



FUCHS LUBRICANTS

Key Information

Company: FUCHS LUBRICANTES S.A.U., a company of the

FUCHS Group

Headquarters: Castellbisbal

Product Range: Over 10,000 products for all kinds of uses in

industry and the automotive industry

Certifications: ISO 9001:2015, IATF 16949:2016; ISO-14001:2015; ISO 45001:2015; NSF ISO 21469; TISAX; Innovative SME; 100 % Renewable Energy Certificate

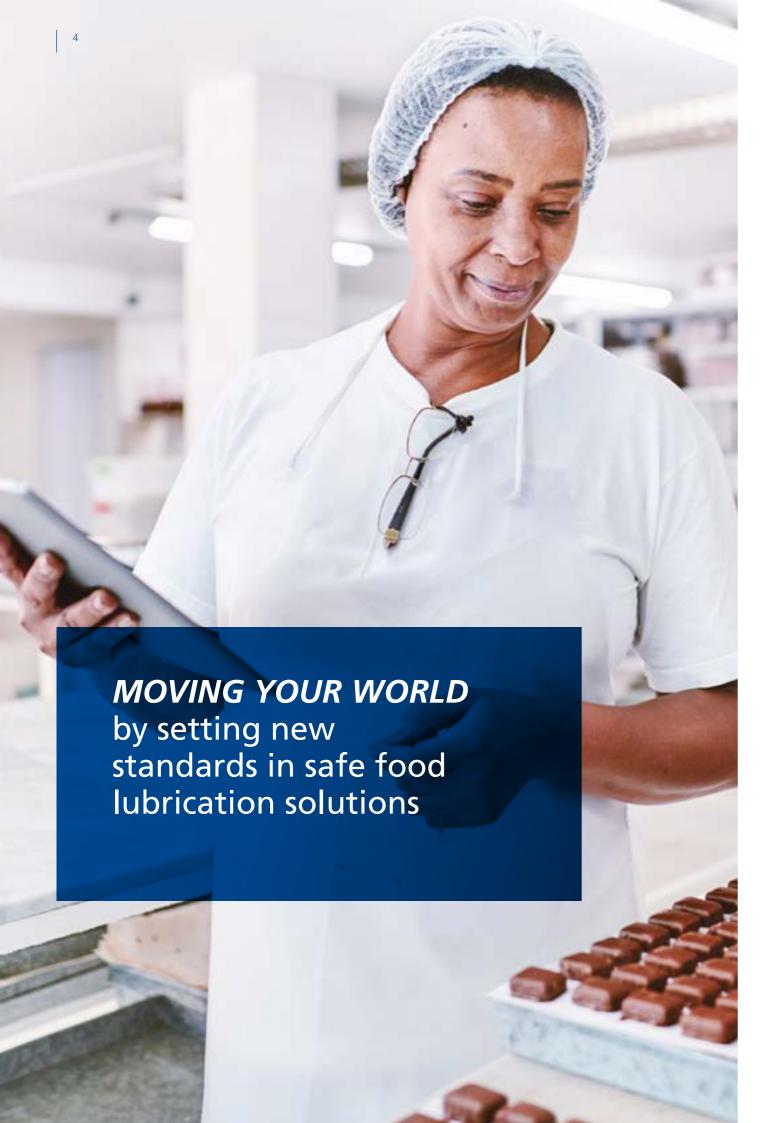
CO₂-neutral production*.

Since 1931 we have been pursuing the same goal: to keep the world moving. At FUCHS we develop, produce and market technologically innovative lubrication solutions with a sustainable impact on the future. Trust is the basis of everything that defines us and also a promise to our clients, which comprises virtually all sectors and areas of application.

Our extensive experience and a team of more than 500 professionals in the fields of science and engineering work to develop more efficient and sustainable solutions, always taking into account compliance with standards and regulations at all levels. Our extensive process knowledge and dialogue with our customers enables us to provide a reliable, safe and efficient service beyond the lubricant.

The Spanish subsidiary has its own R&D laboratories, which are a reference within the FUCHS Group, and a sustainable production plant for energy generation and consumption. These are the differentiators that enable us to continue to move the world.

^{*} Unavoidable CO₂ emissions are offset by compensatory measures.



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ABOUT FUCHS FOOD GRADE PRODUCTS

FUCHS - Your One Stop Provider

MOVING YOUR WORLD forward – to us, this idea is both a commitment to our customers and an obligation to ourselves. Our aim is not only to be the No 1 provider in safe food lubrication solutions but also to actively shape this market with our ideas and innovations. We achieve this on the basis of four pillars:

Supreme safety standards

Outstanding technical expertise

Unconditional reliability

Your direct way to the solution

FUCHS Food Grade Products Product Range



SUPREME safety standards

In the world of food and safe products, the safety of the end consumer is the most important aspect. The requirements in this area are very specific, detailed and complex. The highest possible safety standards are the result of strict compliance with these requirements throughout the entire production and use phase. All certifications and individual approvals require intensive cooperation and partnership with official organisations established for this purpose, such as NSF, EHEDG, BRC, IFS etc. It also requires a deep and comprehensive understanding of

the underlying processes, equipment designs and requirements for food and safe production. Our food grade products embody all this and are the most recognised brands in the world. Depending on their application, all our products are listed in the NSF (National Sanitation Foundation) White Book. And all the important and necessary certifications such as ISO 21469, Kosher and Halal are in place. In short, FUCHS Food Grade products are state-of-the-art lubricants, processing substances, cleaners and degreasers that meet the highest safety standards.

NSF registered

Kosher certified

Halal certified

ompany Member

In Partnership with



















Our international customers need partners that understand global manufacturing processes. Creating uniform standards at different sites with different situations, e.g. in terms of machinery, raw material availability, legal requirements, etc., is a challenge that extends far into the supply chains. As the world's largest independent global supplier of lubrication solutions, with a large number of production sites around the world, we have mastered this task perfectly. Thanks to our comprehensive and globally available portfolio of food-grade and non-food-grade lubricant solutions, we are able to meet all of our customers' needs and anticipate upcoming ones. This means that they don't have to make detours through fragmented distribution networks. And that is what we mean by being a one-stop provider.

The Food Grade product line of FUCHS offers a comprehensive range of high performance lubricants, process substances, cleaners and degreasers for the food and safe industry. The composition of each product is always optimised to ensure maximum suitability for the respective application. This product catalogue presents our product portfolio and gives an overview of the wide range of Food Grade products. The food experts in the FUCHS team or your local sales partner will be happy to help you find the best products for your application. You will receive individual, competent advice and recommendations for the products best suited to meet your requirements.

Outstanding technical expertise

FUCHS is setting new standards by understanding our customers as well as our products. Substantial technical know-how, consisting of in-depth application knowledge and a high level of R&D expertise, are the basis of our work. But what are the conditions for this? For us, the key is to really understand the customer on the one hand and our product on the other. We understand the amount of processes involved in industrial food production. A variety of challenges that can be addressed with an even greater variety of solutions in the field of lubrication. Understanding our customer's highly specific requirements and then finding the best way to solve them – that's what it's all about. We commit our global workforce, our experience and our knowledge of all the machines, all the application, all the processes. All in service of a singleminded goal: to always provide our customers with the perfect solution that improves their business.

