

## 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 authorized 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 that meet the requirements specified in the "guidelines of sec. 21CFR 178.3570 of FDA regulations". In addition to their good anti-corrosion properties, Klüberfood NH1 M 4-series has a very good oil and water absorption behavior.

### 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.

Gear boxes in water/juice/beverage environments. 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 any filters are changed before starting up after an oil change in a recirculating filtration system.

This lubricant is certified as H1, which means that it has been designed and registered for incidental, technically unavoidable food contact. 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.

### Minimum shelf life

The minimum shelf life is approx. 36 months if the product is stored in its unopened original container in a dry, frost-free place.

### Pack sizes

- 20 l Pail PE (pack code 0454)
- 200 l Drum steel (pack code 0335)

### Material Safety Data Sheets

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



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Product Data	Klüberfood NH1 M 4-100	Klüberfood NH1 M 4-150	Klüberfood NH1 M 4-220
Color Aspect	colorless clear	colorless clear	colorless clear
Service temperature range*, [°C], approx.	-30 to 135	-30 to 135	-30 to 135
Density, DIN 51 757 (ASTM-D 4052), at 20 °C, [g/cm <sup>3</sup> ], approx.	0.84	0.84	0.85
ISO VG DIN 51 519	100	150	220
Kinematic viscosity, DIN 51 562, (ASTM-D 445), [mm <sup>2</sup> /s] at 40 °C, at 100 °C, approx.	90-110 13	135-165 19	198-242 25
Pour point, DIN ISO 3016, (ASTM-D 97, D 5950), [°C ]	≤ -33	≤ -33	≤ -33
Copper corrosion, DIN EN ISO 2160, 24 h at 100 °C, rating	1-100	1-100	1-100

\* Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component.

### Lubrication is our world

With more than 2000 products available around the world, you can be sure that Klüber has the right product for your application. Please contact Klüber Lubrication specialists worldwide to assist you in all matters regarding lubrication.

[www.klueber.com](http://www.klueber.com)

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