



FUCHS Special Applications

Product Range

Food Grade Products

MOVING YOUR WORLD

LUBRICANTS.
TECHNOLOGY.
PEOPLE.



MOVING YOUR WORLD

We want to keep the world moving, with innovative and technological lubrication solutions that will have a lasting impact on the future.

To do this, we have combined our knowledge and experience across many applications.

Our goal: to keep our customers' world moving in an efficient, sustainable and reliable way.

Today and tomorrow...

What can we move for you?

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.



MOVING YOUR WORLD
 by setting new
 standards in safe food
 lubrication solutions

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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:

- 1 } Supreme safety standards
- 2 } Outstanding technical expertise
- 3 } Unconditional reliability
- 4 } Your direct way to the solution

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
ISO certified



Kosher certified



Halal certified



Company 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 single-minded goal: to always provide our customers with the perfect solution that improves their business.

Industries served by FUCHS Food Grade Products



Beverage and Brewing



Meat and Poultry



Food Packaging



Dairy



Bakery and Confectionery



Food Logistics



Animal feed



Edible oil processing



Pharma & Cosmetics

... and many more

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

| | | | | |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |
| Roller bearings | Plain bearings | Flushing | High temperature | Low temperature |
|  |  |  |  |  |
| Can seamers and sterilisers | Chains | Conveyors | Gears – open | Gears – enclosed |
|  |  |  |  |  |
| Extreme pressure | Industrial coolants | Heat transfer | Hydraulics | Valves, taps and fittings |
|  |  |  |  |  |
| Compressors | Direct food contact | Sugar dissolving | Vacuum pumps | Maintenance spray |
|  |  |  |  |  |
| Slideways | Mounting/assembling/disassembling aid | Maintenance aid | Worm gears | Linkages, pins |
|  |  |  |  |  |
| Anti-corrosive | NSF registered | Food safety products | Packaging | Direct food contact |
|  |  |  | | |
| Coating applications | Guides, rails, and sliders | Forming and necking applications | | |

CASSIDA FLUIDS

CASSIDA lubricating fluids based on fully synthetic base oils are developed to meet related industry specifications and to fulfil the stringent guidelines governing food-compatible lubricants. The high-performance lubricating fluids of the CASSIDA range enable the efficient operation of demanding manufacturing processes, a higher degree of utilisation of machines and a reduction in maintenance costs. They are used in various branches of the food and beverage industry.

FUCHS's extensive range of food grade lubricating fluids offers the user a wide choice of CASSIDA-branded products for lifetime and total loss lubrication. In addition to mineral-oil-based fluids, a very diverse selection of synthetic lubricating fluids are available for a wide range of applications in the food and beverage industry.

These high-performance lubricating fluids enable the efficient operation of demanding production and manufacturing processes, a higher degree of utilisation of machines and a reduction in maintenance.


FUCHS researches constantly to increase performance and offer optimum lubricating fluids for maximum safety in Food Grade applications.

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.

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

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) |
| CASSIDA CHAIN OIL 150 | 150 | 19 | -30 to +140 (upper peak: +150) |

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 slideways and chains. Plain and anti-friction bearings.

*after evaporation of solvent

CASSIDA CHAIN OIL SP

|  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

|  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

|  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


|  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.

COMPRESSOR FLUIDS


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

|  NSF | Viscosity at 40°C [mm ² /s] | Viscosity at 100°C [mm ² /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: Oil-flooded rotary vane and screw air compressors in food processing plants.


CASSIDA FLUID CRE 46

|  NSF | Viscosity at 40°C [mm ² /s] | Viscosity at 100°C [mm ² /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.

Main application: Screw and vane compressors, plain and anti-friction bearings and general purpose lubrication including light duty gearboxes.


CASSIDA FLUID CRF

|  NSF | Viscosity at 40°C [mm ² /s] | Viscosity at 100°C [mm ² /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: Rotary screw compressors, rotary vane compressors and centrifugal compressors.