Industries served by FUCHS Food Grade Products



Let's find the direct way to your solution

The most comprehensive product portfolio

Wherever you are – **FUCHS** is your one stop partner

> **CASSIDA Rivolta PARAFLUID**

Guide to Symbols















Coating applications









Direct food contact





NSF registered



Guides, rails, and sliders











Maintenance aid



Food safety products



Forming and necking applications















Direct food contact



Low temperature







CASSIDA Fluids (fully synthetic)

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CHAIN OILS

CASSIDA CHAIN OIL | 150 | 320 Spray | 460 | 1500 | 1500 Spray | 5000 Spray

	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA CHAIN OIL 150	150	19	-30 to +140 (upper peak: +150)	
CASSIDA CHAIN OIL 320 SPRAY	320*	34*	-40 to +140 (upper peak: +150)	
CASSIDA CHAIN OIL 460	460	43	-30 to +140 (upper peak: +150)	
CASSIDA CHAIN OIL 1500	1500	135	-30 to +140 (upper peak: +150)	
CASSIDA CHAIN OIL 1500 SPRAY	1500*	135*	-10 to +140 (upper peak: +150)	
CASSIDA CHAIN OIL 5000 SPRAY	5000*	350*	-10 to +100 (upper peak: +150)	
Fully synthetic, very high-performance chain oils. Highly resistant to fling-off or wash-off. Excellent protection against wear and corrosion.			e and transport chains lubrication systems or s	in the food industry. Can be spraying.

*after evaporation of solvent

CASSIDA CHAIN OIL LT | LT Spray

	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA CHAIN OIL LT	32	6.5	-50 to +140 (lower peak: -60)	
CASSIDA CHAIN OIL LT SPRAY	32*	6.5*	-50 to +120 (lower peak: -60)	
Fully synthetic, high-performance anti-wear chain oil suitable for a wide range of temperatures, including subzero 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 slideways and chains. Plain and anti-friction bearings.				

*after evaporation of solvent

CASSIDA CHAIN OIL SP

O NSF	Viscosity at 40°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA CHAIN OIL SP	85	460*	-30 to +140 (upper peak: +150)		
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

CHAIN OILS

CASSIDA CHAIN OIL HTE

OSF USF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA CHAIN OIL HTE	220	20	-25 to +240		
Fully synthetic, ester-based, high-temperature chain lubricant suitable for temperatures of up to 240°C.	Main application: Drive and transport chains in the food industry. Also intended for use in equipment for manufacturing food packaging.				

CASSIDA CHAIN OIL XTE

S ON INST	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range oven [°C]	Specifications
CASSIDA CHAIN OIL XTE	194	18	-20 to +300	
Fully synthetic high-temperature chain lubricant with exceptional thermal stability.	Main application: Drive and transport chains in the food industry (e.g. bakeries). Also intended for use in equipment for manufacturing food packaging.			

CASSIDA CHAIN OIL HTX

	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA CHAIN OIL HTX	330	40	-15 to >+300		
Fully synthetic, extreme-temperature chain lubricant suitable for temperatures up to more than 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.				

CASSIDA CHAIN OIL 150X

JE NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA CHAIN OIL 150X	150	19	-30 to +250 (upper peak: +270)	
Fully synthetic high-performance, anti-wear chain oil with solid lubricants to ensure lubrication in extreme conditions.	Main application: Chains subjected to high loads, steam, humid or especially aggressive conditions in the food industry.			

CASSIDA Fluids Products Product Range 19

COMPRESSOR FLUIDS

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

O S I NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID CR 32	32	6.1	-30 to +100 (upper peak: +120)	DIN 51506 VBL, VCL, VDL
CASSIDA FLUID CR 46	46	8.0	-30 to +100 (upper peak: +120)	DIN 51506 VBL, VCL, VDL
CASSIDA FLUID CR 68	68	11	-30 to +100 (upper peak: +120)	DIN 51506 VBL, VCL, VDL
CASSIDA FLUID CR 100	100	14	-30 to +100 (upper peak: +120)	DIN 51506 VBL, VCL, VDL
CASSIDA FLUID CR 150	150	19	-30 to +100 (upper peak: +120)	DIN 51506 VBL, VCL, VDL
Fully synthetic, very high-performance, long-life compressor oils. Meet DIN 51506 VBL, VCL, VDL and ISO 6743-3A DAH, DAG, DAJ specifications.	Main application plants.	: Oil-flooded rotary v	vane and screw air com	pressors in food processing

CASSIDA FLUID CRE 46

(a))→←((a) (3) (NSF)	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID CRE 46	46	7.6	-30 to +100 (upper peak: +120)	DIN 51506 VBL, VCL, VDL
Advanced synthetic screw compressor lubricant with extraordinary thermo-oxidative stability. Excellent frictional properties promoting energy reduction, increased purity of plant air through low volatility improving manufactured product integrity, and reduced overall lubricant consumption by offering an industry-leading service life of up to 8000 hours in defined environmental conditions.		n: Screw and vane co ubrication including li		ti-friction bearings and

CASSIDA FLUID CRF

8 →8 9 →← NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID CRF	43	7.3	-30 to +100 (upper peak: +120)	
Synthetic flushing fluid designed to remove varnish and sludge from compressors that are used in processing plants, including areas where there is a possibility of incidental contact from the compressed air and/or condensate with edible products and ancillaries.	Main application compressors.	: Rotary screw comp	ressors, rotary vane com	pressors and centrifugal

CASSIDA FLUID RF 46 | 68

III O NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA FLUID RF 46	46	7.8	-40 to +100 (upper peak: +140)	DIN 51501-1	
CASSIDA FLUID RF 68	68	9.7	-40 to +100 (upper peak: +140)	DIN 51501-1	
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 isobutane (R600a).				

DIRECT CONTACT FLUIDS - MULTIPLE APPLICATIONS

CASSIDA FLUID DC 20 | 32

NSF.	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID DC 20	23	4.8	-40 to +100	
CASSIDA FLUID DC 32	32	6	-40 to +100	
Fully synthetic, multipurpose, 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.			

CASSIDA FLUID DCE 10

S NSF	Viscosity at 20°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA FLUID DCE 10	22	10	-10 to +110 (upper peak: +120)		
Synthetic multifunctional oil hydrocarbon free direct, contact fluid for food processing applications in the food, manufacturing industry.	Main application: Multipurpose fluid to be used as forming oil for the manufacture of both two- and three-piece cans for food and beverages (stamping, deep-drawing, and bending), as release agent in several applications, synthetic fibbers manufacture, artificial and collagen casing manufacture, and as absorber fluid for edible oil extraction plant solvent recovery system.				

CASSIDA FLUID DCE 15 | CASSIDA FLUID DCE 15 Spray

⇒ NSF	Viscosity at 20°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA FLUID DCE 15	31	14.8	-10 to +110 (upper peak: +120)		
CASSIDA FLUID DCE 15 SPRAY	31*	14.8*	-10 to +110 (upper peak: +120)		
Synthetic multifunctional mineral oil hydrocarbon free direct contact fluid for food processing applications in the food manufacturing industry.	Main application: Release agent used on grills, loaf pans, cutters, boning benches, chopping blocks or other hard surfaces to help prevent food from adhering during processing. Dough Divider lubrication and forming oil for the manufacture of both two and three piece cans for food and beverages (stamping, deep drawing and bending). Stamping and deep drawing of aluminium foils for food-packaging. Lubrication of lightly loaded chains.				

