

Klübertec CM 6-100, -460, -680

High-performance oils for cold forming



Benefits for your application

- Higher process stability, e.g. lower reject rate, due to high load-carrying capacity and ease of application with normal metering systems.
- Comply with "guidelines of sec. 21 CFR §178.3570 of FDA regulations" (category H1 "lubricants for incidental food contact") for better workplace safety.
- Easy cleaning as products are water-soluble.
- Excellent anticorrosive behaviour helps to prevent costly post-treatment.
- Seals made of 72 NBR 902 and 75 FKM 585 as well as 75 FKM 170055 are resistant to Klübertec CM 6 oils.

Description

Klübertec CM 6 oils are based on a concept combining high lubricity with easy cleaning and weldability of cold-formed parts as well as excellent anticorrosive characteristics and sound workplace safety. Due to the oils' high lubricity, they can be applied in small quantities so the washing bath lasts longer before it has to be replaced. Cleaning of the cold-formed parts is much easier because Klübertec CM 6 oils are water-soluble. Enhanced workplace safety for the user as the product is compliant with the "guidelines of sec. 21 CFR §178.3570 of FDA regulations" (category H1 "lubricants for incidental food contact"). This may also be an additional benefit when the products are used in the making of packages for pharmaceuticals or food. Further features are the high flash point and the good anticorrosive effect on steel as well as the compatibility with copper. With their stable viscosity-temperature behaviour, start-up of the forming processes can be much easier under difficult conditions, reducing start-up scrap.

Application

Klübertec CM 6 oils may be used in many cold-forming applications as well as for blanking and shearing of thin or thick sheet metal.

Examples of applications are:

- Forming under tensile or compressive conditions such as rolling or deep-drawing
 - Forming under bending conditions, hydro-forming
 - Precision blanking
- of aluminium or aluminium alloys (see application notes), nonferrous metals, steel or stainless steel.

Application notes

Klübertec CM 6 oils should be used undiluted. They may be applied by means of normal metering methods such as rolling or immersion.

Klübertec CM 6 oils should be applied to aluminium and aluminium alloy parts only once – never more often.

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	Klübertec CM 6-100	Klübertec CM 6-460	Klübertec CM 6-680
Canister 20 l	+	+	+
Drum 200 l	+	+	+



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Product data	Klübertec CM 6-100	Klübertec CM 6-460	Klübertec CM 6-680
Article number	096107	096109	096117
Lower service temperature	-35 °C / -31 °F	-25 °C / -13 °F	-25 °C / -13 °F
Upper service temperature	160 °C / 320 °F	160 °C / 320 °F	160 °C / 320 °F
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 20 °C	approx. 250 mm ² /s	approx. 1 270 mm ² /s	approx. 1 900 mm ² /s
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 100 mm ² /s	approx. 460 mm ² /s	approx. 680 mm ² /s
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 19.5 mm ² /s	approx. 78 mm ² /s	approx. 115 mm ² /s
Viscosity index, DIN ISO 2909	>= 190	>= 240	>= 250
Density, DIN 51757, 20 °C	approx. 1.05 g/cm ³	approx. 1.07 g/cm ³	approx. 1.07 g/cm ³
Colour space	colourless	yellow	yellow
Flash point, DIN EN ISO 2592, Cleveland, open-cup apparatus	>= 220 °C	>= 220 °C	>= 220 °C
Appearance	slightly turbid	turbid	turbid
Anticorrosive properties on steel, DIN ISO 7120, method A, steel, 24 h/60 °C	no rust corrosion degree	no rust corrosion degree	no rust corrosion degree
Copper corrosion, DIN EN ISO 2160, 24 h/100°C	1 - 100 corrosion degree	1 - 100 corrosion degree	1 - 100 corrosion degree
Pour point, DIN ISO 3016	<= -40 °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.	36 months	36 months	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 80 years.

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