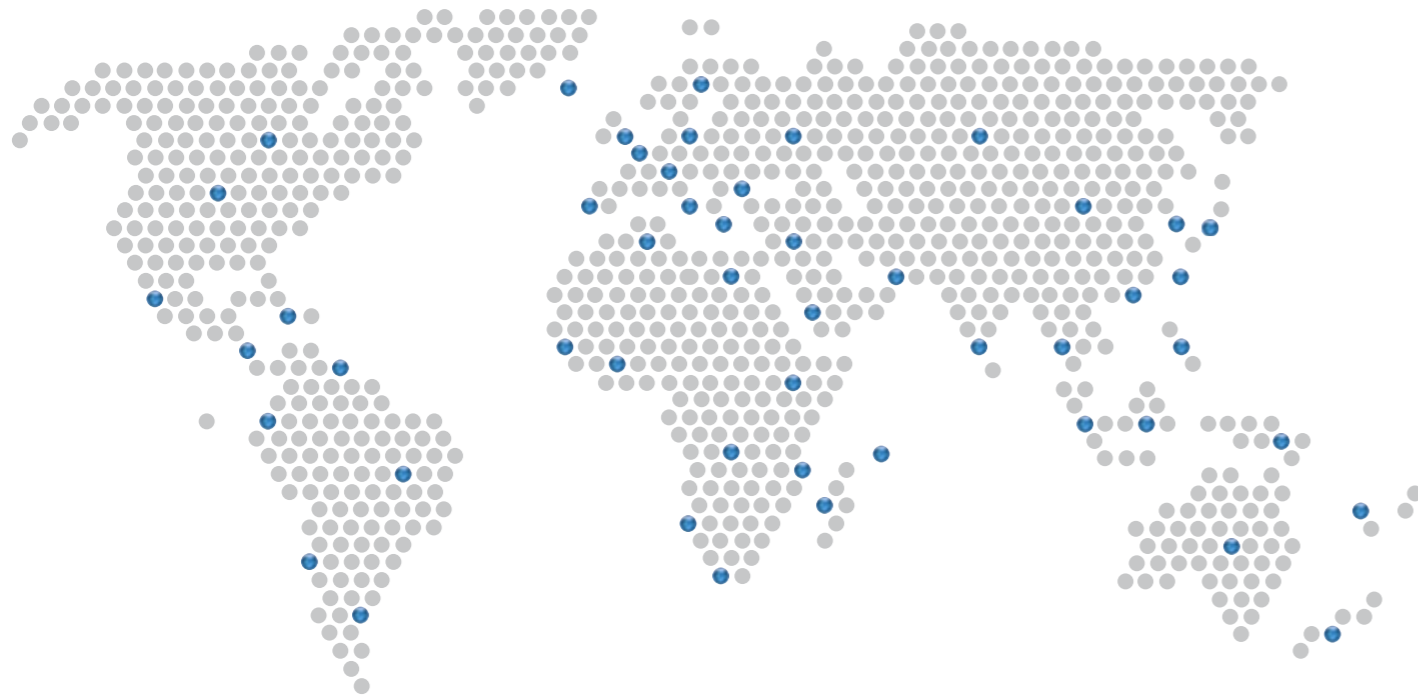




## PRODUCT CATALOGUE





### FUCHS LUBRITECH – The Global Expert in Lubricants

The FUCHS Group offers a comprehensive range of food grade lubricants to satisfy all the requirements of the food and beverage industry as well as related application fields. Our CASSIDA range is manufactured at FUCHS LUBRITECH, headquartered in Kaiserslautern (Germany), which is an independent unit with roots in FUCHS PETROLUB AG. The brand new manufacturing plant utilises all the latest modern and high-tech machinery for optimal performance and efficiency.

FUCHS PETROLUB AG, which was founded as a family business in Mannheim (Germany) in 1931, is the largest independent lubricants manufacturing company worldwide and has a global reach. FUCHS PETROLUB and the FUCHS LUBRITECH Group with their numerous subsidiaries and sales partners offer global availability of the CASSIDA range of food grade lubricants as well as the complete portfolio of FUCHS and FUCHS LUBRITECH lubricants for practically all conceivable areas of use.