*without propellant

CASSIDA Fluids FUCHS Food Grade Products Product Range 21

GEAR FLUIDS

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

Sign (NSF)	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID GL 150	150	19	-45 to +140 (upper peak: +150)	DIN 51517 CLP / DIN 51506 VBL, VCL
CASSIDA FLUID GL 220	220	25	-40 to +140 (upper peak: +150)	DIN 51517 CLP / DIN 51506 VBL
CASSIDA FLUID GL 320	320	33	-35 to +140 (upper peak: +150)	DIN 51517 CLP
CASSIDA FLUID GL 460	460	44	-35 to +140 (upper peak: +150)	DIN 51517 CLP
CASSIDA FLUID GL 680	680	59	-30 to +140 (upper peak: +150)	DIN 51517 CLP
Fully synthetic, very high-perfomance, long-life, anti-wear gear oils. Meet DIN 51517 CLP and ISO 6743/6 specifications.	Main application: Suitable for gearboxes on food handling and processing equipment. May also be used for general machine lubrication, for example, on chains.			

CASSIDA FLUID GLE 150 | 220

(S) (NSF)	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID GLE 150	150	19	-40 to +140 (upper peak: +150)	DIN 51517 CLP
CASSIDA FLUID GLE 220	220	25	-40 to +140 (upper peak: +150)	DIN 51517 CLP
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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.

CASSIDA FLUID WG 150 | 220 | 320 | 460 | 680 | 1000

NSF NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID WG 150	150	128	-35 to +150	DIN 51517 CLP
CASSIDA FLUID WG 220	220	61	-35 to +160	DIN 51517 CLP
CASSIDA FLUID WG 320	320	61	-35 to +160	DIN 51517 CLP
CASSIDA FLUID WG 460	460	83	-30 to +160	DIN 51517 CLP
CASSIDA FLUID WG 680	680	122	-25 to +160	DIN 51517 CLP
CASSIDA FLUID WG 1000	1000	163	-25 to +160	DIN 51517 CLP

Fully synthetic, high-performance gear lubricants for worm gearboxes. 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 specifications.

Main application: For the lubrication of worm gearboxes 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.

GEAR FLUIDS

CASSIDA FLUID GLS 220 | 320 | 460

COO SE NISE	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA FLUID GLS 220	220	30.3	-40 to +140 (upper peak: +150)	DIN 51517 CLP	
CASSIDA FLUID GLS 320	320	41.0	-35 to +140 (upper peak: +150)	DIN 51517 CLP	
CASSIDA FLUID GLS 460	460	55.8	-35 to +140 (upper peak: +150)	DIN 51517 CLP	
Fully synthetic food grade gear oil based on new mPAO technology with very high performance based on latest base oil and additive technology, high micro pitting resistance.	Main application: Lubrication of enclosed gearboxes and worm gears. May also be used for general machine lubrication, for example, on chains, bearings and dynamic loaded seals.				

HYDRAULIC OILS

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

=(7)= (8) NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID HF 15	15	3.6	-65 to +100 (upper peak: +120)	DIN 51524 HLP
CASSIDA FLUID HF 32	32	6	-60 to +140 (upper peak: +150)	DIN 51524 HLP, HVLP
CASSIDA FLUID HF 46	46	8	-59 to +140 (upper peak: +150)	DIN 51524 HLP, HVLP
CASSIDA FLUID HF 68	68	11	-52 to +140 (upper peak: +150)	DIN 51524 HLP, HVLP DIN 51517 CLP
CASSIDA FLUID HF 100	100	14	-45 to +140 (upper peak: +150)	DIN 51524 HLP, HVLP DIN 51517 CLP

Fully synthetic, high-performance, long-life, anti-wear hydraulic oils. Meet ISO 6743/4 HM, DIN 51524 HLP, HVLP and DIN 51517 CLP (ISO 68 and ISO 100) specifications. **Main application:** Hydraulic systems, hydrostatic gears and control systems, plain and anti-friction bearings on food handling and processing equipment.

CASSIDA FLUID HFS 15 | 32 | 46 | 68 | 100

=()= (S) NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID HFS 15	15	4	-62 to +100 (upper peak: +120)	DIN 51524 HLP
CASSIDA FLUID HFS 32	32	6	-60 to +140 (upper peak: +150)	DIN 51524 HLP, HVLP DIN 51517 CLP
CASSIDA FLUID HFS 46	46	8	-60 to +140 (upper peak: +150)	DIN 51524 HLP, HVLP DIN 51517 CLP
CASSIDA FLUID HFS 68	68	11	-50 to +140 (upper peak: +150)	DIN 51524 HLP, HVLP DIN 51517 CLP
CASSIDA FLUID HFS 100	100	15	-45 to +140 (upper peak: +150)	DIN 51524 HLP, HVLP DIN 51517 CLP

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, HVLP and DIN 51517 CLP (HFS 68) 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.

CASSIDA Fluids FUCHS Food Grade Products Product Range 23

VACUUM PUMP FLUIDS

CASSIDA FLUID VP 68 | 100

	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID VP 68	68	10.5	-45 to +120 (upper peak: +140)	DIN 51506 VBL, VCL, VDL
CASSIDA FLUID VP 100	100	14	-40 to +120 (upper peak: +140)	DIN 51506 VBL, VCL, VDL
Fully synthetic, high-performance vacuum pump oils.	Main application: Vacuum pumps producing a medium vacuum, used in the food and beverage processing and packing industry.			

MAINTENANCE FLUIDS and SPECIALTIES

CASSIDA COMPOUND S

NSF NSF	Viscosity at 20°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA COMPOUND S	-	-	-10 to +130 (upper peak: +140)		
Synthetic water-based lubricating paste, with high film strength and excellent wetting quality for the manufacturing of packaging for safe and food use.	Main application: Pressing, extrusion and forming lubricant in the manufacture of containers in the food and beverage industries. It can also be used as non-stick coating of foils and metal food-packaging.				

CASSIDA COMPOUND L

ISF NSF	Viscosity at 20°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA COMPOUND L	-	-	-5 to +45	
Synthetic water-based lubricating paste, with high film strength and excellent wetting quality for the manufacturing of packaging for safe and food use.	Main application: Pressing, extrusion and forming lubricant in the manufacture of containers in the food and beverage industries. It can also be used as non-stick coating of foils and metal food-packaging.			

CASSIDA FLUID PF 22

NSF NSF	Viscosity at 20°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA FLUID PF 22	-	22			
Synthetic fluid for the manufacture of packaging for the food industry.	Main application: Manipulation of the synthetic fibers and its weaving process for the manufacture of mesh bags for food products.				

CASSIDA FLUID FL 5 | FL 5 Spray

	Viscosity at 20°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA FLUID FL 5	3.8	1.1	n.a.		
CASSIDA FLUID FL 5 SPRAY	3.8*	1.1*	-60 to +110		
Synthetic water-based lubricating fluid, with high film strength and excellent wetting quality for the manufacturing of packaging for safe and food use.	Main application: Pressing, extrusion and forming lubricant in the manufacture of containers in the food and beverage industries.				

