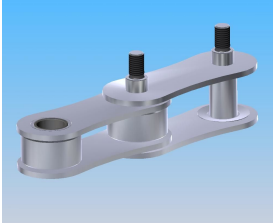

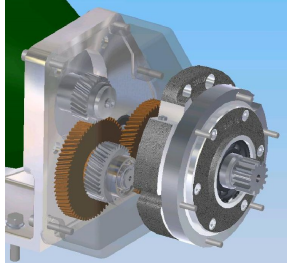


Lubricants for food & pharmaceutical industry



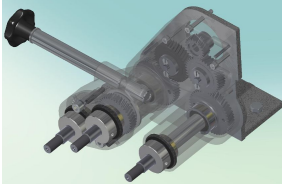
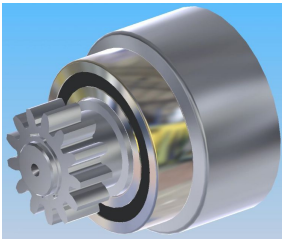
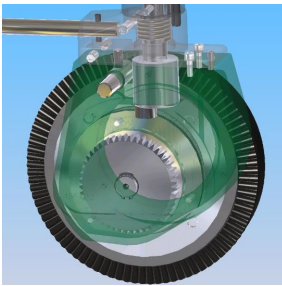
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No.	Lubrication point (Machine-Component/-Part)	Name of lubricant	Characteristics	Advantages in application
1	<p>Chains</p>  	<p>PREMIUM HT OIL 220 FD</p> <p>PREMIUM KL 100 FLUID</p>	<p>Fully synthetic high temperature chain oil. Chain lubrication of transport-, drive- and cam shaft chains up to +260°C in the food and pharmaceutical industry. Colour: yellow, Base: synthetic oil Viscosity at 40°C: 220 mm²/s, Temperature range: - 20°C - + 260°C</p> <p>Fully synthetic high-temperature chain oil. Chain lubrication up to + 250°C for drying and shrinking ovens, painting and coating lines and conveyors. Colour: yellow, Base: synthetic oil, Viscosity at 40°C: 100 mm²/s, Temperature range: - 40°C - + 250°C</p>	<ul style="list-style-type: none"> ○ Extremely low evaporation loss ○ Excellent wear protection ○ Outstanding creeping and penetrating properties ○ Extremely low coefficient of friction ○ Very good anti-corrosion properties ○ High hydrolytic stability <ul style="list-style-type: none"> ○ NSF H2 conform ○ Excellent wear properties ○ Excellent corrosion protection ○ Outstanding creeping and penetrating properties ○ Adhesive additives prevent dripping and spinning-off
2	<p>Gears</p> 	<p>SYNTEC 220 FD SYNTEC 320 FD SYNTEC 460 FD</p>	<p>Fully synthetic high-performance gear oils for a wide temperature range: - 30°C - + 130°C, Colour: transparent, Base: synthetic oil, Viscosities at + 40°C: 220, 320, 460 mm²/s (other viscosity grades available on request) Especially designed for the use in bevel, spur and worm gears in the food and pharmaceutical industry.</p>	<ul style="list-style-type: none"> ○ NSF H1 conform ○ Thermally stable up to + 130°C ○ Outstanding wear protection ○ Neutral to sealings and paints ○ Re-smoothens damaged surfaces ○ Lowers the coefficient of friction and power losses and reduces the oil sump temperature ○ Meets the requirements of the specifications DIN 51517-3 and ISO 12925-1 FZG-test > 12

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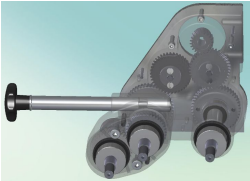
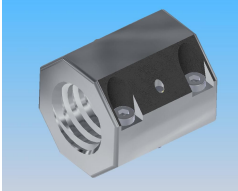

