

Klüberalfa DH 3

High-temperature lubricating oils for sintered metal plain bearings and plastic components



Benefits for your application

- **Long component life across a wide service temperature range**
 - due to excellent thermal and chemical stability
- **Many component materials can be used**
 - due to the good compatibility with plastics and elastomers

Description

Klüberalfa lubricants, based on perfluorinated polyether (PFPE), were developed to fulfil lifetime lubrication under demanding conditions and offer a number of characteristics that make them highly suitable for such tasks.

Klüberalfa DH 3 oils contain a PFPE oil mixture with excellent thermal stability and low evaporation rate. They are available with different viscosities to cover various temperature ranges.

Application

Sintered metal components

Klüberalfa DH 3 oils are used for the impregnation of sintered metal plain bearings subject to high temperatures where long-term lubrication is required. Due to their high thermal and chemical stability, additional lubrication with, for example, MIKROZELLA is normally not necessary.

Plastic components

Klüberalfa DH 3 oils are suitable for the lubrication of both plastic components and metal-plastic sliding contact surfaces. These clear, colourless and odourless oils do not form unwanted resins.

Klüberalfa DH 3 oils are generally regarded as neutral towards elastomers and plastics (possible exception: perfluorinated rubber), so no negative effect on the material is to be expected.

Nevertheless compatibility with the materials should be tested, especially prior to series application.

Application notes

Sintered metal components are impregnated by immersion in the Klüberalfa DH 3 oil. The oil bath can be heated up to a maximum of 80 °C, during which the immersion tank is subjected to a low vacuum of 0.1 to 0.001 bar, accelerating penetration. The sintered-metal component is completely filled with oil when no more air bubbles are expelled to the oil surface.

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.

Pack sizes	Klüberalfa DH 3-100	Klüberalfa DH 3-150	Klüberalfa DH 3-230	Klüberalfa DH 3-350
Canister 500 ml	+	+	-	+
Canister 10 l	+	+	+	+

Product data	Klüberalfa DH 3-100	Klüberalfa DH 3-150	Klüberalfa DH 3-230	Klüberalfa DH 3-350
Article number	090067	090068	090140	090069
NSF-H1 registration		155 602		155 603
Chemical composition, type of oil	PFPE	PFPE	PFPE	PFPE



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Product data	Klüberalfa DH 3-100	Klüberalfa DH 3-150	Klüberalfa DH 3-230	Klüberalfa DH 3-350
Lower service temperature	-25 °C / -13 °F	-25 °C / -13 °F	-25 °C / -13 °F	-25 °C / -13 °F
Upper service temperature	180 °C / 356 °F	200 °C / 392 °F	230 °C / 446 °F	230 °C / 446 °F
Density, DIN 51757, 20 °C	approx. 1.89 g/cm ³	approx. 1.9 g/cm ³	approx. 1.91 g/cm ³	approx. 1.91 g/cm ³
Refraction index, DIN 51423 pt. 02, at 20 °C	approx. 1.28	approx. 1.301	approx. 1.302	approx. 1.303
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 100 mm ² /s	approx. 150 mm ² /s	approx. 230 mm ² /s	approx. 350 mm ² /s
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 12 mm ² /s	approx. 18 mm ² /s	approx. 24 mm ² /s	approx. 35 mm ² /s
Viscosity index, DIN ISO 2909	approx. 114	>= 120	>= 120	>= 120
Pour point, DIN ISO 3016	<= -40 °C	<= -35 °C	<= -30 °C	<= -25 °C
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	60 months	60 months	60 months	60 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 80 years.

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