



# **MOL FOOD** **FOOD GRADE LUBRICANTS**

REGISTERED SAFETY



# FOOD SAFETY IS ESSENTIAL

The food industry is a field governed by the **strictest regulations** - not surprising since food must not jeopardize consumer health.

As do all participants in the food supply chain, producers bear an exceptionally high responsibility. They have to fulfil all the requirements of food safety which means they have to ensure the safety not only of raw materials but of all parts of the production process including their machinery as well.

One of the most important guarantees of food safety is the HACCP system. It aims to eliminate all factors that may jeopardize consumer health and ensure constant good quality of end-products during the whole food production process.

In Hungary, HACCP rules can be found in the Hungarian Food Regulations. Their everyday application is ensured by the Act LXXII - Food Supply, 2003.

## REGISTERED LUBRICANTS, GUARANTEED QUALITY

Lubricants for machinery used in food production are necessary but represent a hazard since they can incidentally get into the food being produced. To guarantee maximum food safety, only lubricants that fulfil the requirements of the American Food and Drug Administration (FDA) may be used in such machinery.



The same requirements are effective in Europe as well and are regulated by Directive 23 of the European Hygienic Equipment Design Group (EHEDG). Registration of food grade lubricants is carried out exclusively by NSF International. All data on registered lubricants are laid out in the e-White Book that can be found on their webpage: [www.nsf.org](http://www.nsf.org).



NSF uses several lubricant categories in its registration process.

**Only lubricants with H1 registration may come into "incidental" contact with food! Lubricants in other NSF categories must not come into direct contact with food and even incidental contact is not permitted.**

Do not take risks! Use MOL high performance food grade lubricants with H1 registration. They will make your operations more efficient at the same time.





# MOL FOOD GRADE LUBRICANTS WITHOUT COMPROMISE



## SAFE

All MOL Food products have NSF H1 registration, so they **can be applied in any part of the food production process**, from farm to restaurants.

Their constant high quality is ensured by our regularly audited Quality Management (ISO 9001:2000) and Environmental Management (ISO 14001:2000) Systems.



## HIGH PERFORMANCE

MOL food grade lubricants are made from high performance synthetic base oils and a special food grade additive system; they provide similar or even **higher performance than conventional lubricants**.

Their characteristics are significantly better than those of food grade lubricants made from mineral white oils or vegetable oil.



## COST - EFFECTIVE

MOL Food products formulated with synthetic poli-alpha-olefin base stock offer not only safety but **economy of application** as well.

### Lower lubricant consumption and inventory costs because they

- provide long oil drain intervals due to their excellent thermal and oxidation stability.

### The number of lubricants used can be decreased, because MOL Food lubricants:

- can be used in a wide temperature range
- maintain their characteristics even in harmful environments
- are compatible with mineral based products.

### MOL Food lubricants reduce maintenance costs, because:

- they form a stable lubricating film and successfully prevent wear
- they prevent cavitation thanks to their excellent air-release properties and foam characteristics
- they provide efficient corrosion protection.

### MOL Food lubricants are environmentally considerate, because:

- they produce less waste to be disposed of
- they are non-toxic.



