

# Klüberfood NH1 M 4-100, -150, -220

Fully synthetic high-performance oils for high-speed can closing machines



## Benefits for your application

- For food and beverage plants increasing level of food safety
- Neutral odor and taste, NSF H1 registered for incidental food contact
- Improved component performance leading to increased life and reduced component costs
- Low and high temperature suitability with minimum viscosity change
- Good anti-wear characteristics
- Long component life due to good corrosion protection in humid environment
- Excellent oxidation stability → increased level of protection through greater stability
- Oil life enhanced through excellent water absorption and separation properties in recirculating filtration systems

## Description

The Klüberfood NH1 M 4-100, -150, -220 oils are mineral oil-free products based on synthetic hydrocarbons.

Klüberfood NH1 M 4-100, -150, -220 oils are NSF H1 registered and therefore comply with FDA 21 CFR § 178.3570. The lubricants were developed for incidental contact with products and packaging materials in the food-processing, cosmetics, pharmaceutical or animal feed industries. The use of Klüberfood NH1 M 4-100, -150, -220 oils can contribute to increase reliability of your production processes. We nevertheless recommend conducting an additional risk analysis, e.g. HACCP.

In addition to their good anti-corrosion properties, Klüberfood NH1 M 4-series has a very good oil and water absorption behaviour.

## Application

Lubrication of can seaming machines with either recirculating or total loss systems. Especially for those systems that have contamination of water or juice mixtures that need to be filtered. Circulating oil systems for bearings, chains and open gears on equipment in the food and beverage industry.

## Application notes

We recommend that the use of the Klüberfood NH1 M 4-100, -150, -220 oils has to comply with the instructions of the equipment supplier. Try to start with a clean or fully drained system. Always check on the compatibility of the Klüberfood NH1 M 4-100, -150, -220 oils with the previous or current lubricant in the system. Make sure that all filters are changed before starting up after an oil change in a recirculating filtration system.

Specific test results referring to pharmaceutical applications are not available for this product (e.g. biocompatibility). Therefore, before using the lubricant adequate risk analyses have to be performed and, if necessary, suitable measures be taken by the manufacturer and user of pharmaceutical installations in order to exclude the risk of health hazards and personal injuries.

## Material safety data sheets

Material safety data sheets can be requested via our website [www.klueber.com](http://www.klueber.com). You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	Klüberfood NH1 M 4-150	Klüberfood NH1 M 4-220	Klüberfood NH1 M 4-100
Canister 20 l	+	+	-
Drum 200 l	+	+	-



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Product data	Klüberfood NH1 M 4-100	Klüberfood NH1 M 4-150	Klüberfood NH1 M 4-220
Article number	029056	029057	029058
Lower service temperature	-30 °C / -22 °F	-30 °C / -22 °F	-30 °C / -22 °F
Upper service temperature	135 °C / 275 °F	135 °C / 275 °F	135 °C / 275 °F
Colour space	colourless	colourless	colourless
Appearance	clear	clear	clear
Density, DIN 51757, 20 °C	approx. 0.84 g/cm <sup>3</sup>	approx. 0.84 g/cm <sup>3</sup>	approx. 0.85 g/cm <sup>3</sup>
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 100 mm <sup>2</sup> /s	approx. 150 mm <sup>2</sup> /s	approx. 220 mm <sup>2</sup> /s
Kinematic viscosity, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 13 mm <sup>2</sup> /s	approx. 19 mm <sup>2</sup> /s	approx. 25 mm <sup>2</sup> /s
ISO viscosity grade, DIN ISO 3448	100	150	220
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	<= -33 °C	<= -33 °C	<= -33 °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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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.

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