CASSIDA FLUID RF 46 | 68


|  NSF | Viscosity at 40°C [mm ² /s] | Viscosity at 100°C [mm ² /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 [mm ² /s] | Viscosity at 100°C [mm ² /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

|  NSF | Viscosity at 20°C [mm ² /s] | Viscosity at 40°C [mm ² /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 fibers 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 [mm ² /s] | Viscosity at 40°C [mm ² /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

GEAR FLUIDS


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

|  | 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-performance, 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

|  | 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 |

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


|  | 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 51517 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


|  | 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

|  | 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


|  | 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.

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

|  | 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

|  | 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

|  | 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

|  | 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-metal contact. **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


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, chains, cables, conveyors, sliding tracks, joints, pivots, lifts, pulleys, threaded parts, bolts, rollers, taps, valves and many other moving parts. For lubrication and protection of seals and guides, operating in food, pharmaceutical and other clean environments where incidental food contact is possible.

*including solvent


CASSIDA FLUID CP | CASSIDA FLUID CP Spray

|  | 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 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

|  | 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

CASSIDA greases are fully based on synthetics and fulfil the same technical requirements as non-food grade lubricants – i.e. to reduce friction and wear or to protect against corrosion. For the food and beverage industry they support maximum food safety. With our range of CASSIDA greases, we cover all of the applications where there is potential for incidental food contact – as found in various branches of the food and beverage industry.

Included in the CASSIDA range of greases are direct contact lubricants which are both NSF H1 and also 3H registered for safety. This means the lubricants are acceptable for incidental contact with food as well as for use as release agents on hard surfaces which are in direct contact with meat and poultry.

Our CASSIDA GREASE EPS range of lubricants has been developed to provide high-performance and wear protection for machinery operating at high pressures and loads. At slower speeds, high pressures and high loads, a heavy-duty grease is required which helps protect machinery. We provide CASSIDA greases that are specifically designed for heavy-loaded and shock-loaded applications.

Other product series include highly water-resistant greases, assembly pastes and low-temperature greases.

CASSIDA Greases

Regular Load

CASSIDA GREASE RLS 000 | 00 | 0 | 1 | 2 26

Extreme Pressure

CASSIDA GREASE EPS 00 | 1 | 2 26

Heavy Duty

CASSIDA GREASE HDS 00 | 2 26

Specialties

CASSIDA GREASE GTS 2 | GTS SPRAY 27

CASSIDA GREASE GTM 2 27

CASSIDA GREASE GTX 0 | 2 27

CASSIDA GREASE HTS 2 27

CASSIDA GREASE LTS 1 28

CASSIDA GREASE P 1 28

CASSIDA GREASE CLEAR 2 28

CASSIDA GREASE MD 2 28

CASSIDA GREASE DCE 2 28

CASSIDA GREASE FC 1 | 2 29





CASSIDA PASTE AP 29

HD GREASE GUN CASSIDA 29



REGULAR LOAD




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

|  | Thickener | Viscosity at 40°C [mm²/s] | Viscosity at 100°C [mm²/s] | Temperature range [°C] | NLGI-Grade | Color Code* |
|-----------------------------------------------------------------------------------|-----------|---------------------------|----------------------------|--------------------------------|------------|-------------------------------------------------------------------------------------|
| CASSIDA GREASE RLS 000 | AICx | 100 | 13 | -50 to +100 (upper peak: +120) | <000 |  |
| CASSIDA GREASE RLS 00 | AICx | 100 | 13 | -45 to +100 (upper peak: +120) | 00 | |
| CASSIDA GREASE RLS 0 | AICx | 150 | 18 | -40 to +100 (upper peak: +120) | 0 | |
| CASSIDA GREASE RLS 1 | AICx | 150 | 18 | -40 to +120 (upper peak: +140) | 1 |  |
| CASSIDA GREASE RLS 2 | AICx | 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 particularly recommended for centralised lube systems or other similar systems where an NLGI 2 grease may be difficult to dispense.