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<p>2</p>	<p>Gears</p>		<p>PREMIUM GEAR 220 FD</p>	<p>Semi-synthetic gear oil for use in common temperatures: - 10°C - + 90°C. NSF Registration-No.: H1 applied, Colour: transparent, Base: med. white oil / SHC Viscosity at + 40°C: 220 mm2/s (other viscosity grades available on request) Especially designed for the use in bevel, spur and worm gears in the food and pharmaceutical industry.</p>	<ul style="list-style-type: none"> ○ Thermally stable up to + 90°C ○ Outstanding wear protection ○ Neutral to sealings and paints ○ Excellent air and water separation behaviour ○ Meets the requirements of the specifications DIN 51517-3 and ISO 12925-1 FZG-test > 12
			<p>DURATA HT 56-00 FD</p>	<p>High-temperature grease for long-term lubrication in food and pharmaceutical industry. For long-term or life-time lubrication of rolling and plain bearings and all sliding pairs susceptible to wear under extreme conditions, especially in food and pharmaceutical industry. Typical applications: baking ovens, baking lines, guide pulleys of conveyor chains, kiln cars, calenders and other applications e.g. in dairies and beverage filling. Colour: white , Base: PFPE oil , NLGI Grade: 00 Temperature range: - 40°C - + 260°C</p>	<ul style="list-style-type: none"> ○ High load carrying ability ○ Excellent corrosion protection ○ Extended relubrication cycles ○ Resistant against chemicals and aggressive media ○ Resistant to oxidation and ageing
			<p>ALUPEX S 00 FD</p>	<p>Fully synthetic aluminium-complex semi-fluid grease. Especially designed for lubrication of machinery and equipment in the food and pharmaceutical industry where incidental contact with food may occur. Typical applications: gears, rolling and plain bearings, joints, levers, bolts, tracks, hoist cylinders and rotary cams, etc. Colour: white, Base: synthetic oil, NLGI Grade: 00, Temperature range: - 30°C - + 150°C</p>	<ul style="list-style-type: none"> ○ Compatible with usual plastic and sealing materials ○ Reduces wear and tear ○ Very good resistance to ageing ○ Stable to cold and hot water ○ Free from mineral oil

Lubricants for food & pharmaceutical industry

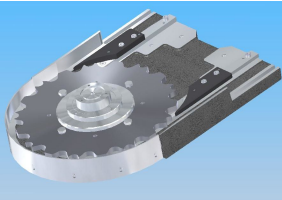

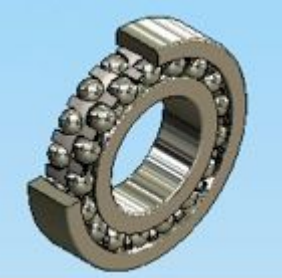
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3	Hydraulics		<p>PREMIUM HLP 68 FD</p>	<p>Hydraulic oil for the food and pharmaceutical industry. Developed for the lubrication of valves, pistons, cylinders in hydraulic systems, as well as guidings, tubes and slide ways in the food and pharmaceutical industry. Also suited for the use in bearings and small gears. Colour: transparent, Base: med. white oil, Viscosity at 40°C: 68 mm²/s (other viscosity grades aviable on request) Temperature range: - 10°C - + 90°C</p>	<ul style="list-style-type: none"> ○ Very good corrosion protection ○ Extends lifetime of machine parts and industrial plants ○ Permits longer oil change intervals by lower strain ○ Free from solids and silicone
4	Screwed connections		<p>PORTUS L 84-201</p>	<p>White high-temperature paste for food and pharmaceutical industry. As assembly and lubricating paste for bolts, nuts, studs, flanges and spindles as well as other sliding surfaces in screw and plug connetions, guidebars, hinges and rollers. Colour: white, Base: semi-synthetic oil, Density at 20°C: approx. 1,55 g/cm³ Temperature range: - 20°C - + 1.200°C, from + 200°C dry lubrication</p>	<ul style="list-style-type: none"> ○ High load carrying ability ○ Efficient lubrication even at high temperatures ○ Avoids groove formation ○ Compatible with elastomeres ○ Very good anti-corrosion properties
5	Roller and sliding bearings, hinges		<p>DURATA HT FLUID 500</p>	<p>Fully synthetic lubricating fluid for high-temperature applications. Rolling and plain bearings, sinter bearings at temperatures up to + 250°C. Wear protection of electric contacts, especially gold and gold alloys. Successfully in use for lubrication of plastic/plastic friction pairings and high-temperature chains in the food industry. Colour: colourless, clear, Base: PFPE oil, Density at 20°C: 1,91 g/cm³ Viscosity at 40°C: 460 mm²/s, Temperature range: - 20°C - + 250°C</p>	<ul style="list-style-type: none"> ○ NSF H1 conform ○ Excellent stability against nearly all chemicals ○ Very good di-electric properties ○ Resistant to radiation and oxygen ○ High oxidation and thermal stability ○ Excellent lubricating properties