MAINTENANCE FLUIDS and SPECIALTIES

CASSIDA SILICONE FLUID | CASSIDA SILICONE FLUID Spray

The state of the s	Viscosity at 25°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA SILICONE FLUID	350	270	-40 to +200 (upper peak: +220)		
CASSIDA SILICONE FLUID Spray	1000*	730*	-40 to +200 (upper peak: +220)		
Silicone-based, fully synthetic, multipurpose 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-					

*without propellant

CASSIDA PTFE DRY Spray

	Viscosity at 20°C [mm²/s]	Temperature range [°C]
CASSIDA PTFE DRY SPRAY	0.8*	-50 to +270
Synthetic PTFE multipurpose and maintenance lubricant, based on a unique blend of components.	Main application: For use on belts, cams, joints, pivots, lifts, pulleys, threaded parts, be moving parts. For lubrication and protection pharmaceutical and other clean environment	olts, rollers, taps, valves and many other of seals and guides, operating in food,

*including solvent

CASSIDA FLUID CP | CASSIDA FLUID CP Spray

NSF.	Viscosity at 20°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FLUID CP	4.9*	3.8*	n.a.	
CASSIDA FLUID CP SPRAY	4.9**	3.8**	-30 to +100	
Easy-to-handle, fully synthetic corrosion protection fluid	Main application	n: Protection for mac	ninery of all kind durin	a shipping and distribution.

Easy-to-handle, fully synthetic corrosion protection fluid with excellent yield for use in machinery in the food and beverage processing and packaging industry. Provides a thin, highly efficient molecular film on components.

Main application: Protection for machinery of all kind during shipping and distribution. For metal parts and tools after galvanic conditioning and cleaning processes. For gearbox housings, gear-wheels, couplings, driveshafts, measuring tools, precision tools, etc. As a temporary protection of sub-assemblies.

* including solvent ** without propellant, including solvent

CASSIDA COOLANT

(*) INST	Viscosity at 20°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA COOLANT	47	17	-45 to +120	

Propylene-glycol-based fluid containing anti-corrosion additives, for use in closed systems to chill, cool or 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 potential for incidental food contact. Not to be used for applications where there is direct contact between food and the coolant.



CASSIDA Greases

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REGULAR LOAD

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

© © ISF	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*		
CASSIDA GREASE RLS 000	AlCx	100	13	-50 to +100 (upper peak: +120)	<000			
CASSIDA GREASE RLS 00	AlCx	100	13	-45 to +100 (upper peak: +120)	00			
CASSIDA GREASE RLS 0	AlCx	150	18	-40 to +100 (upper peak: +120)	0			
CASSIDA GREASE RLS 1	AlCx	150	18	-40 to +120 (upper peak: +140)	1			
CASSIDA GREASE RLS 2	AlCx	150	18	-35 to +120 (upper peak: +140)	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 particulary recommended for centralised lube systems or other similiar systems where an NLGI 2							

grease may be difficult to dispense.

EXTREME PRESSURE

CASSIDA GREASE EPS 00 | 1 | 2

© © © EP NSF	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*		
CASSIDA GREASE EPS 00	AlCx	220	25	-45 to +100 (upper peak: +120)	00			
CASSIDA GREASE EPS 1	AlCx	220	25	-40 to +120 (upper peak: +140)	1			
CASSIDA GREASE EPS 2	AlCx	220	25	-35 to +120 (upper peak: +140)	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, particulary where high pressure and loads, high temperatures and water spray occur. CASSIDA GREASE EPS 00 is especially recommended for centralised lube sytems and enclosed gears.							

HEAVY DUTY

CASSIDA GREASE HDS 00 | 2

O O EP SER NSF	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*		
CASSIDA GREASE HDS 00	AICX	800	68	-35 to +120 (upper peak: +120)	00			
CASSIDA GREASE HDS 2	AICX	800	68	-35 to +120 (upper peak: +140)	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, particulary 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.							

SPECIALTIES

CASSIDA GREASE GTS 2 | GTS SPRAY

	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*			
CASSIDA GREASE GTS 2	CSX	85	12.8	-45 to +170 (upper peak: +200)	2				
Cassida grease gts spray	CSX	85	12.8**	-45 to +170 (upper peak: +200)	2*				
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 medium- to high-speed bearings operating up to 170°C.								

**without propellant

CASSIDA GREASE GTM 2

	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*		
CASSIDA GREASE GTM 2	CSX	220	25	-40 to +160	2			
Specialty synthetic extreme-pressure grease for food and beverage processing equipment.	Main application: For use on bearings of electric motors, pumps, conveyors, mixers and robotic applications.							

CASSIDA GREASE GTX 0 | 2

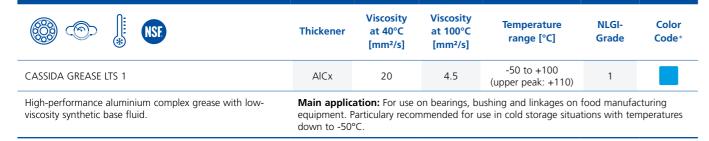
	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*		
CASSIDA GREASE GTX 0	CSX	460	44	-35 to +160 (upper peak: +200)	0			
CASSIDA GREASE GTX 2	CSX	460	44	-35 to +180 (upper peak: +220)	2			
High-performance, extreme-pressure calcium sulphonate 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.							

CASSIDA GREASE HTS 2

	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*		
CASSIDA GREASE HTS 2	Inorganic	400	40	-30 to +200 (upper peak: +220)	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.							

SPECIALTIES

CASSIDA GREASE LTS 1



CASSIDA GREASE P 1

	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*	
CASSIDA GREASE P 1	Inorganic	770	65	-30 to +150 (upper peak: +180)	1		
Specialty high-performance grease. Inorganically thickened with fully synthetic base fluids.	Main application: Lubrication of heavily loaded plain or roller bearings, joints, linkages an slides up to 150°C (peak 180°C) and protection of seals and guides.						

CASSIDA GREASE CLEAR 2

	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*	
CASSIDA GREASE CLEAR 2	Inorganic	75	11.5	-30 to +170	2		
Inorganically thickened clear grease with synthetic base fluid and highly micronised white solid lubricant (PTFE).	Main application: Lubrication of plain or roller bearings, joints, linkages and slides. Lubrication and protection of seals and guides, operating in food, pharmaceutical and other clean environments.						

CASSIDA GREASE MD 2

=Ē= NSF	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*
CASSIDA GREASE MD 2	PTFE	650	250	-40 to +200 (upper peak: +250)	2–3	

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.

CASSIDA GREASE DCE 2

S INSF	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*	
CASSIDA GREASE DCE 2	Inorganic	100	13	-10 to +110 (upper peak: +120)	2		
Synthetic food contact grease designed for a number of special applications in the food manufacturing industry. Suitable for both direct and incidental food contact applications.	Main application: Ideal for use as a direct food contact release agent. Release agent for grills, loaf pans, cutters, boning benches, chopping blocks and other hard surfaces to help prevent food from adhering during processing. Lubrication and protection of guides, bearings and blades operating in food, pharmaceutical and other clean environments where direct food contact is inevitable.						

SPECIALTIES

CASSIDA GREASE FC 1 | 2

	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*
CASSIDA GREASE FC 1	PTFE	510	47	-25 to +260 (upper peak: +280)	1	
CASSIDA GREASE FC 2	PTFE	510	47	-25 to +260 (upper peak: +280)	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, microbearings, precision tools, linkages and mechanical seals. Suitable for continuous operation at temperatures up to 260°C and short-term exposure to temperatures not exceeding 300°C.