FUCHS LUBRICANTS is one of the worldwide leading manufacturers of lubricants and release agents for all areas of industrial use, from the automotive industry and the construction industry to mechanical engineering and farming. FUCHS LUBRICANTS (UK) PLC provides hydraulic oils, gear lubricants, greases, sprays and much more – a total of over 2,500 industrial products worldwide. Environmental protection, work safety, and user safety are our highest priority not only during production, but throughout the research and development process.

Our unique concentration on the development and production of lubricants, coupled with an exceptional rate of innovation, is one of the greatest strengths of the FUCHS Group. In all our endeavours, our main focus is always on the needs and individual requirements of our customers.





## Our Most Important Product: Individual Consulting and Service

We set standards not only with our high-performance products, but also with our exceptional service! This includes providing advice on how to optimise the use of food grade lubricants: taking into account stringent QA management procedures in order to avoid food contamination (in accordance with HACCP = Hazard Analysis and Critical Control Points), examination of used lubricants, development of lubrication and maintenance schedules, support in changing lubricants, active support for practical testing, careful documentation of all measures, and much more.

Finding comprehensive, sustainable, and safe solutions for all tribological issues arising from our customers' requirements and their applications is our declared aspiration, standard, and goal. Customer seminars and training sessions held globally complete our service programme. With its competent technical advice and widespread sales network, our global Food Division team supports you in your production and processing activities to ensure that you will always achieve optimal results.

## CASSIDA in the Food Industry

The highest safety standards for food, optimal productivity, and smooth operation are indispensable for economic success and for a reliable reputation. Our customers benefit from the excellent quality of the CASSIDA portfolio, which has been confirmed by numerous OEM approvals by well-known manufacturers of production and manufacturing equipment. From hydraulic systems and transmissions to bearings and compressors, our customers profit from close co-operation during the development phase of each lubricant.

All lubricants for the production, processing, and packaging of food, beverages, medications, and cosmetic products must fulfil stringent requirements. Consumer protection is crucial, which is why food safety is very important in all aspects of development, production, sales, and after-sales service. This is the reason why all of our food grade lubricants are registered by NSF International in accordance with the respective food related categories.

Furthermore, our manufacturing plant in Kaiserslautern, as well as the food grade lubricants produced there, is certified in accordance with the international standard ISO 21469. This standard determines the hygienic requirements for the composition, manufacturing, and use of lubricants that may have incidental contact with food products – meaning that our products fulfil the highest possible safety standard.

In addition, our CASSIDA products fulfil the strict requirements of both Jewish and Muslim laws and regulations. The respective Kosher and Halal certificates document that we guarantee the highest possible level of product and food safety in this respect.

NSF registered  
ISO certified



Nonfood Compounds  
Program Listed  
ISO 21469 certified

Kosher certified



Halal certified







## Support Solutions

FUCHS believe providing the right service and support is just as important as providing high quality lubricants. We provide a technical help line for all our customers and supply customers with a tailored service package to meet their individual requirements. Site surveys, assistance with LCCP audit compliance and supply of a bespoke lubrication compliance manual are just some of the technical support services our food grade lubricant specialists can provide.

Our dispensing and storage solutions assist customers with best lubricant practices and meeting audit requirements. Our CASSIDA lube centre holds all the small

pack lubricants allowing them to be easily stored and displayed. To further aid identification, we are able to supply colour coded aerosols, grease cartridges and grease nipple covers. Dispensing pumps, grease guns and oil safe containers can be supplied to customers to facilitate ease of usage.

Our CASSIDA team will be happy to advise on the full range of technical support and service solutions we offer.

## At a Glance!

Being one of our core competencies, food grade lubricants are assigned a special brand in our product portfolio: CASSIDA food grade lubricants. This brand stands for the entire range of high-performance lubricants for the food and beverage industries. Under this joint umbrella, you will find fully synthetic as well as semi-synthetic and white oil based products. Their composition is always optimised to ensure optimum suitability for their respective application.

This product catalogue introduces our product portfolio and gives a comprehensive overview of the wide

range of services offered by the current CASSIDA products. It is divided into the subcategories CASSIDA Fluids (fully synthetic), CASSIDA Greases (fully synthetic), and FM Lubricants (white oil based resp. semi-synthetic).