EXTREME PRESSURE



CASSIDA GREASE EPS 00 | 1 | 2

|  | Thickener | Viscosity at 40°C [mm²/s] | Viscosity at 100°C [mm²/s] | Temperature range [°C] | NLGI-Grade | Color Code* |
|-------------------------------------------------------------------------------------|-----------|---------------------------|----------------------------|--------------------------------|------------|---------------------------------------------------------------------------------------|
| CASSIDA GREASE EPS 00 | AICx | 220 | 25 | -45 to +100 (upper peak: +120) | 00 | |
| CASSIDA GREASE EPS 1 | AICx | 220 | 25 | -40 to +120 (upper peak: +140) | 1 |  |
| CASSIDA GREASE EPS 2 | AICx | 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, 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.

HEAVY DUTY

CASSIDA GREASE HDS 00 | 2




|  | 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, 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.

* Color Coding: For cartridges only

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.

* Color Coding: For cartridges only

SPECIALTIES


CASSIDA GREASE LTS 1

| | Thickener | Viscosity at 40°C [mm²/s] | Viscosity at 100°C [mm²/s] | Temperature range [°C] | NLGI-Grade | Color Code* |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|---------------------------|----------------------------|-----------------------------------|------------|-------------------------------------------------------------------------------------|
| CASSIDA GREASE LTS 1 | AICx | 20 | 4.5 | -50 to +100 (upper peak: +110) | 1 |  |
| <p>High-performance aluminium complex grease with low-viscosity synthetic base fluid.</p> <p>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.</p> | | | | | | |


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 | |
| <p>Specialty high-performance grease. Inorganically thickened with fully synthetic base fluids.</p> <p>Main application: Lubrication of heavily loaded plain or roller bearings, joints, linkages and slides up to 150°C (peak 180°C) and protection of seals and guides.</p> | | | | | | |

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 |  |
| <p>Inorganically thickened clear grease with synthetic base fluid and highly micronised white solid lubricant (PTFE).</p> <p>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.</p> | | | | | | |

CASSIDA GREASE MD 2

| | 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 |  |
| <p>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.</p> <p>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.</p> | | | | | | |



CASSIDA GREASE DCE 2

| | 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 | |
| <p>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.</p> <p>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.</p> | | | | | | |


* Color Coding: For cartridges only

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 |  |
| <p>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.</p> <p>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.</p> | | | | | | |

CASSIDA PASTE AP

| | 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 |  |
| <p>Synthetic assembly/disassembly paste for food and beverage processing equipment.</p> <p>Main application: Assembly and disassembly paste with an extremely large range of applications, for example, 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. Protects from fretting corrosion. Protects from seizing – easy disassembling.</p> | | | | | | |

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



* Color Coding: For cartridges only

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

Hydraulic Oils

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

Gear Oils

CASSIDA FM GEAR OIL TLS 150 32

CASSIDA FM GEAR OIL 220 | 460 32

Specialties

CASSIDA FM FLUID DC 20 | 68 33

CASSIDA FM FLUID RC 150 | 220 33

CASSIDA FM FLUID PF 16 33

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

The FM Series of the CASSIDA product portfolio are white-oil-based or semi-synthetic-based food grade lubricating fluids and greases. They are used in similar applications as the CASSIDA series. Especially in cases of total loss lubrication FM lubricants are preferred – as found for example in the animal feed and beverage industry.