CASSIDA PASTE AP

₩SF NSF	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*	
CASSIDA PASTE AP	Inorganic	85	12	-40 to +1200	1		
Synthetic assembly/disassembly paste for food and beverage	Main application: Assembly and disassembly paste with an extremely large range of applications for example screw paste for high-allow 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. Protects from fretting corrosion. Protects from seizing – easy disassembling.

HD GREASE GUN CASSIDA

The two-handed gun guarantees clean and safe lubrication of machines in the food industry. It delivers a large volume of lubricant per stroke. Particularly simple handling is achieved with the use of matching cartridges with a screw cap.

The gun is pre-lubricated with food grade grease, which ensures the highest level of food safety.

- Operation pressure up to 400 bar / 5,800 psi
- Ergonomic grips for optimum operation
- Twin-lock system protects the piston from wear and avoids grease escaping the piston
- Protecting cap to prevent contamination at hose end
- Flexible armoured hose for optimum accessibility of lubricating points
- Output: 1.5 cm³/stroke
- Available with 500 g SR cartridges
- Complete discharge of the SR cartridge by special piston shape
- Colour coding of cartridges avoids mixing up different lubricants





CASSIDA FM Range (semi-synthetic or white-oil-based)

Hydraulic Oils					
CASSIDA FM HYDRAULIC OIL 32 46 68 100					
Gear Oils					
CASSIDA FM GEAR OIL TLS 150					
CASSIDA FM GEAR OIL 220 460	32				
Specialties					
CASSIDA FM FLUID DC 20 68					
CASSIDA FM FLUID RC 150 220	33				
CASSIDA FM FLUID PF 16					
CASSIDA FM FLUSHING FLUID 32	33				
CASSIDA FM HEAT TRANSFER FLUID 32	34				
CASSIDA FM SUGAR DISSOLVING FLUID	34				
Greases					
CASSIDA FM GREASE DC 2 CASSIDA FM GREASE DC 2 SPRAY	34				
CASSIDA FM GREASE EP 1.5	34				
CASSIDA FM GREASE HD 1.5 2	35				

CASSIDA FM Range

FUCHS Food Grade Products Product Range

33

HYDRAULIC OILS

CASSIDA FM HYDRAULIC OIL 32 | 46 | 68 | 100

SSF = NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA FM HYDRAULIC OIL 32	32	5.7	0 to +110 (upper peak: +120)	DIN 51524 HLP	
CASSIDA FM HYDRAULIC OIL 46	46	7	0 to +110 (upper peak: +120)	DIN 51524 HLP	
CASSIDA FM HYDRAULIC OIL 68	68	9	0 to +110 (upper peak: +120)	DIN 51524 HLP	
CASSIDA FM HYDRAULIC OIL 100	100	11.5	0 to +110 (upper peak: +120)	DIN 51524 HLP	
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.				

GEAR OILS

CASSIDA FM GEAR OIL TLS 150

	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FM GEAR OIL TLS 150	150	15	0 to +110 (upper peak: +120)	DIN 51517 CLP
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.			mer gearboxes on food al machine lubrication.	handling and processing

CASSIDA FM GEAR OIL 220 | 460

SS (SS)	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications		
CASSIDA FM GEAR OIL 220	220	20	0 to +110 (upper peak: +120)	DIN 51517 CLP		
CASSIDA FM GEAR OIL 460	460	30	0 to +110 (upper peak: +120)	DIN 51517 CLP		
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 a flushing fluid.					

SPECIALTIES

CASSIDA FM FLUID DC 20 | 68

SEP	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications	
CASSIDA FM FLUID DC 20	22	4	0 to +120 (upper peak: +130)		
CASSIDA FM FLUID DC 68	68	9.5	0 to +120 (upper peak: +130)		
White mineral oil, multipurpose, 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.				

CASSIDA FM FLUID RC 150 | 220

(S) (NSF)	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications
CASSIDA FM FLUID RC 150	150	15.5	-10 to +140 (upper peak: +150)	DIN 51517 CLP
CASSIDA FM FLUID RC 220	220	20.4	-10 to +140 (upper peak: +150)	DIN 51517 CLP
Special high-performance fluids specially developed for use in rotary cooking equipment in food and beverage canning plants. Provide good lubrication even when operating in locations where they are subject to contamination with water.			tralised systems of rotar es and other moving cor	ry cookers and sterilisers mponents.

CASSIDA FM FLUID PF 16

NSF NSF	Viscosity at 20°C [mm²/s]	Viscosity at 40°C [mm²/s]	Temperature range [°C]	Specifications		
CASSIDA FM FLUID PF 16	-	16				
Fluid for the manufacture of packaging for the food industry.	Main application: manipulation of the synthetic fibers and its weaving process for the manufacture of mesh bags for food products					

CASSIDA FM FLUSHING FLUID 32

% → % NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications		
CASSIDA FM FLUSHING FLUID 32	31	5.2	-10 to +150 (upper peak: +325)	DIN 51522 Q		
Specialty cleaning and flushing concentrate for heat transfer systems operating in the food and beverage industry.	Main application: FM FLUSHING FLUID 32 is recommended for use in closed heat transfer systems which suffer from carbon formation due to thermal and oxidative degradation.					

SPECIALTIES

CASSIDA FM HEAT TRANSFER FLUID 32

I NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications		
CASSIDA FM HEAT TRANSFER FLUID 32	35	6	0 to +325 (upper peak: +340)	DIN 51522 Q		
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.					

CASSIDA FM SUGAR DISSOLVING FLUID

NSF NSF	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	Specifications		
CASSIDA FM SUGAR DISSOLVING FLUID	36	5.7	n.a.			
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.					

GREASES

CASSIDA FM GREASE DC 2 | CASSIDA FM GREASE DC SPRAY

SE NSF	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*	
CASSIDA FM GREASE DC 2	Inorganic	100	11	-10 to +120	2		
CASSIDA FM GREASE DC 2 SPRAY	Inorganic	100	11	-10 to +120	00*		
White mineral oil grease, multipurpose, suitable for both direct and incidental food contact applications. Can handle a wide range of applications.	Main application: For use as a direct food contact release agent for grills, loaf pans, cutters, boning benches, chopping blocks and other hard surfaces to help prevent food from adhering during processing. Lubrication and protection of seals, guides, bearings and blades operating in food, pharmaceutical and other clean environments where direct food contact is inevitable.						

*without propellant

CASSIDA FM GREASE EP 1.5

	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*	
CASSIDA FM GREASE EP 1.5	AlCx mod.	200	22	-20 to +130 (upper peak: +140)	1.5		
Modified aluminium complex multipurpose, extreme pressure grease.	Main application: For use on slow to medium-speed plain and rolling element bearings in regular or heavy 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.						

GREASES

CASSIDA FM GREASE HD 1.5 | 2

	Thickener	Viscosity at 40°C [mm²/s]	Viscosity at 100°C [mm²/s]	Temperature range [°C]	NLGI- Grade	Color Code*	
Cassida FM Grease HD 1.5	AlCx mod.	550	38	-10 to +140 (upper peak: +150)	1.5		
CASSIDA FM GREASE HD 2	AlCx mod.	550	38	-10 to +140 (upper peak: +150)	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.						