Should you be unable to find a product or have any questions, our Food Division team or your local sales partner will be happy to assist you. You will receive individual, competent advice and recommendations for products that are best suited for fulfilling your particular requirements.

## Guide to Symbols



Bearings



Extreme Pressure



High Temperature



Low Temperature



Can Seamers



Chains and Conveyors



Compressors



Direct Food Contact



Gears - enclosed



Gears - open



Industrial Coolants



Heat Transfer



Hydraulics



Valves, Taps and Fittings



Slideways



Linkages, Pins



Sugar Dissolving



Vacuum Pumps



Maintenance Spray



Mounting/Assembling/Disassembling Aid



Maintenance Aid



Worm Gears



NSF registered

The information contained in this brochure corresponds to our current state of knowledge. It is intended to provide information about possible uses, but not to assure specific properties or guarantee the suitability of our products for each single case. Prior to using our products, we recommend that professional users check whether they are suitable for their purpose and assure themselves that the performance of the selected product is satisfactory. Depending on how they are used, lubricants will change their technical values. We therefore always recommend individual consultation. Since our products are being continually evolved, we reserve the right to change any information contained in this brochure at any time and without prior announcement.

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## CASSIDA FLUIDS

### CHAIN OILS

#### CASSIDA CHAIN OIL | 150 | 320 Spray | 1500 | 1500 Spray | 5000 Spray

Fully synthetic, very high-performance chain oils. Highly resistant to fling-off or wash-off. Excellent protection against wear and corrosion.

**Main application:** Lubrication of drive and transport chains in the food industry. Can be applied by brush, via bath, automatic lubrication systems or spraying.

\*after evaporation of solvent



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA CHAIN OIL 150	150	19
CASSIDA CHAIN OIL 320 Spray	320*	34*
CASSIDA CHAIN OIL 1500	1500	135
CASSIDA CHAIN OIL 1500 Spray	1500*	135*
CASSIDA CHAIN OIL 5000 Spray	5000*	350*

#### CASSIDA CHAIN OIL LT | LT Spray

Fully synthetic, high-performance anti-wear chain oil suitable for a wide range of temperatures, including sub-zero conditions.

**Main application:** Transport mechanisms inside food freezers such as spiral freezers. Lubrication of metal-metal and metal-ceramic contact points in open machinery, such as slide ways and chains. Plain and anti-friction bearings.

\*after evaporation of solvent



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA CHAIN OIL LT	32	6.5
CASSIDA CHAIN OIL LT Spray	32*	6.5*

#### CASSIDA CHAIN OIL SP

Fully synthetic, high-performance, anti-wear chain oil with excellent creeping and penetrating features.

**Main application:** Drive and transport chains in the food industry, slideways, levers, joints and bolts, ropes, spindles and guide pulleys. Also intended for use in equipment for manufacturing food packaging.

\*after evaporation of solvent



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 40°C [mm <sup>2</sup> /s]
CASSIDA CHAIN OIL SP	85	460*

#### CASSIDA CHAIN OIL HTE

Fully synthetic, ester-based, high-temperature chain lubricant suitable for temperatures up to 240 °C.

**Main application:** Drive and transport chains in the food industry. Also intended for use in equipment for manufacturing food packaging.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA CHAIN OIL HTE	220	20

## CASSIDA FLUIDS

### CASSIDA CHAIN OIL HTX

Fully synthetic, extreme-temperature chain lubricant suitable for temperatures up to 300 °C.

**Main application:** Drive and transport chains in the food industry (e.g. bakeries). Also intended for use in equipment for manufacturing food packaging.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA CHAIN OIL HTX	330	40

### COMPRESSOR FLUIDS

#### CASSIDA FLUID CR 32 | 46 | 68 | 100 | 150

Fully synthetic, very high-performance, long-life compressor oils. Meet DIN 51524 HLP and ISO 6743-3A.

**Main application:** Oil-flooded rotary vane and screw air compressors in food processing plants.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA FLUID CR 32	32	6.1
CASSIDA FLUID CR 46	46	8.0
CASSIDA FLUID CR 68	68	11
CASSIDA FLUID CR 100	100	14
CASSIDA FLUID CR 150	150	19

#### CASSIDA FLUID RF 46 | 68

Fully synthetic lubricants for refrigeration compressors used in the food industry.