HYDRAULIC OILS

CASSIDA FM HYDRAULIC OIL 32 | 46 | 68 | 100


|  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


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

CASSIDA FM GEAR OIL 220 | 460


|  NSF | 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

|  NSF | 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

|  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. | | Main application: For use in the centralised systems of rotary cookers and sterilisers which lubricate the can exchange valves and other moving components. | | |

CASSIDA FM FLUID PF 16


|  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




|  | Viscosity at 40°C [mm ² /s] | Viscosity at 100°C [mm ² /s] | Temperature range [°C] | Specifications |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------|---------------------------------|----------------|
| CASSIDA FM HEAT TRANSFER FLUID 32 | 35 | 6 | 0 to +325 (upper peak: +340) | DIN 51522 Q |
| <p>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.</p> <p>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.</p> | | | | |

CASSIDA FM SUGAR DISSOLVING FLUID

|  | Viscosity at 40°C [mm ² /s] | Viscosity at 100°C [mm ² /s] | Temperature range [°C] | Specifications |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------|------------------------|----------------|
| CASSIDA FM SUGAR DISSOLVING FLUID | 36 | 5.7 | n.a. | |
| <p>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.</p> <p>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.</p> | | | | |



GREASES

CASSIDA FM GREASE DC 2 | CASSIDA FM GREASE DC SPRAY

|  | Thickener | Viscosity at 40°C [mm ² /s] | Viscosity at 100°C [mm ² /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* |  |
| <p>White mineral oil grease, multipurpose, suitable for both direct and incidental food contact applications. Can handle a wide range of applications.</p> <p>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.</p> | | | | | | |

*without propellant




CASSIDA FM GREASE EP 1.5

|  | Thickener | Viscosity at 40°C [mm ² /s] | Viscosity at 100°C [mm ² /s] | Temperature range [°C] | NLGI-Grade | Color Code* |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------|-----------------------------------------|-----------------------------------|------------|---------------------------------------------------------------------------------------|
| CASSIDA FM GREASE EP 1.5 | AlC _x mod. | 200 | 22 | -20 to +130 (upper peak: +140) | 1.5 |  |
| <p>Modified aluminium complex multipurpose, extreme pressure grease.</p> <p>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.</p> | | | | | | |

* Color Coding: For cartridges only

GREASES

CASSIDA FM GREASE HD 1.5 | 2

|  | Thickener | Viscosity at 40°C [mm ² /s] | Viscosity at 100°C [mm ² /s] | Temperature range [°C] | NLGI-Grade | Color Code* |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------------------------|-----------------------------------------|-----------------------------------|------------|-------------------------------------------------------------------------------------|
| CASSIDA FM GREASE HD 1.5 | AlC _x mod. | 550 | 38 | -10 to +140 (upper peak: +150) | 1.5 |  |
| CASSIDA FM GREASE HD 2 | AlC _x mod. | 550 | 38 | -10 to +140 (upper peak: +150) | 2 |  |
| <p>Modified aluminium complex heavy-duty, extreme-pressure greases.</p> <p>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.</p> | | | | | | |

* Color Coding: For cartridges only

CASSIDA Automatic Lubricators

| | |
|-----------------------------------------|----|
| CASSIDA STAR VARIO BLUETOOTH | 39 |
| CASSIDA STAR CONTROL | 39 |
| CASSIDA FLEX | 42 |
| REMOTE INSTALLATION ACCESSORY KIT | 44 |

CASSIDA Automatic Lubricators

Consider automatic lubrication and single point lubricators as an easy place to start when trying to improve your plant's reliability programme. A single point automatic lubricator filled with the correct lubricants will help to avoid costly manual lubrication. They literally pay for themselves through a reduction in maintenance and labour costs, while at the same time increasing the safety of your operation. Benefits include reduced workplace hazards, precise lubricant delivery, improved machine reliability/availability, increased man-hour availability, increased safety with installation in hard-to-reach areas, prevention of lubricant mixing, contamination, dust and moisture ingress with hermetically sealed lubrication points.

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 manually
- Improved hygienic design and food safety by minimising residue

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.



STAR VARIO BLUETOOTH



STAR CONTROL



FLEX

CASSIDA STAR VARIO BLUETOOTH

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.



