements of many gears.

Klübersynth EG 4 offers a high scuffing strength of API GL-4. Gears are sufficiently protected against scuffing even at extremely high peak loads, vibrations or oscillations. The good wear protection of the gear components ensures that their calculated service life is achieved, leading to lower maintenance and repair costs.

Klübersynth EG 4 offers a much longer service life than mineral oils due to the excellent ageing and oxidation resistance of the selected raw materials; thus service intervals can be extended and maintenance costs reduced. The product's low foaming tendency and anti-corrosive properties enable problem-free gear operation. Klübersynth EG 4 is neutral towards most sealing materials such as NBR or FKM. Oil leakage leading to contamination is prevented. It also shows good demulsifying behaviour.

The good viscosity-temperature behaviour supports the formation of a sufficient lubricant film across a wide service temperature range. Therefore, a single viscosity grade can cover both low and high temperatures in many applications. The optimised friction behaviour enabled by the carefully selected base oils reduces power loss and improves gear efficiency.

By using Klübersynth EG 4 you can benefit from a number of advantages that will help you save costs easily and efficiently. We look forward to hearing from you.

Application

Klübersynth EG 4 was especially developed for the lubrication of heavily loaded spur, bevel and planetary gears. It can also be used for the lubrication of worm gears.

Klüberoil EG 4 can also be selected for the lubrication of plain and rolling bearings, all kinds of toothed couplings, chains, guideways, joints, spindles and pumps.

Application notes

Klübersynth EG 4 can be used for immersion, immersion circulation and injection lubrication.

The use of drip-feed oilers, brushes, oil cans or suitable automatic lubricating systems is also possible. When using automatic lubricating systems, please note the manufacturer's instructions regarding the maximum permissible viscosity. The low-viscosity varieties are also used for oil mist lubrication.

Klübersynth EG 4 is miscible with mineral oils. However, for the Klübersynth EG 4 oil to deliver its full performance, any residues of a previously used mineral oil should not exceed 5 % in quantity.

For use at permanent temperatures of 80 °C max., seals made of NBR may be used. For higher temperatures, seals made of FKM should be chosen. It should be noted that elastomers from one or several manufacturers can behave differently; therefore tests should be performed.

For checking the contact pattern during running-in, the inspection paint Klübertop P 39-462 Spray (Art. No. 081295) can be used.

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,Prod. 012220, 012221, 012222, 012223, 012224, 012225,en
Edition 06.05.2022 [replaces edition 27.10.2021]

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Viscosity selection

When determining the oil viscosity for gear lubrication, the gear manufacturer's instructions take priority. To determine the correct oil viscosity for bearings, please observe the bearing manufacturer's instructions. Due to the better viscosity-temperature behaviour of Klübersynth EG 4, its actual viscosity during operation differs from that of mineral oils and can be determined by means of the enclosed diagram.

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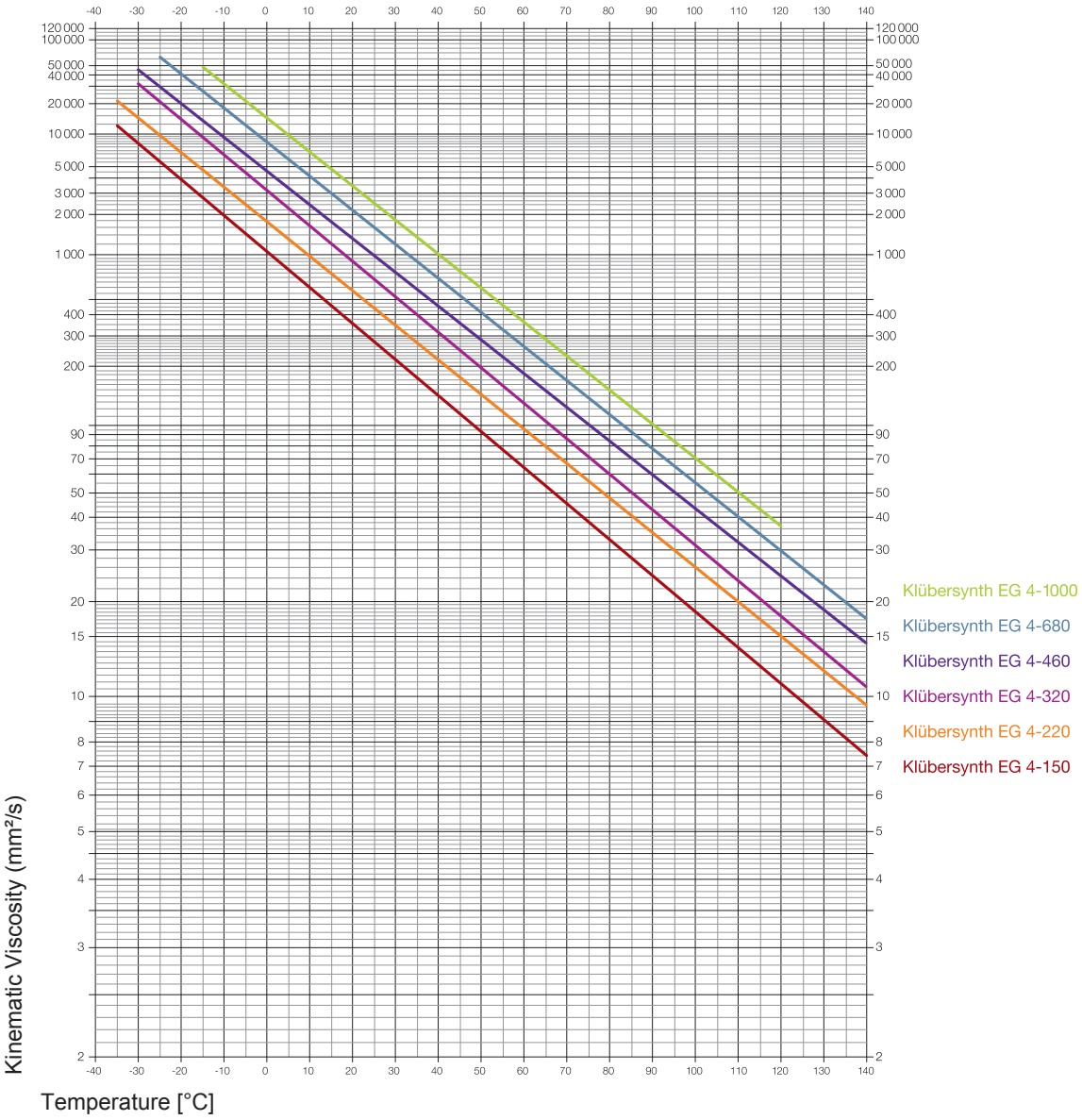
Viscosity Temperature Diagram