# OUR PRODUCT RANGE

	PRODUCT	APPLICATION	PRODUCT FEATURES	KINEMATIC VISCOSITY 40 °C/100 °C	VISCOSITY INDEX	POUR POINT °C
Hydraulic systems	<b>MOL Food Hyd 32</b> NSF H1: 142128	<ul style="list-style-type: none"> <li>hydraulic systems operating at high pressure</li> <li>low and moderate load gears</li> <li>circulating systems</li> <li>spray-lubricated systems</li> </ul>	<ul style="list-style-type: none"> <li>long oil life thanks to its excellent oxidation stability</li> <li>outstanding wear protection</li> <li>surface protection against moisture</li> <li>cavitation protection</li> <li>excellent demulsibility</li> </ul>	32/6	137	<-44
	<b>MOL Food Hyd 46</b> NSF H1: 142129			46/8	145	<-41
	<b>MOL Food Hyd 68</b> NSF H1: 142130			68/10,5	145	<-40
Gears	<b>MOL Food Gear 100</b> NSF H1: 142131	<ul style="list-style-type: none"> <li>closed food and beverage machine gears:                             <ul style="list-style-type: none"> <li>normal and high load</li> <li>straight, helical and hypoid toothed gears</li> </ul> </li> <li>chain lubrication</li> <li>spray lubrication</li> </ul>	<ul style="list-style-type: none"> <li>long oil life</li> <li>excellent high temperature oxidation stability</li> <li>outstanding wear and corrosion protection</li> <li>compatible with copper and bronze components</li> <li>low formation of sludge, varnish and coke</li> <li>low foaming characteristics</li> </ul>	100/14	145	<-39
	<b>MOL Food Gear 220</b> NSF H1: 142132			220/25	145	<-35
Compressors	<b>MOL Food Comp 46</b> NSF H1: 142133	<ul style="list-style-type: none"> <li>piston and rotary vane compressors handling inert gases</li> <li>vacuum pumps</li> <li>pneumatic systems</li> </ul>	<ul style="list-style-type: none"> <li>excellent wear and corrosion protection</li> <li>low formation of sludge, varnish and coke</li> <li>outstanding demulsibility</li> <li>low oil consumption due to low volatility</li> <li>long oil life, decreased lubricant consumption</li> </ul>	46/8	145	<-41
	<b>MOL Food Comp 100</b> NSF H1: 142134			100/14	145	<-39
Chain lubricants	<b>MOL Food Chain 100</b> NSF H1: 142136	<ul style="list-style-type: none"> <li>drive and conveyor chains operating at high temperatures</li> </ul>	<ul style="list-style-type: none"> <li>long chain life and low chain elongation due to outstanding wear protection and load carrying capabilities</li> <li>less relubrication thanks to low volatility</li> <li>excellent corrosion protection</li> <li>easy cleaning due to low formation of sludge, varnish and coke</li> <li>protection against water washout</li> </ul>	100/14	145	<-39
	<b>MOL Food Chain 220</b> NSF H1: 142137			220/25	148	<-35
	<b>MOL Food Chain spray</b> NSF H1: 142138			-	-	-
Speciality Products	<b>MOL Food Penetrating</b> NSF H1: 142139	<ul style="list-style-type: none"> <li>joints, jacks, chains, screw spindles</li> <li>stretching and supporting rollers</li> </ul>	<ul style="list-style-type: none"> <li>top up of highly jointed machines</li> <li>excellent wear protection</li> <li>outstanding corrosion protection</li> <li>resistance against short, strong thermal shocks</li> </ul>	-	-	-
	<b>MOL Food Silicon</b> NSF H1: 142140	<ul style="list-style-type: none"> <li>friction parts</li> <li>mould-release for rubber and plastic parts</li> </ul>	<ul style="list-style-type: none"> <li>clean surfaces due to strong antideposit effect</li> <li>strong chemical resistance</li> <li>no electrostatic charging</li> <li>suitable for wide temperature range</li> </ul>	-	-	-



	PRODUCT	APPLICATION	PRODUCT FEATURES	PRIMARY APPLICATION	NLGI GRADE	THICKENER TYPE	APPLICATION TEMPERATURE °C
Greases	<b>MOL Food Grease 00</b> NSF H1: 142055 HALAL	<ul style="list-style-type: none"> <li>low and moderate load gears</li> <li>joints, jacks and chains</li> </ul>	<ul style="list-style-type: none"> <li>water resistance</li> <li>excellent corrosion protection</li> <li>excellent wear protection</li> </ul>	gear	00	aluminum complex	-30 °C ↔ +140 °C
	<b>MOL Food Grease 1</b> NSF H1: 142056 HALAL	<ul style="list-style-type: none"> <li>plain and rolling bearings</li> <li>central lubrication systems</li> </ul>	<ul style="list-style-type: none"> <li>lower power loss due to lower friction</li> <li>protection against weak acidic and alkaline materials</li> </ul>	plain bearing	1	aluminum complex	-30 °C ↔ +140 °C
	<b>MOL Food Grease 2</b> NSF H1: 142057 HALAL		<ul style="list-style-type: none"> <li>lower grease consumption thanks to its good adhesion</li> </ul>	rolling bearing	2	aluminum complex	-30 °C ↔ +150 °C

## FOOD GRADE LUBRICANTS NEED SPECIAL HANDLING!

### HANDLING AND STORAGE



- Store in an enclosed place at room temperature, if possible
- Segregate from other lubricants!
- Avoid placing under other lubricants at all costs.