CASSIDA Automatic Lubricators

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CASSIDA Automatic Lubricators

CASSIDA automatic lubricators are devices that can be programmed to apply lubricant (grease or oil) automatically. In most cases, the equipment can continue to operate during lubricant application, which reduces downtime.

Investing in automatic lubricators always results in savings and reduced maintenance costs in the long run, because lubricant consumption is optimised. In addition, these devices eliminate the cost and risk involved in manually applying controlled amounts of lubricant to multiple sites at frequent intervals while the equipment is in operation. Hygienic design considerations are also improved by the use of automatic lubricators, as they provide a means of achieving clean lubrication, by preventing leaks and spills that might otherwise contaminate products. Automated lubrication provides constant protection against the ingress of contaminants through lubrication points, preventing water, dirt and dust ingress, which leads to longer equipment service life.

In short, automatic lubricators simplify equipment lubrication and provide a level of homogeneity resulting in benefits that include:

- Reduced maintenance costs
- Improved labour efficiency and cost savings
- Greater safety for personnel during maintenance tasks
- Reduced equipment downtime
- Longer equipment service life
- Optimal and homogeneous lubrication guaranteed
- Reliable lubrication vs. human error when applying
- Improved hygienic design and food safety by minimising

To achieve all these benefits, FUCHS offers its customers the full CASSIDA product range in automatic lubricators for STAR VARIO BLUETOOTH, STAR CONTROL and FLEX systems.

BLUETOOTH

CASSIDA STAR VARIO

CASSIDA STAR VARIO BLUETOOTH operates fully automatically, regardless of temperature and back pressure, discharging with extreme precision.

The system consists of an electromechanical motor, an LC (Lubricant Cartridge) unit containing 60 cm3, 120 cm3, 250 cm3 or 500 cm3 of lubricant and batteries.

The desired discharge interval and LC size are easily selected via the set button and are immediately shown on the LCD display. The current operating status is always shown by an LED signal (green / red), which is visible even from a distance, and also on the LCD display.

This single-point lubricator can be controlled remotely via Bluetooth, using mobile device app.





The main difference between the CASSIDA STAR **CONTROL** and the **STAR VARIO BLUETOOTH** model is that the drive is powered externally via a connection cable and therefore no batteries are required.

CASSIDA STAR CONTROL also has an electromagnetic drive with two built-in operating modes: TIME and IMPULSE.

In TIME mode, CASSIDA STAR CONTROL applies lubrication according to the programmed discharge time (1, 2, 3 ... 12 months).

In IMPULSE mode, the device applies the exact amount of lubricant when power is detected on starting up the machinery. This mode is particularly recommended for machinery that operates intermittently.

A further advantage is that service status can be transmitted and assessed in a PLC.









FLEX

Technical information

Reusable electromechanical drive

CASSIDA STAR VARIO BLUETOOTH with

CASSIDA STAR CONTROL with external power: 9 - 30 V DC, Imax 0.5 A

Discharge time

1, 2, 3... 12 months for both devices CASSIDA STAR CONTROL:

Time-based control (TIME)

Impulse-based control (TIME)

Lubricant amount

60 cm³, 120 cm³, 250 cm³ or 500 cm³ **Application temperature**

CASSIDA STAR VARIO BLUETOOTH: -20 °C to +60 °C

CASSIDA STAR CONTROL: -40 °C to +60 °C

Operating pressure 7.5 bar

Protection class

IP 65 for both devices

Lubricant up to NLGI 2 / oils For both devices

LCD display CASSIDA STAR CONTROL button CASSIDA STAR VARIO BLUETOOTH STAR VARIO drive Plunger STAR LC (co-polyeste Lubricant External thread Dimensions for both LC 60: Ø 75 x 155 mm LC 120: Ø 75 x 178 mm LC 250: Ø 75 x 228 mm LC 500: Ø 72 x 329 mm



Product features and benefits



The LCD display with set button shows discharge interval, LC size and operating status

Setting: 1, 2, 3... 12 months and LC size

- Simple and intuitive handling
- Precise, customised adjustment avoids under- or over**lubrication**
- · Changes to the settings can be made at any time.
- Can be switched off in the event of a long-term plant shutdown



Reusable electromechanical drive STAR VARIO **BLUETOOTH** with batteries **STAR CONTROL cable** connection

Always-visible LED (green/red) shows operating status and incidents

- Reliable and precise lubrication, regardless of room temperature and back pressure
- One-time acquisition cost
- Quick operation control through LED signals saves time and makes maintenance easier
- STAR VARIO BLUETOOTH can be controlled remotely with a
- STAR CONTROL can be connected to a PLC



The 7.5 bar pressure generated allows for mounting at a distance of up to 5 m.

Additional manual discharge at the push of a button (purge)

- Mounting outside hazard areas or in easy-access areas increases safety at work
- Increased availability of the equipment, as the LC change can be carried out smoothly during service
- If necessary, the lubrication point can be purged to remove blockages

Lubricator accessories can be ordered separately according to your needs.

Accessories



DRIVE

Description: Geared drive. 5 years' service life. Retail packaging: 1 pc.



CABLE FOR STAR CONTROL

Description: 4-wire connection cable for CASSIDA STAR CONTROL devices.

Retail packaging: 1 pc.



SUPPORT FLANGE

Description: Lubricator support for first installation. 5 years' service life. Retail packaging: 1 pc.



BATTERY PACK

Description: Battery pack for power supply in CASSIDA STAR VARIO **BLUETOOTH** devices. Change with each lubricant cartridge replacement (LC).

Retail packaging: Pack of 3 batteries.

CASSIDA Cartridges



CASSIDA STAR LC 60

Description: 60 cm³ Replacement Lubricant Cartridge (LC). Items included: STAR LC 60.

Retail packaging: Box of 10 pcs.



CASSIDA STAR LC 120

Description: 120 cm³ Replacement Lubricant Cartridge (LC). Items included: STAR LC 120. Retail packaging: Box of 10 pcs.



CASSIDA STAR LC 250

Description: 250 cm³ Replacement Lubricant Cartridge (LC). Items included: STAR LC 250. Retail packaging: Box of 10 pcs.

CASSIDA FLEX

CASSIDA FLEX is a compact, ready-to-use lubrication system delivered as a complete unit. It can be used in a wide range of applications at temperatures from -20 °C to +60 °C. The discharge interval can be freely selected from between 1 and 12 months.

The required pressure is achieved by means of an electronically controlled chemical reaction. Fresh lubricant is continuously applied to the lubrication point throughout the selected discharge interval.

CASSIDA FLEX is available in 60 cm³ and 125 cm³ sizes.





Technical information

Operation

Electrochemical reaction. Gas generation.

Discharge interval at +20 °C 1, 2, 3... 12 months

Lubricant volume 60 cm3 or 125 cm3

Application temperature

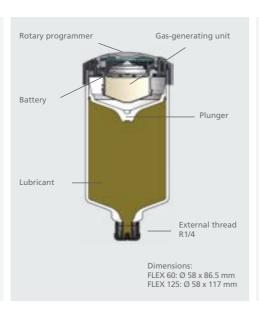
-20 °C to +60 °C

Operating pressure Max. 5 bar

Protection class

Special and standard lubricants

Greases up to NLGI 2 / oils





Features and Benefits



Complete system with rotary timer to adjust the discharge interval:

1, 2, 3... 12 months

- The system is delivered fully assembled and ready for immediate use
- Easy setting and activation via rotary timer
- Discharge time adjustable from 1 to 12 in monthly intervals



The system operates reliably between -20 °C and +60 °C.

