Klüberfood NH1 M 4-100, -150, -220 N

High-performance oils for high-speed can seaming machines

Your benefits at a glance

- Compliance with the highest food safety standards due to NSF H1 registration and ISO 21469 certification
- Reduced formation of sludge and increased oil lifetime due to excellent oxidation stability and modern oil technology
- Increased component lifetime due to good corrosion protection also in corrosive media
- Excellent wear protection
- Efficient and quick separation from water and beverages in the oil reservoir

Your requirements - our solution

Modern seaming machines are designed to achieve high production speeds in order to meet the requirements of the leading beverage companies. However, increased mechanical stresses and the effects of different beverages on components can compromise the performance and the lifetime of mechanical parts.

High-performance seaming oils are required to ensure the lowest maintenance efforts and achieve maximum machine reliability at your production site. Based on a modern base oil concept and a highly efficient additive package, Klüberfood NH1 M 4 N oils show reduced formation of residues and sludge. Thus they support you as an operating company in improving the efficiency of your production process.

Water, beverages and foodstuffs can contaminate the oil circulation system, which is why the lubricating fluid needs to be regularly circulated through a filter. The formulation of Klüberfood NH1 M 4 .. N enables the oil to perform its critical function of creating a lubricating film on the component surfaces even in the presence of water or beverages.

The product is designed to quickly separate from contaminants in the oil reservoir so they can be more easily removed.

Klüberfood NH1 M 4-100, -150, -220 N 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 N oils can contribute to increase the reliability of your production processes. Nevertheless we recommend conducting an additional risk analysis, e.g. HACCP.

Application

Lubrication of can seaming machines with either recirculating or total loss systems, especially for those systems where contamination by water or beverages occurs, making filtration necessary. Circulating oil systems for bearings, chains and open gears of machinery in the food and beverage industry.

Application notes

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

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	Klüberfood NH1 M 4-100 N	Klüberfood NH1 M 4-150 N	Klüberfood NH1 M 4-220 N
Bucket 19 l	+	+	+
Drum 208 l	+	+	+

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Characteristics	Klüberfood NH1 M 4-100 N	Klüberfood NH1 M 4-150 N	Klüberfood NH1 M 4-220 N
Article number	029083	029084	029085
Composition, type of oil	synthetic hydrocarbon oil	synthetic hydrocarbon oil	synthetic hydrocarbon oil
Appearance	clear	clear	clear
Colour space	yellow	yellow	yellow
Service temperature, lower limit	-30 °C	-30 °C	-30 °C
Service temperature, upper limit	150 °C	150 °C	150 °C
NSF H1 registration number	157537	157541	157543
Demulsifying capacity, DIN ISO 6614 /ASTM D1401, 82°C	40-40-0 (15) ml (min)	40-40-0 (15) ml (min)	40-40-0 (20) ml (min)
Density, DIN 51757, 20°C	approx. 0.848 g/cm³	approx. 0.85 g/cm³	approx. 0.849 g/cm³
Foam test, ISO 6247 / ASTM D892, 24°C, sequence I	≤ 50 ml	≤ 50 ml	≤ 50 ml
Foam test, ISO 6247 / ASTM D892, 24°C, sequence III	≤ 50 ml	≤ 50 ml	≤ 50 ml
Foam test, ISO 6247 / ASTM D892, 93.5°C, sequence II	≤ 50 ml	≤ 50 ml	≤ 50 ml
ISO viscosity grade, DIN ISO 3448, ISO VG	100	150	220
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 100°C	approx. 14 mm²/s	approx. 20 mm²/s	approx. 27 mm²/s
Kinematic viscosity, DIN EN ISO 3104 / DIN 51562-1 / ASTM D445 / ASTM D7042, 40°C	approx. 100 mm²/s	approx. 150 mm²/s	approx. 220 mm²/s
Copper corrosion, DIN EN ISO 2160, 3 h, 100°C	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree	1 - 100 - 3 corrosion degree
Steel corrosion, DIN ISO 7120 / ASTM D665, method B, 24 h, 60°C	passed	passed	passed
Oxidation stability, ASTM D2272, Rotating Pressure Vessel Oxidation Test (RPVOT), operating time at 150°C	≥ 1400 min	≥ 1400 min	≥ 1400 min
FZG scuffing test, DIN ISO 14635-1, A / 8.3 / 90, failure load stage	≥ 12	≥ 12	≥ 12
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

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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 90 years.

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