### APPLICATION AND CHANGE:



- Check the damage-free state of new packaging before use: the seal must be unbroken and the area surrounding the cap must be clean!
- Close packages after use!
- Only original packaging or clearly labelled dedicated containers may be used for the internal transportation of NSF H1 lubricants!

### CHANGE OVER NSF H1 LUBRICANT



- Before filling up machinery, complete system cleaning is necessary
- If food grade and non-food grade lubricants are mixed, NSF H1 requirements are not fulfilled!
- If mixed lubricant are used, then shortening of the oil change interval is recommended so as to change over to a suitable quality product as soon as possible.

### DISPOSAL



- Deposit used oil and empty packaging in dedicated waste collection places!
- Lubricants must not be poured into sewers, soil or waterways.

# SERVICES

Lubricant application requires expertise and experience to get the most out of all the advantages it offers. Our team of highly qualified, trend-following engineers offer full support to our customers' industrial experts.

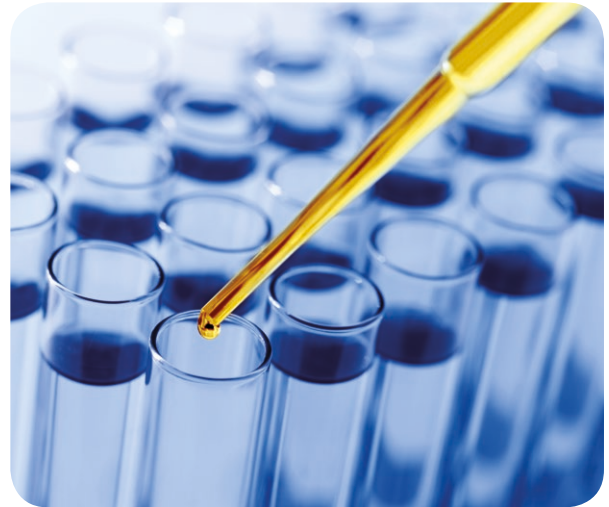
## LUBCHECK OIL AND MACHINE DIAGNOSTICS

LubCheck diagnostics is the world's leading lubricant-analysis process, which helps precisely identify the degree of lube oil ageing, degradation and any kind of damage to machinery well before its consequences might cause significant losses in production and lead to high repair costs.

**With regular lubricant tests, the state of machinery can be monitored, starting failures uncovered and expensive cumulative damages prevented.**

### ADVANTAGES OF LUBCHECK DIAGNOSTICS:

- 🔴 discovery of unexpected malfunctions in their early stages
- 🔴 identification of hidden damage in machinery and irregular operation
- 🔴 reduction or elimination of lost production
- 🔴 reduction of equipment maintenance costs
- 🔴 more accurate and easy-to-plan maintenance
- 🔴 equipment oil change cycle optimisation
- 🔴 increased machinery reliability



## LUBRICATION ASSESSMENT

Using proper lubrication management makes lubricants improve production reliability and profitability. Lubricant-related issues are well worth regular reconsideration!

Our expert team with years of lubrication experience can really help in this. During the lubrication assessment process, they provide expert advice to achieve more efficient and economical lubrication.



Find more about our LubCheck and lubrication assessment services in our separate brochures.



# AVAILABLE PACKAGING



**Our lubricant services:**

- ✔ Lubrication technology consulting
- ✔ LubCheck oil and machine diagnostics
- ✔ Lubrication assessment
- ✔ On-site lubricant maintenance
- ✔ Lubrication technology audit
- ✔ Training courses

**YOUR PARTNER:**

