

Lubricants for Food and Related Industries



GERALYN[®]

food grade NSF-H1 lubricants



LUBRITECH



Bremer & Leguil GmbH



■ **Global**

FUCHS LUBRITECH is the global speciality division in the Fuchs group of companies. Since 1931, Fuchs the largest independant lubricant manufacturer in the world, has been the leader in industrial lubricants. In this brochure, we focus on just one of the speciality product groups created by Fuchs, the new GERALYN®series of food grade lubricants. These products are marketed worldwide under the coordination of Fuchs Lubricants Co., Kansas City, Kansas, USA and Bremer & Leguil GmbH, Duisburg, Germany.

■ **The lubricant is a structural element**

Industrial food preparation machinery is expensive and it is important to maintain it. As more demand is placed on food processing equipment with faster speeds, longer run times and higher temperatures, the lubricants used on this equipment also need to keep up with the increasing performance demands to ensure smooth equipment operation.

Just as the increase in equipment demands has gone up, so too has the demands placed upon the food grade lubricant. Now more than ever, it is critical to use only lubricants that are physiologically harmless to ensure compliance with your risk analysis programs such as HACCP.



■ **GERALYN® lubricants are NSF-H1 registered**

The NSF H1-registration has established itself as an international standard for lubricants used in the food industry. The H1-registration is based on the US guidelines of sec. 21 CFR of the FDA regulations. The "Food and Drug Administration" (FDA) of the USA has determined qualitative and quantitative ingredients to be used in lubricants for the food industry. The assessment and the approval process is carried out by the NSF International. The NSF registered products are listed in the White Book. The standard H-1 describes products, which are to be used in cases where incidental contact with food is possible.



White Book™ - Nonfood Compounds Listings Directory
 These Listings were Last Updated on Monday, September 27, 2010 at 1:01 PM Eastern Standard Time
 Please contact NSF International to confirm the status of any Listing, registration, or other requirements.
 Warning: NSF is concerned about fraudulent manufacturing and manipulation of vehicle lists. If you have received this listing by e-mail, please contact us immediately by e-mail or by phone to verify the listing. For the latest version visit: <http://www.nsf.org/whitebooklisting.aspx> for the latest version available.

NSF-Registered Proprietary Substances and Nonfood Compounds

| FUCHS LUBRICANTS COMPANY FUCHS LUBRITECH DIVISION | Listing Number | Listing Status |
|---|----------------|----------------|
| GERALYN AS 700 | 111111 | HL |
| GERALYN AS 211 | 111114 | HL |
| GERALYN AS 212 | 111115 | HL |
| GERALYN SF 100 | 111164 | HL |
| GERALYN SF 120 | 111167 | HL |
| GERALYN SF 210 | 111168 | HL |
| GERALYN SF 311 | 111169 | HL |
| GERALYN SF 312 | 111171 | HL |
| GERALYN SF 313 | 111172 | HL |
| GERALYN SF 410 | 111180 | HL |
| GERALYN SF 411 | 111181 | HL |
| GERALYN SF 412 | 111182 | HL |

■ Hydraulics

GERALYN® Hydraulic Oils exceed the demands of DIN 51524 part 2 for HLP hydraulic oils and many ASTM test requirements. GERALYN® SF hydraulic oils have excellent demulsifying properties and separate water very quickly. GERALYN® SF hydraulic oils have maximum anti-wear properties as demonstrated by extremely low wear rates in Vickers van-cell-pump and FZG tests.

■ Gears

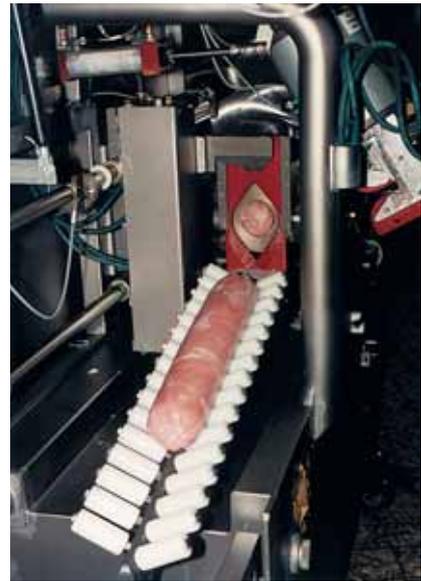
GERALYN® Gear Oils exceed the demands of DIN 51517 part 3 for CLP gear oils and many ASTM test requirements. The load carrying capacity of these products is excellent as extended tests (runtime per load step 30 min.) during the FZG test show. In spite of considerable run time, all 12 load stages passed with virtually no wear. Suitable for gear applications including spur gears, bevel gears as well as worm gear sets.