Klübersynth EG 4

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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
Lower service temperature	-35 °C / -31 °F
Upper service temperature	140 °C / 284 °F
Density, DIN 51757, 20 °C	approx. 0.87 g/cm³
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 150 mm²/s
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 18 mm²/s
Viscosity index, DIN ISO 2909	>= 130
Pour point, DIN ISO 3016	<= -39 °C
Flash point, DIN EN ISO 2592, Cleveland, open-cup apparatus	>= 200 °C
Foam test, ASTM-D 892, ISO 6247, sequence I/24 °C	<= 100/10 ml
Foam test, ASTM-D 892, ISO 6247, sequence II/ 93.5 °C	<= 100/10 ml
Foam test, ASTM D 892, ISO 6247, sequence III/24°C	<= 100/10 ml
FZG scuffing test, DIN ISO 14635-1, A/8.3/90, scuffing load stage	>= 14
FZG scuffing test, based on DIN ISO 14635-1, A/16.6/90, scuffing load stage	>= 12
API scuffing load capacity	API GL 4
FAG FE8 rolling bearing test, DIN 51819-3, D 7,5/80-80, wear of rolling element	<= 30 mg
FAG FE8 rolling bearing test, DIN 51819-3, D 7,5/80-80, wear of cage	<= 200 mg
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
-35 °C / -31 °F	-30 °C / -22 °F	-30 °C / -22 °F	-25 °C / -13 °F	-15 °C / 5 °F
140 °C / 284 °F	140 °C / 284 °F	140 °C / 284 °F	140 °C / 284 °F	120 °C / 248 °F
approx. 0.87 g/cm³	approx. 0.87 g/cm³	approx. 0.88 g/cm³	approx. 0.89 g/cm³	approx. 0.89 g/cm³
approx. 220 mm²/s	approx. 320 mm²/s	approx. 460 mm²/s	approx. 680 mm²/s	approx. 1 000 mm²/s
approx. 25.8 mm²/s	approx. 33.9 mm²/s	approx. 43.3 mm²/s	approx. 53.4 mm²/s	approx. 71.3 mm²/s
>= 130	>= 130	>= 130	>= 130	>= 130
<= -36 °C	<= -36 °C	<= -36 °C	<= -30 °C	<= -24 °C
>= 200 °C	>= 200 °C	>= 200 °C	>= 200 °C	>= 200 °C
<= 100/10 ml	<= 100/10 ml	<= 100/10 ml	<= 100/10 ml	<= 100/10 ml
<= 100/10 ml	<= 100/10 ml	<= 100/10 ml	<= 100/10 ml	<= 100/10 ml
<= 100/10 ml	<= 100/10 ml	<= 100/10 ml	<= 100/10 ml	<= 100/10 ml
>= 14	>= 14	>= 14	>= 14	>= 14
>= 12	>= 12	>= 12	>= 12	>= 12
API GL 4	API GL 4	API GL 4	API GL 4	API GL 4
<= 30 mg	<= 30 mg	<= 30 mg	<= 30 mg	<= 30 mg
<= 200 mg	<= 200 mg	<= 200 mg	<= 200 mg	<= 200 mg
60 months	60 months	60 months	60 months	60 months

Product information

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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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