Lubricants for food & pharmaceutical industry

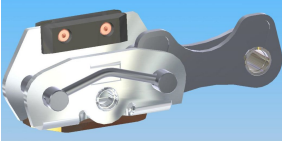
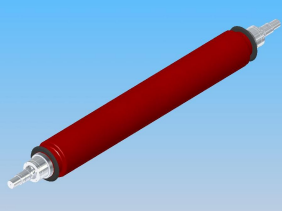

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5	<p>Roller and sliding bearings, hinges</p>	  	<p>DURATA HT 56-00 FD DURATA HT 56-01 FD DURATA HT 56-02 FD</p> <p>STRONGANA MBS 12 FD</p> <p>ALUPEX S 00 FD ALUPEX S 01 FD ALUPEX S 02 FD</p>	<p>High-temperature grease for long-term lubrication in food and pharmaceutical industry. For long-term or life-time lubrication of rolling and plain bearings and all sliding pairs susceptible to wear under extreme conditions, especially in food and pharmaceutical industry. Typical applications: baking ovens, baking lines, guide pulleys of conveyor chains, kiln cars, calendars and other applications e.g. in dairies and beverage filling. Colour: white , Base: PFPE oil , NLGI Grade: 00 / 1 / 2, Temperature range: - 40°C - + 260°C</p> <p>Versatile high-temperature grease without solid lubricants with extremely high wear and corrosion protection. Suitable for rolling and plain bearings, joints and other sliding pairings in machinery and equipment in the food industry working under high temperatures and high loads. Colour: light beige, Base: semi-synthetic oil , NLGI Grade: 2 Temperature range: - 25°C - + 160°C, Short term max. temp.: + 180°C</p> <p>Fully synthetic aluminium-complex grease for food and pharmaceutical industry. Especially designed for lubrication of machinery and equipment in the food and pharmaceutical industry where incidental contact with food may occur. Typical applications: gears, rolling and plain bearings, joints, levers, bolts, tracks, hoist cylinders and rotary cams, etc. Colour: white, Base: synthetic oil, NLGI Grade: 00 / 1 / 2, Temperature range: - 30°C - + 150°C</p>	<ul style="list-style-type: none"> ○ High load carrying ability ○ Excellent corrosion protection ○ Extended relubrication cycles ○ Resistant against chemicals and aggressive media ○ Resistant to oxidation and ageing ○ Very high wear and corrosion protection ○ High load carrying ability ○ Resistant to cold and hot water, alkaline solutions etc. ○ Environmentally friendly; no labelling according to the ordinance on hazardous substances (GefStoffV) ○ Compatible with usual plastic and sealing materials ○ High adherence on metallic surfaces ○ Silicone-free ○ Compatible with usual plastic and sealing materials ○ Reduces wear and tear ○ Very good resistance to ageing ○ Stable to cold and hot water ○ Free from mineral oi
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Lubricants for food & pharmaceutical industry