CASSIDA STAR CONTROL

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.



Technical information

Reusable electromechanical drive
CASSIDA STAR VARIO BLUETOOTH with batteries
CASSIDA STAR CONTROL with external power: 9 - 30 V DC, I_{max} 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

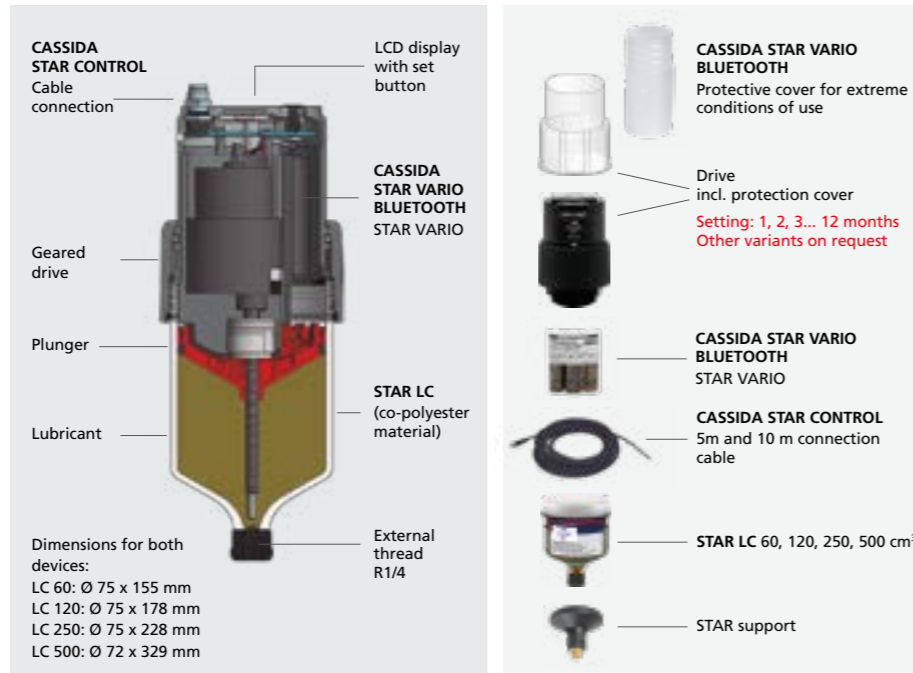
Application temperature
CASSIDA STAR VARIO BLUETOOTH:
 -20 °C to +60 °C

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



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 mobile device
- **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.



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.



CABLE FOR STAR CONTROL

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

Retail packaging: 1 pc.

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.



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

Technical information

Operation

Electrochemical reaction.
Gas generation.

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

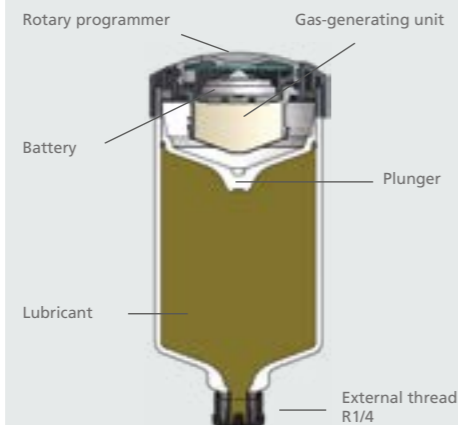
Lubricant volume
60 cm³ or 125 cm³

Application temperature
-20 °C to +60 °C

Operating pressure
Max. 5 bar

Protection class
IP 68

Special and standard lubricants
Greases up to NLGI 2 / oils



Dimensions:
FLEX 60: Ø 58 x 86.5 mm
FLEX 125: Ø 58 x 117 mm

Setting the discharge interval in months:

Guideline values for back-pressure free discharge with NLGI 2 lubricant.