**Main application:** Recommended for use in open- and semi-open compressors, both screw and reciprocating types. Designed for applications with ammonia (R717), offering excellent performance under high and low evaporation temperatures. Can also be used with halogenated hydrocarbons (R22) and isobutene.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA FLUID RF 46	46	7.8
CASSIDA FLUID RF 68	68	9.7

### DIRECT CONTACT AND HEAT TRANSFER FLUIDS

#### CASSIDA FLUID DC 20 | 32

Fully synthetic, multi-purpose, low-volatility fluids suitable for both direct and incidental food contact applications. Can handle a wide range of application temperatures and have excellent thermal and oxidative stability to minimise cracking and promote long service life.

**Main application:** In absorber oil columns designed to remove traces of hexane from steam / air / hexane mixtures. As forming oil for the manufacture of both two- and three-piece cans for the food and beverage industry. In closed circuit and pressureless heat transfer systems with a bulk oil temperature of approximately -30 °C to 280 °C where direct food contact may occur.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA FLUID DC 20	23	4.8
CASSIDA FLUID DC 32	32	6

## CASSIDA FLUIDS

### GEAR FLUIDS

#### CASSIDA FLUID GL 150 | 220 | 320 | 460 | 680

Fully synthetic, very high-performance, long-life, anti-wear gear oils. Meet DIN 51516 CLP specification.

**Main application:** Suitable for gearboxes on food handling and processing equipment. May also be used for general machine lubrication, e.g. chains.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA FLUID GL 150	150	19
CASSIDA FLUID GL 220	220	25
CASSIDA FLUID GL 320	320	33
CASSIDA FLUID GL 460	460	44
CASSIDA FLUID GL 680	680	59

#### CASSIDA FLUID GLE 150 | 220

Fully synthetic, high-performance, anti-wear gear fluids for use in the food canning industry. Provides excellent lubrication, even when operating in locations where the product may be subject to contamination with water, juice and food. CASSIDA FLUID GLE holds these contaminants in suspension, thus protecting metal surfaces from wear and corrosion. Approved by Angelus Sanitary Can Seaming Company for can seamer lubrication.

**Main application:** Lubrication of rotary can seaming machines, including both enclosed and total loss systems, and for circulating and bearing oil systems where contamination with water or food juices can occur.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA FLUID GLE 150	150	19
CASSIDA FLUID GLE 220	220	25

#### CASSIDA FLUID WG 220 | 320 | 460 | 680 | 1000

Fully synthetic, high-performance gear lubricants for worm gear boxes. High resistance to micro-pitting. Provides exceptional thermal stability and corrosion protection. Exceptional low-friction characteristics providing efficient power transmission. Meet DIN 51717 CLP and ISO 6743/6.

**Main application:** For the lubrication of worm gear boxes in food processing plants. Ideal for all worm gear applications. Suitable for use in situations where equipment gets routinely cleaned before and after use and where water might enter the lubricant.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA FLUID WG 220	220	42
CASSIDA FLUID WG 320	320	61
CASSIDA FLUID WG 460	460	83
CASSIDA FLUID WG 680	680	122
CASSIDA FLUID WG 1000	1000	163

## CASSIDA FLUIDS

### HYDRAULIC OILS

#### CASSIDA FLUID HF 15 | 32 | 46 | 68 | 100

Fully synthetic, high-performance, long-life, anti-wear hydraulic oils. Meet ISO 6743/4HM and DIN 51524 HLP and HVLP specifications.

**Main application:** Hydraulic systems, hydrostatic gears and control systems, plain and anti-friction bearings on food handling and processing equipment.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA FLUID HF 15	15	3.6
CASSIDA FLUID HF 32	32	6
CASSIDA FLUID HF 46	46	8
CASSIDA FLUID HF 68	68	11
CASSIDA FLUID HF 100	100	14

#### CASSIDA FLUID FL 15 | 32 | 46 | 68 | 100

Fully synthetic, high-performance, long-life, anti-wear specialty hydraulic oils. Meet ISO 6743/4HM and DIN 51524 HLP and HVLP specifications.