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5	<p>Roller and sliding bearings, hinges</p>		<p>ALUPEX M 02 FD</p>	<p>Light-coloured, semi-synthetic aluminium-complex grease for food and pharmaceutical industry. Especially designed for lubrication of machinery and equipment in the food and pharmaceutical industry where incidental contact with food may occur. Typical applications: rolling and plain bearings, joints, levers, bolts, tracks, hoist cylinders and rotary cams, etc. Colour: light coloured, almost transparent Base: med. white oil / SHC, NLGI Grade: 2, Temperature range: - 20°C - + 130°C, Short term max. temperature: + 150°C</p>	<ul style="list-style-type: none"> ○ NSF H1 conform ○ Compatible with usual plastic and sealing materials ○ Excellent corrosion protection ○ Reduces wear and tear ○ Very good resistance to ageing
6	<p>Fittings, valves, sealings</p>		<p>SILKOPEX L 50</p>	<p>High temperature silicone grease. For low loaded rolling and plain bearings in a wide temperature range as well as for lubrication of material pairings metal/plastic and as assembly lubricant for material pairings metal/rubber. Colour: white, Base: silicone oil NLGI Grade: 2, Temperature range: - 50°C - + 200°C</p>	<ul style="list-style-type: none"> ○ NSF H1 conform ○ Odourless ○ Stable to cold and hot water ○ Resistant to superheated steam up to approx. + 130°C ○ Outstanding sealing properties ○ Resistant to oxidation ○ Compatible with EPDM, FPM und NBR
			<p>STRONGANA S 03 FD STRONGANA S 0 FD</p>	<p>Adhesive greases for food and pharmaceutical industry. For lubrication of taps, valves, gaskets, glands, tubular tracks, cams, joints, guide ways and machinery parts where the lubricant may have contact with the foodstuff. Colour: light, Base: synthetic oil, NLGI Grade: 3 / 0, Temperature range: - 5°C - + 150°C</p>	<ul style="list-style-type: none"> ○ Universal in use ○ Very good adhesion property ○ Resistant to cold and hot water ○ Free from mineral oil ○ Resistant to oxidation and ageing
			<p>STRONGANA M 0 FD STRONGANA M 02 FD</p>	<p>Light multi-purpose greases for food and pharmaceutical industry. For long-term lubrication of fittings, tap cocks, joints, sliding surfaces, filling stations, packaging and sealing machines. Colour:light, Base:semi-synth.oil NLGI Grade: 0 / 2, Temperature range: - 15°C - + 140°C</p>	<ul style="list-style-type: none"> ○ Excellent corrosion protection ○ Resistant to cold and hot water, alkaline solutions etc. ○ Neutral to beerfoam - if applied properly ○ Compatible with usual plastic and sealing materials

Lubricants for food & pharmaceutical industry




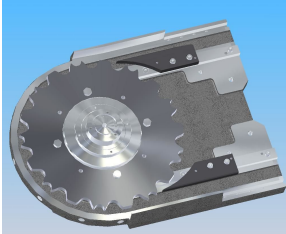
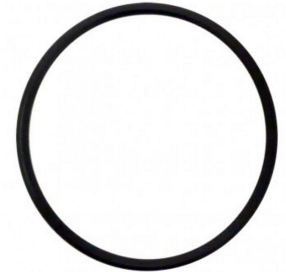
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6	Fittings, valves, sealings		<p>SILKOPEX L 64 - 01 SILKOPEX L 64 - 03</p> <p>SILKOPEX L 92 FD</p> <p>SILKOPEX L 104 FD</p>	<p>Silicone lubricating greases for a wide application range. For lubrication and sealing of connectors, O-rings, control and pressure regulating valves, especially in food and pharmaceutical industry. As assembly lubricant for plastic-sheathed cables to be pulled through cable channels. For waterproof electrical connectors, electrical components and terminals. Colour: light, Base: silicon oil, NLGI Grade: 3 / 1 Temperature range: - 40°C - + 150°C</p> <p>Silicone lubricating grease for fittings. Lubricating grease for valves and fittings (e.g. beer dispensing valves) and EPDM seals in the beverage industry. Assembly luristic for metal/ plastic and metal/rubber pairings. Colour: white, Base: silicon oil, NLGI Grade: 3, Temperature range: - 40°C - + 150°C</p> <p>Adhesive grease on silicone basis. For lubrication and sealing of plug connections, rubber and plastic O-rings. As assembly lubricant for metal/plastic and metal/rubber pairings. Colour: whitish, Base: silicon oil, NLGI Grade: 2-3 Temperature range: - 30°C - + 150°C</p>	<ul style="list-style-type: none"> ○ Resistant to cold and hot water ○ Outstanding sealing properties ○ Excellent oxidation stability ○ Odourless, tasteless ○ Non-volatile and non-conductive ○ Neutral to elastomers, plastics and metals <ul style="list-style-type: none"> ○ Excellent oxidation stability ○ Excellent sealing properties ○ Mineral oil free ○ Neutral to beerfoam - if applied properly ○ Stable to cold and hot water, steam ○ Compatible with EPDM, FPM und NBR <ul style="list-style-type: none"> ○ Excellent oxidation stability ○ Stable to humidity ○ Odourless ○ Non-volatile ○ Non-conductive ○ Economical in consumption
7	Corrosion protection		<p>PREMIUM CP GREASE FD</p>	<p>Grease-like corrosion preventive of the latest generation. Ideal for the protection of tools for production of plastic parts for the food and pharmaceutical industry. bulk NSF conform, but not registered Colour: transparent, light yellow, Base: corrosion preventive in solvents Temperature range: - 20°C - + 70°C</p>	<ul style="list-style-type: none"> ○ Excellent corrosion protection ○ Extremely water repellent ○ Short drying time ○ High affinity to metal surfaces