- Flexible use in various temperature ranges
- Can be used outdoors all year round



Ex protection approval FM approval **IP 68**

- Safe and permanent lubrication in explosion-hazard areas
- Can be used in high-humidity or dusty environments
- Increased safety at work

CASSIDA automatic lubricators



CASSIDA FLEX 60

Description: 60 cm³ automatic lubrication system.

Retail packaging: Box of 10 pcs.



CASSIDA FLEX 125

Description: 120 cm³ automatic

lubrication system.

Retail packaging: Box of 10 pcs.

Accessory kit for distance installation

CASSIDA Automatic lubricators

Direct mounting is recommended in order to reduce lubricant pressure on the lubrication point. However, in many cases, remote installation is required, especially when lubrication points are located in high temperature zones (>60 °C), inaccessible areas or where there is a high risk of accidents (vibration, shocks, cuts, etc.).

The following accessories are required to install CASSIDA automatic lubricators at a distance from the lubrication point. Please note that the maximum distance is 5 m for STAR VARIO BLUETOOTH and STAR CONTROL systems and 2 m for the FLEX system in order to keep the proper operating pressure.

INSTALLATION KIT FOR SINGLE-POINT LUBRICATORS WITH OIL

Description:

Accessory kit for remote installation of automatic lubricators containing

(CASSIDA STAR LC or CASSIDA FLEX)

Items included:

8 accessories and spare parts

Retail packaging:

Box with accessory kit

	L	L
Item name	Quantity	Image
STAR Bracket (inox.) G1/4	1 pcs	
Mounting Clamp 65 mm (inox.)	1 pcs	ŧ
Straight G1/4" nickel-plated brass connector for e8mm / i6mm hose.	2 pcs	4
PA hose, 8 mm outside diameter, -40 a to +80 °C	3 m	
90° elbow G1/4e x G1/4i, brass	1 pcs	
Oil check valve G1/4e xG1/4i Up to 60 °C (brass / plastic)	2 pcs	•
Brush bracket (stainless steel)	1 pcs	
Brush Ø20 mm G1/4	1 pcs	

INSTALLATION KIT FOR SINGLE-POINT LUBRICATORS **WITH GREASE**

Description:

Accessory kit for remote installation of automatic lubricators containing grease

(CASSIDA STAR LC or CASSIDA FLEX)

Items included:

8 accessories and spare parts

Retail packaging:

Box with accessory kit

Item name	Quantity	Image
STAR Bracket (inox.) G1/4	1 pcs	
Mounting Clamp 65 mm (inox.)	1 pcs	Ú.
Straight G1/4" connector for e8mm / i6mm hose, nickel-plated brass	2 pcs	E 3
PA hose, 8 mm outside diameter, -40 a to +80 °C	3 m	
90° elbow G1/4e x G1/4i, brass	1 pcs	
Pipe adaptor G1/8e x G1/4i, brass	1 pcs	-
Pipe adaptor G1/M8x1e x G1/4i, brass	1 pcs	
Pipe adaptor G1/M10x1e x G1/4i, brass	1 pcs	



SUPERLA® Food Grade

White Oils SUPERLA® 40 70 90 190 240 350	46
Petroleum Jelly SUPERLA® PJ 2000	46
Liquid Polymer SUPERLA® LIQUID POLYMER 1800	47

SUPERLA® Food Grade

WHITE OILS

SUPERLA® FOOD GRADE WHITE OILS

	Colour Saybolt	Viscosity at 40°C [mm²/s]	Density at 15°C [g/cm³]	Specifications
SUPERLA® 40	+30	15	0.849	NSF H1, HX-1, 3H FDA 178.3620 (a) FDA 172.878
SUPERLA® 70	+30	23	0.853	NSF H1, HX-1, 3H FDA 178.3620 (a) FDA 172.878
SUPERLA® 90	+30	36	0.861	NSF H1, HX-1, 3H FDA 178.3620 (a) FDA 172.878
SUPERLA® 190	+30	46	0.863	NSF H1, HX-1, 3H FDA 178.3620 (a) FDA 172.878
SUPERLA® 240	+30	69	0.868	NSF H1, HX-1, 3H FDA 178.3620 (a), FDA 172.878 EU-Plastics directive 10/2011
SUPERLA® 350	+30	101	0.872	NSF H1, HX-1, 3H FDA 178.3620 (a), FDA 172.878 EU-Plastics directive 10/2011

SUPERLA® food grade white oils are colourless, odourless and tasteless oils. The mixtures of saturated paraffinic and naphthenic hydrocarbons span a wide viscosity range. They are clear, bright and free of solids. These chemically nearly inert oils are virtually free of nitrogen, sulphur, oxygen and aromatic compounds.

Main application: Dust-binders in cereals processing, Defoaming agents, Release agents in bakeries, Coatings for sausage casings, Fruit coatings, Plasticisers in plastic packaging materials. They are also ideally suited as processing aids for: Production of - edible oils, - wine corks, - beverage and animal feed cans, - food trays and meat processing.

PETROLEUM JELLY

SUPERLA® FOOD GRADE PETROLEUM JELLY

	Colour Lovibond	Viscosity at 100°C [mm²/s]	Cone penetration 1/10mm at 25°C	Specifications
SUPERLA® PJ 2000	0.5	13	170	NSF H1, HX-1, 3H, Regulation No. (EU) 10/2011, FDA 172.880 (Petrolatum for direct addition to food for human consumption)
SUPERLA® PJ 2000 is a petroleum jelly of unique composition. With highest quality white mineral oils and microcrystalline waxes being chosen as raw materials for this grade, it not only meets the requirements of Regulation (EU) 10/2011, but also complies to various recommendations from the German Federal Institute for Risk Assessment (BfR).			e agent, metal can fo otection, assembly aid	rming, aluminum coating, food tray

LIQUID POLYMER

SUPERLA® FOOD GRADE SYNTHETIC OIL

	Colour Saybolt	Viscosity at 40°C [mm²/s]	Density at 15°C [g/cm³]	Specifications
SUPERLA® Liquid Polymer 1800	+30	31	0.825	(EC) No. 1333 / 2008, hydrogenated poly-1-decene (E907)

SUPERLA® Liquid Polymer 1800 is a mixture of synthetically produced iso-paraffins. This product is pure, inert, colourless and odourless. It is permitted under the denomination »hydrogenated poly-1-decene« as a food additive (E907) according to Commission Regulation (EC) No. 1333 / 2008. Due to its properties it is a superior alternative to mineral and vegetable oils used in the food producing industry. SUPERLA® Liquid Polymer 1800 is thermally and UV stable.

Main application: Defoaming agent, release agent in bakeries, coating for sausage casings, production of edible oils (hexane recovery), wine corks, beverage and animal feed cans, food trays and meat processing



Rivolta Cleaners

Solvent-based Cleaners	
Rivolta N.I.T.	50
Rivolta S.B.C. Spray	50
Rivolta S.L.X. Rapid Spray	50
Water-based Cleaners	
Rivolta B.F.C. Spray	51
Rivolta B.W.K	51
Rivolta B.W.R. 180	51

52 Rivolta Cleaners

SOLVENT-BASED CLEANERS

Rivolta N.I.T.