**Main application:** Hydraulic systems, hydrostatic gears and control systems, plain and anti-friction bearings on food handling and processing equipment.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA FLUID FL 15	15	4
CASSIDA FLUID FL 32	32	6
CASSIDA FLUID FL 46	46	8
CASSIDA FLUID FL 68	68	11
CASSIDA FLUID FL 100	100	14

#### CASSIDA FLUID HFS 46 | 68

Fully synthetic, high-performance, long-life, anti-wear hydraulic oils with boosted solvency and lubricity. Resist the formation of harmful oxidation products, even at elevated temperatures. Meet ISO 6743/4 HV and DIN 51524 HLP and HVLP specifications.

**Main application:** Hydraulic systems, hydrostatic gears and control systems, plain and anti-friction bearings on food handling and processing equipment. Can be used on demanding injection moulding machinery.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
CASSIDA FLUID HFS 46	46	7.9
CASSIDA FLUID HFS 68	68	11



## CASSIDA FLUIDS

### MAINTENANCE FLUIDS

#### CASSIDA FLUID FL 5 | FL 5 Spray

Fully synthetic penetrating fluid with excellent creeping and penetrating features. Capillary effect allows quick penetration between rusty and encrusted surfaces of contact. Lubricates and protects against corrosion. Has a neutral odour and taste.

**Main application:** Penetrating fluid for use in food grade equipment. Can be used for disassembling of screws, interlocking nuts and other components. Offers corrosion protection for metal components. Can be used for lubrication of various nondemanding applications where food grade lubricants are required.

\*without propellant



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
<b>CASSIDA FLUID FL 5</b>	3.8	1.1
<b>CASSIDA FLUID FL 5 Spray</b>	3.8*	1.1*

#### CASSIDA SILICONE FLUID | CASSIDA SILICONE FLUID Spray

Silicone-based, fully synthetic, multi-purpose fluid. Thermal stability up to 250 °C. Excellent adhesive properties minimise fling-off in use and wash-off by both cold and hot water. Readily displaces water. Formulated for use on metal-to-non-metal or non-metal-to-non-metal contact surfaces.

**Main application:** For lubrication of conveyors; slow rotating machinery; small, slow-speed bearings and pivot points found in equipment in the food industry.

\*without propellant



	Typical Viscosity at 25°C [mm <sup>2</sup> /s]	Typical Viscosity at 40°C [mm <sup>2</sup> /s]
<b>CASSIDA SILICONE FLUID</b>	350	270
<b>CASSIDA SILICONE FLUID Spray</b>	1000*	730*

### VACUUM PUMP FLUIDS

#### CASSIDA FLUID VP 68 | 100

Fully synthetic, high-performance vacuum pump oils.

**Main application:** Vacuum pumps producing medium vacuum, used in the food and beverage processing and packing industry.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
<b>CASSIDA FLUID VP 68</b>	68	10.5
<b>CASSIDA FLUID VP 100</b>	100	14

## CASSIDA GREASES

### REGULAR LOAD

#### CASSIDA GREASE RLS 000 | 00 | 0 | 1 | 2

High-performance, regular-load aluminium complex greases with synthetic base fluid.

**Main application:** For use on bearings, bushings and linkages on food manufacturing equipment. CASSIDA GREASE RLS 0 and 00 are particularly recommended for centralised lube systems or other similar systems where an NLGI 2 grease may be difficult to dispense.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA GREASE RLS 000</b>	100	13	<000
<b>CASSIDA GREASE RLS 00</b>	100	13	00
<b>CASSIDA GREASE RLS 0</b>	150	18	0
<b>CASSIDA GREASE RLS 1</b>	150	18	1
<b>CASSIDA GREASE RLS 2</b>	150	18	2

### EXTREME PRESSURE

#### CASSIDA GREASE EPS 00 | 1 | 2

High-performance, extreme-pressure aluminium complex greases with synthetic base fluid.

**Main application:** For use on bearings, bushings and linkages on food manufacturing equipment, particularly where high pressure and loads, high temperatures and water spray occur. CASSIDA GREASE EPS 00 is especially recommended for centralised lube systems and enclosed gears.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA GREASE EPS 00</b>	220	25	00
<b>CASSIDA GREASE EPS 1</b>	220	25	1
<b>CASSIDA GREASE EPS 2</b>	220	25	2

### HEAVY DUTY

#### CASSIDA GREASE HDS 00 | 2

High-performance, high-viscosity heavy-duty aluminium complex greases with synthetic base fluid.