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8	Cleaning		PREMIUM CLEANER FD	High performance cleaner and degreaser , highly effective and fast evaporating. For residue-free basic cleaning and degreasing of machine components and injection moulds/-tools. Removes quickly and reliable grease, oil, resin, dirt and remains of sealings. Colour: colourless, Base: SHC, Temperature range: - 30°C - + 80°C	<ul style="list-style-type: none"> ○ Odourless ○ Evaporates quickly and without residues ○ Cleans quickly and efficiently ○ Eco- and user friendly ○ Guarantees absolutely clean surfaces
			PREMIUM CLEANER PFPE	Special cleaner/thinner on PFPE basis. For basic cleaning (without residues) prior to new greasing or regreasing with PFPE lubricants. Suitable for use on rolling and plain bearing and other machine elements. Also suitable as thinner for PFPE greases. Colour: colourless, Base: PFPE oil, Temperature range: - 20°C - + 70°C	<ul style="list-style-type: none"> ○ NSF H1 conform ○ Permits improved adhesion and thus an increased performance ○ Removes residues of old PFPE lubricants ○ Cleans quickly and efficiently
9	Maintenance and servicing		PREMIUM GLIDE FD OIL	Fully synthetic lubricating and fine oil for the for food and pharmaceutical industry. For lubrication, loosening, preserving, cleaning and making mechanical elements move smoothly in applications where incidental food contact cannot be avoided. Examples: precision drives, measuring tools, sliders, spindles, joints, fittings, chains and ropes, cylinder locks, screw connections, mechanical seals etc. Also suitable as care spray for stainless steel and as corrosion protection for metallic surfaces. Colour: light yellow, Base: synthetic oil, Temperature range: - 20°C - + 80°C	<ul style="list-style-type: none"> ○ Optimal temporary corrosion protection of metallic surfaces ○ Produces a not developing protective film ○ Neutral to most plastics and elastomers ○ Silicone-free
			PREMIUM P 800 OIL	Synthetic, transparent lubricating and separating agent, based on silicone oil. Ideal for plastic/plastic and plastic/metal friction pairings in different applications. Colour: transparent, Base: silicon oil, Temperature range: - 40°C - + 180°C	<ul style="list-style-type: none"> ○ For all sliding parts metal on rubber ○ Outstanding water displacing properties ○ Lubricates without greasing ○ Avoids electrostatic charging
			PREMIUM WHITE OIL FD	Multi-purpose oil for the food processing industry. Preservation and conservation of sealing, O-rings, hinged slat or roller chains as well as any kind of drives in the whole food, pharmaceutical and cosmetic industry. Colour: colourless, water clear, Base: med. white oil, Temperature range: - 10°C - + 100°C	<ul style="list-style-type: none"> ○ Absorbs water residues ○ Excellent corrosion protection ○ Outstanding sliding surface ○ Economical in consumption