■ Compressors, vacuum pumps

GERALYN® Compressor Oils exceed the demands of DIN 51506 for VDL compressor oils. Whether lubricating piston compressors, sliding vane, rotary compressors, screw-type compressors as well as vacuum pumps by oil injection, the use of these products can lead to an increase of service life and will extend the oil change intervals. Extremely low evaporation losses ensure that the oil contamination of the air system is minimized. GERALYN® COMP compressor oils have excellent volatility properties, which provide for very clean operation of the compressor units and extend the life of the air/oil separators and other internal components.

■ Chains

GERALYN® Chain Oils are suitable for lubricating chains in extreme conditions. These products can be used in low temperature applications (froster) as well as in high temperature applications (bakery machine). Even on flooded chains (sterilizing apparatus) GERALYN® products will offer you the H1 approved solution.



| GERALYN® products | ISO VG-grade |
|----------------------|--------------------------|
| SF hydraulic oils | 15, 32, 46, 68, 100 |
| SF gear oils | 100, 150, 220, 320, 460 |
| PG gear oils | 220, 460 |
| COMP compressor oils | 32, 46, 68, 100, 150 |
| SF chain oils | 32, 100, 320, 1500, 5000 |

■ Refrigeration machines

GERALYN® Refrigeration Oil is based upon PAO base fluids and is especially developed for use with NH₃ and CO₂ refrigerants. The product is not miscible with CO₂.

This product provides very good aging resistance and durability. GERALYN® refrigeration oil will work to remove aging residues from systems which were previously operated by mineral oil based lubricants in refrigeration machines.

■ Silicone oil

GERALYN® Silicone Oil is usable for the lubrication of a variety of materials such as metal-plastics, plastics-plastics, rubber-rubber and metal-paper. On the treated surface it forms a film, which does not disturb but which improves the frictional properties. The silicone film is colorless and odorless, heat and cold resistant and antistatic.

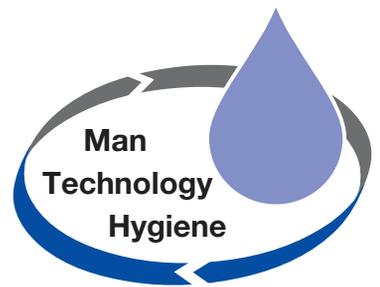
■ Maintenance products

GERALYN® Maintenance Products (e.g. synthetic creep and fine oil or assembly paste) offer a multitude of tried and tested solutions for various areas of applications in the service and maintenance of food processing equipment.



■ Aerosol products

Several GERALYN® food grade oils are also available as aerosols (ISO VG-grade 5, 32, 320, 1500, 5000)



GERALYN®
food grade NSF-H1 lubricants



The high technical demands on production machines in the food industry necessitate high performance lubricants which are up to these requirements. Therefore we have developed a complete range of food grade lubricants, which combine high performance properties and use only non-toxic and the purest of additives. GERALYN® lubricants contain FDA approved additives to increase their wear protection, oxidation stability and corrosion preventing properties.

What GERALYN® offers you: With the following benefit:

Very low friction and wear rates, high load carrying capacity (FZG > 12)

Extends the machine running time, downtimes because of repair work will be reduced.

Excellent oxidation and aging behavior

Maintenance rates, which will interrupt the production process, can be extended.

Very good thermal stability

Functionality of lubricant and equipment is also guaranteed at high temperatures. The thermal stability of the synthetic products are much better than that of products based on white oils.

Outstanding corrosion prevention ability

In hostile environments our products offer a safe protection against corrosion.

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GERALYN® series of NSF-H1-greases include white oil greases, PAO synthetic greases as well as special synthetic greases based on silicone or perflourinated alkylether.

■ A multitude of possible applications

- **Rolling bearings and plain bearings**
Fully synthetic high performance greases lubricate and protect all kinds of bearings effectively
- **Guidings, Ways and Slides**
- **Gears**
For grease lubricated gears we also offer suitable fully synthetic fluid greases in our product range
- **Spindles and fittings**, e.g. beverage fittings, i.e. beer taps (very good compatibility with beer froth)
- **Plastic and Elastomers used in seals**
- **Under high temperatures**
- **In central lubrication units**

■ GERALYN® lubricants for many markets / applications

Beverage industry (breweries, mineral water industry, juice production etc.), sausage and meat processing industry, fish processing industry, sugar industry, bread, cake and pastries industry, fruits and vegetables processing industry, fodder concentrate industry, tea, coffee and tobacco processing industry, condiments industry (e.g. mayonnaise, vinegar, mustard production), sweets industry (chocolate, chewing gum, candy production), spice industry, milk processing industry (e.g. dairies, butter and cheese production), salad dressing and nutrient fat industry, containers (e.g. glass, plastic, fiber tubes, drums, metal cans and tins).



Contact

■ Would you like to know more?

If you would like additional information on our GERALYN® food grade NSF-H1 lubricants, please contact us. No matter where in the world your manufacturing plant is located, you can rest easy knowing that GERALYN® food grade NSF-H1 lubricants are only one phone call away!

For Local Supply and Distribution Contact:



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