**Main application:** For use on bearings, bushings and linkages on food manufacturing equipment, particularly where slower speeds, high pressure and loads, high temperatures and water spray are present. CASSIDA GREASE HDS 00 is recommended for open gears and centralised lube systems.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA GREASE HDS 00</b>	800	68	00
<b>CASSIDA GREASE HDS 2</b>	800	68	2



**CASSIDA GREASES**

**SPECIALITIES**

**CASSIDA GREASE GTS 2 | GTS Spray**

Speciality extreme-pressure calcium sulphonate complex greases with synthetic base fluid. Excellent extreme pressure, anti-wear and corrosion prevention properties.

**Main application:** For use on bearings of electric motors, pumps, conveyors, mixers, gear units and bearings.

\*without propellant



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA GREASE GTS 2</b>	50	8.6	2
<b>CASSIDA GREASE GTS Spray</b>	50*	8.6*	2*

**CASSIDA GREASE GTX 2**

High-performance, extreme-pressure calcium sulphonate complex grease with synthetic base fluid. Excellent extreme pressure, anti-wear and corrosion prevention properties.

**Main application:** For use on bearings of electric motors, pumps, conveyors, mixers, gear units and bearings. Heavy-loaded and shock-loaded applications with low- to medium-speed bearings operating up to 180 °C, such as machines used to process pet food and animal feed.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA GREASE GTX 2</b>	400	40	2

**CASSIDA GREASE HTS 2**

Inorganically thickened grease with synthetic base fluid.

**Main application:** Suitable for applications on food manufacturing equipment where high temperatures (peak 220 °C) may be experienced.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA GREASE HTS 2</b>	400	40	2

**CASSIDA GREASE LTS 1**

High-performance aluminium complex grease with low-viscosity synthetic base fluid.

**Main application:** For use on bearings, bushing and linkages on food manufacturing equipment. Particularly recommended for use in cold storage situations with temperatures down to -50 °C.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA GREASE LTS 1</b>	20	4.5	1

**CASSIDA GREASES**

**CASSIDA GREASE MD 2**

High-performance, silicone-based speciality grease specially developed for the lubrication and sealing of taps, valves and fittings with EPDM seals. Suitable for use with other seal materials normally used in food machinery lubrication systems. Good resistance to hot water, steam and disinfectant solutions.

**Main application:** Taps, flow meters and fittings used for the handling of water, drinks and beer. Seals on autoclaves and sterilisers. Suitable for continuous operation at temperatures up to 180 °C and short-term exposure to temperatures not exceeding 250 °C.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA GREASE MD 2</b>	650	250	2-3

**CASSIDA GREASE FC 1 | 2**

Fully synthetic, high-performance, high-temperature greases for the filled-for-life lubrication of bearings and seals used in extreme temperatures and/or aggressive environments. Effective anti-corrosion prevention characteristics. Excellent elastomer compatibility. Suitable for applications where components might be exposed to reactive chemicals and gases; chemically inert or non-reactive in the event of contact with strong acids, alkalis and halogens. Excellent elastomer compatibility.

**Main application:** Plain/roller bearing elements, joints, linkages and mechanical seals which are exposed to solvents, chemically aggressive materials and radiation. Suitable for continuous operation at temperatures up to 260 °C and short-term exposure to temperatures not exceeding 300 °C.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA GREASE FC 1</b>	510	47	1
<b>CASSIDA GREASE FC 2</b>	510	47	2

**CASSIDA PASTE AP**

Synthetic assembly paste for food and beverage processing equipment.

**Main application:** Assembly paste with an extremely large range of applications, e.g. screw paste for high-alloy steels to optimise the tightening torque, mounting and pressing of bearings and disks, wheels and bolts, for the lubrication of adjusting mechanisms as well as for drifting, bending, punching, pressing and stamping.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>CASSIDA PASTE AP</b>	85	12	1

**FM RANGE**

**FM COOLANT**

Propylene-glycol-based fluid containing anti-corrosion additives, for use in closed systems to chill/cool/heat food or beverages in food industry applications. Designed to be used in mixtures with potable water. Suitable for operation in the range of -45 °C to 120 °C.