At temperatures from > -60 °C and with discharge intervals of > 6 months, lubricant may remain undelivered.



| | 1 | 2 | 6 | 9 | 12 |
|-----------|-----|-----|-----|-----|----|
| at -20 °C | 2 | 5 | 10 | 13 | 15 |
| at 0 °C | 1.3 | 3.8 | 7.2 | 11 | 13 |
| at +20 °C | 1 | 3 | 6 | 9 | 12 |
| at +40 °C | 0.8 | 2.5 | 5.2 | 7.5 | 10 |
| at +60 °C | 0.6 | 2 | 4 | - | - |

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

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 oil (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 |  |
| Straight G1/4" nickel-plated brass connector for e8mm / i6mm hose. | 2 pcs |  |
| 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 |  |
| Straight G1/4" connector for e8mm / i6mm hose, nickel-plated brass | 2 pcs |  |
| 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

Valuable processing aids for the food industry

Our customers in the food industry have high expectations and they can count on us to deliver:

- Consistently high-grade products of the very purest quality
- Reliable fulfilment of regulatory requirements
- A variety of different packaging sizes
- A fast completely smooth supply chain

And that is exactly what we do! We ensure consistent product quality: The purity of the SUPERLA® products is why they are already widely used by many customers in the food industry. Our goods fulfil and even partially surpass the requirements set out in strict directives. We offer a unique combination of unbeatable service and the best processing aids for the production of food and its packaging, including white oils, petroleum jellies and oils that are approved as food additives.

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

WHITE OILS

SUPERLA® FOOD GRADE WHITE OILS



|   | Colour Saybolt | Viscosity at 40°C [mm ² /s] | Density at 15°C [g/cm ³] | 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 [mm ² /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).

Main application: Release agent, metal can forming, aluminum coating, food tray manufacturing, surface protection, assembly aid

LIQUID POLYMER

SUPERLA® FOOD GRADE SYNTHETIC OIL

|   | Colour Saybolt | Viscosity at 40°C [mm ² /s] | Density at 15°C [g/cm ³] | 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

Soiled machine parts, systems and surfaces are not only visually annoying, they can also bring the entire work process to a halt. Within the food, beverage and pharmaceutical industry special certified cleaners are required to properly clean various materials in a wide variety of circumstances. For these jobs Rivolta provides solvent-based or water-based cleaning agents with NSF registration.

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 |

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 |
| <p>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</p> | | | |

Available in: 500ml 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: 500ml spray can (PU 12 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: 400ml 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.)

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 10 pcs.), 10 l can, 200 kg drum

Rivolta B.W.R. 180

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

Rivolta B.W.R. 180 is a cleaning agent. It was especially 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.

Available in: cans (11 kg and 20 kg), 220 kg drum



FUCHS Smart Services

MOVING YOUR WORLD

by pushing forward together

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.



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 tu LCCP



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 guidance

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.

Developing customised lubrication solutions for the most demanding challenges

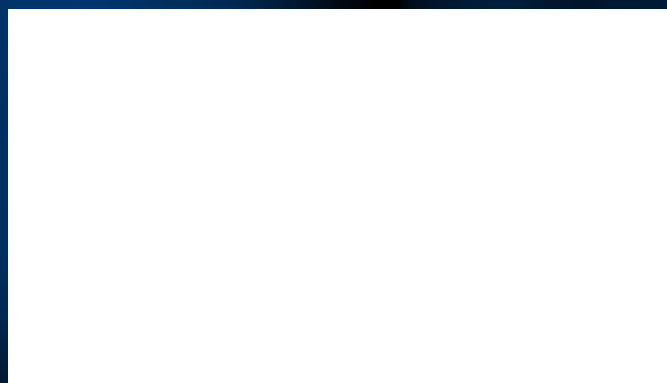
Our international team of experts from all industries and disciplines is fully dedicated to creating lubrication solutions that allow our customers to focus on their business.

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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