NSF	Density at 15°C [g/cm³]	Flash Point	Specifications
Rivolta N.I.T.	0.84	> +60°C	NSF A1
Rivolta N.I.T. is a user-friendly cleaner for the removal of stubborn impurities, which are difficult to remove like residues of dispersion adhesives and hotmelts. Due to its innovative chemical composition, N.I.T. is NSF-A1 listed and therefore suitable for cleaning tasks in particularly sensitive areas, e.g. in the food and pharmaceutical industries	Available in: 500	ml spray bottle (PU 6	pcs.), 10l can

Rivolta S.B.C. Spray

NSF	Density at 15°C [g/cm³]	Evaporation Rate	Specifications
Rivolta S.B.C. Spray	0.82	15	NSF A1
Rivolta S.B.C. Spray is a cleaning agent that evaporates quickly and without leaving residues. S.B.C. Spray is based on a combination of highly effective substances, each of which can remove various types of soiling, e.g. grease, oil, adhesive, paint and sealant residues. The evaporation rate and the spray rate of S.B.C. Spray are precisely matched to the required exposure time or product quantity. This means that with S.B.C. Spray an exact dosage and thus an economical mode of operation is possible. S.B.C. Spray is NSF-A1 registered and suitable for cleaning applications in the food, beverage and pharmaceutical industries.	Available in: 500	ml spray can (PU 12 բ	pcs.)

Rivolta S.L.X. Rapid Spray

NSF	Density at 15°C [g/cm³]	Evaporation Rate	Specifications
Rivolta S.L.X. Rapid Spray	0.77	7	NSF K1 / K2
Rivolta S.L.X. Rapid Spray is especially designed for the rapid and effective cleaning of machine parts in the food, pharmaceutical and feed industry. It excels in its rapid complete evaporation without any residues and by its excellent material compatibility. The product can be used on solvent-resistant paints, plastics, elastomers and metals of all kinds. In addition to this S.L.X. Rapid Spray is suitable for the rapid cleaning of electric and electronic components in all industrial fields.	Available in: 400r	nl spray can (PU 12	pcs.)

WATER-BASED CLEANERS

Rivolta B.F.C. Spray

NSF	Density at 15°C [g/cm³]	pH-Value at 15°C	Specifications
Rivolta B.F.C. Spray	0.98	8.5	NSF A1
Rivolta B.F.C. Spray is a universal active foam for cleaning and degreasing of water-resistant surfaces from slightly oily and greasy contaminations, soot and dust, nicotine, fingerprints and many more. The active foam is odourless and perfectly adhesive. It does not drip or run off and therefore is especially suitable for the use at vertical surfaces that with S.B.C. Spray an exact dosage and thus an economical mode of operation is possible. S.B.C. Spray is NSF-A1 registered and suitable for cleaning applications in the food, beverage and pharmaceutical industries.	Available in: 400	ml spray can (PU 12	pcs.)

FUCHS Food Grade Products

Product Range

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Rivolta B.W.K.

NSF	Density at 15°C [g/cm³]	pH-Value at 15°C	Specifications
Rivolta B.W.K.	1.02	10.6	NSF A1
Rivolta B.W.K. is a ready-to-use cleaning agent to remove persistent dirt from water resistant surfaces. Our product is solvent-free and based on a combination of highly effective and modern substances. B.W.K. distinguishes itself by its good solvent characteristics for lubricants and pastes, oils, wax and bitumen residues and processing fluids that are difficult to remove.	Available in: 750	ml spray bottle (PU 1	10 pcs.), 10 l can, 200 kg drum

Rivolta B.W.R. 180

NSE	Density at 15°C [g/cm³]	pH-Value at 15°C	Specifications
Rivolta B.W.R. 180	1.1	10.6	NSF A1

developed for the universal use in those industrial areas where particularly high requirements are placed on the user friendliness as well as on the technical performance of the cleaning medium. B.W.R. 180 is characterized by an excellent net effect. By the surface activity resulting from this an extensive wetting of contaminations is achieved and thus their removal also at inaccessible places and out of hollows. Its active substances dissolve oily, fatty and dusty contaminations from plastics, metals, glass, lacquered surfaces etc. B.W.R. 180 can be processed in plunging, spraying and rinsing procedures and is very well suitable for steam jet cleaners, ultrasonic cleaning systems and hot-water high pressure devices. B.W.R. 180 is exclusively available as concentrate. The application concentration depends on the cleaning procedure, the temperature and the degree of contamination of the parts that are to be cleaned.

Rivolta B.W.R. 180 is a cleaning agent. It was especially **Available in:** cans (11 kg and 20 kg), 220 kg drum



At FUCHS, **MOVING YOUR WORLD** means to constantly push forward. To strive for novel solutions that not only keep your machines running today, but unfold the potentials of tomorrow. A goal we achieve with tailored approaches and individually designed concepts that utilise the full range of our extensive FUCHS Smart Services portfolio. Whether it's digital technologies that monitor the condition of machines or on-site teams that lighten your workload – together, we never stop pushing forward together.





Develop Plan and Set-Up Manage Implement and Operate



Our goal: Perfect, sustainable lubrication at all times. Everything starts with the selection of the right lubricant for the specific application and continues with keeping it and the production equipment in perfect condition. Both aspects lead to a significant reduction of your total cost of ownership.

LCCP Survey

Lubrication Critical Control Point (LCCP) is a tool for the evaluation of lubrication hazards and improvements that can have an impact on safety processes, machine/process performance and savings in maintenance and energy costs. This approach is based on the Hazard Analysis and Critical Control Points (HACCP), a systematic preventive process to ensure food safety in a logical and objective way, in this case with a focus on lubrication points and their respective cleaning/degreasing.

Costly product recalls, brand damage for the product manufacturer and even legal action by the end user can result from using the wrong lubricants. It can also be the cause of maintenance and energy overruns.

FUCHS, as your lubrication supplier, will send experts to your site to conduct an LCCP survey and help you prepare your lubrication program to develop and meet the lubrication portion of a safety plan.

Solicita aquí





Right & Safe products

Proper use of lubricants, degreasers, and cleaners, e.g. NSF listed, ISO 21469 certified manufacturing plants, etc.



Savings

Reduce references and consumption by switching to less expensive products. Assistance with lubricant optimisation and/or consolidation. Improvement of the energy savings.



Longer lifetime

Protect and extend the life of the machinery and equipment in which they are used by updating and selecting products with superior mechanical performance.



Optimized methods

Review current lubrication methods/ practices and suggest ways to improve, e.g., automatic lubrication, colour codes, QRcodes, etc.



Handling quidance

Guidance on storage, use and disposal of lubricants.



Customized training

Tailor-made courses for maintenance personnel to establish criteria for the correct selection of lubricants, food safety and reducing the cost of lubrication.

FUCHS Group

Developing customised lubrication solutions for the most demanding challenges

Our international team of experts from all industries and disciplines is fully dedicated to creating lubrication solutions that allow our customers to focus on their business.

Our mission is to ensure that we provide technology that delivers value and improves the sustainability of their processes.

Our engineering team is at your service!



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