**Main application:** Secondary cooling, or heating, in the food and beverage industry. For use in closed cooling systems, including those where there is a potential for incidental food contact. Not to be used for applications where there is direct contact between food and the coolant.



	Typical Viscosity at 20°C [mm <sup>2</sup> /s]	Typical Viscosity at 40°C [mm <sup>2</sup> /s]
<b>FM COOLANT</b>	47	17

**FM HEAT TRANSFER FLUID 32**

High-performance heat transfer fluid. Can handle a wide range of application temperatures and has excellent thermal and oxidative stability to minimise cracking and promote long service life.

**Main application:** For closed-circuit and pressureless heat transfer systems with a bulk oil temperature range of approximately -10 °C to max. +325 °C where the surface temperature of the heating elements (oil film temperature) should not exceed +340 °C.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
<b>FM HEAT TRANSFER FLUID 32</b>	35	6

**FM HYDRAULIC OIL 32 | 46 | 68 | 100**

Hydraulic fluids for food and beverage processing equipment.

**Main application:** Hydraulic systems, hydrostatic gears and control systems, plain and anti-friction bearings on food handling and processing equipment.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
<b>FM HYDRAULIC OIL 32</b>	32	5.7
<b>FM HYDRAULIC OIL 46</b>	46	7
<b>FM HYDRAULIC OIL 68</b>	68	9
<b>FM HYDRAULIC OIL 100</b>	100	11.5

**FM GEAR OIL TLS 150**

Speciality anti-wear gear lubricant specifically designed for use in the food and beverage canning industry. Provides good lubrication even when operating in locations where it is subject to contamination with water, juice and food. Holds these contaminants in suspension, thus protecting metal surfaces from wear and corrosion. Only to be used for total loss systems.

**Main application:** Suitable for can seamer gearboxes on food handling and processing equipment. May also be used for general machine lubrication.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
<b>FM GEAR OIL TLS 150</b>	150	15

**FM RANGE**

**FM GEAR OIL 220 | 460**

Gear lubricants for food and beverage processing equipment.

**Main application:** Suitable for gearboxes on food handling and processing equipment. May also be used for general machine lubrication or as flushing fluid.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
<b>FM GEAR OIL 220</b>	220	20
<b>FM GEAR OIL 460</b>	460	30

**FM SUGAR DISSOLVING FLUID**

Emulsifiable oil-based cleaning and rust protecting concentrate. Designed to be used in mixtures with potable water on machine surfaces in the food and sugar manufacturing industry.

**Main application:** For cleaning and flushing sugar or sugar-based deposits from food and beverage manufacturing equipment. For freeing moving parts or screws and bolts that are stuck with sugar deposits. For lubrication of lightly loaded bearings and slideways, especially where sugar deposits are likely to form. For cleaning sugar deposits off meshes and screens.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
<b>FM SUGAR DISSOLVING FLUID</b>	34	6

**FM FLUID DC 20 | 68**

White mineral oil, multi-purpose, low-volatility fluids suitable for both direct and incidental food contact applications. Can handle a wide range of applications.

**Main application:** Absorber oils for edible oil extraction plant solvent recovery systems. Release agent used on grills, loaf pans, cutters, boning benches, chopping blocks or other hard surfaces to help prevent food from adhering during processing. Forming oils for the manufacture of both two- and three-piece cans for food and beverages.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]
<b>FM FLUID DC 20</b>	22	4
<b>FM FLUID DC 68</b>	68	9.5

**FM GREASE HD 1.5 | 2**

Modified aluminium complex heavy-duty, extreme-pressure greases.

**Main application:** For use on slow to medium-speed plain and rolling element bearings in heavy-loaded and shock-loaded applications. Recommended for use in machinery requiring frequent changes of the grease charge or with a high product consumption rate, such as machines used to process pet food and animal feed.



	Typical Viscosity at 40°C [mm <sup>2</sup> /s]	Typical Viscosity at 100°C [mm <sup>2</sup> /s]	NLGI-Grade
<b>FM GREASE HD 1.5</b>	550	38	1.5
<b>FM GREASE HD 2</b>	550	38	2

# CASSIDA food grade lubricants



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