

TUNAP

Solutions for the industry

CLEAN | LUBRICATE | PROTECT



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TUNAP

Company divisions



Industry

TUNAP develops and distributes high-performance and speciality lubricants for a wide range of industrial sectors, from heavy industry to the food sector and the plastics industry. Our portfolio includes a wide range of products and services along the process chain of our customers.



Private Brands

In strategic alliances, TUNAP develops and produces TUNAP products and ranges for the distribution of technical maintenance and care products. Its customers include well-known manufacturers and companies in the wholesale and retail sectors. Our laboratory offers individualised and customer-specific developments on request, thus ensuring sustainable performance.



Sports

TUNAP offers innovative end user concepts for exclusive bicycle technology. TUNAP SPORTS customers enjoy bike quality at the highest level. Cosmetic products for cyclists round off the range. In this area, too, the highest value is placed on health and environmental compatibility.



Automotive

TUNAP is a service partner for vehicle manufacturers, car dealerships and garages. Our range includes chemical-technical products for maintenance, repairs and problem solutions for all vehicle areas: From the engine, brakes and bodywork to the air conditioning system and interior maintenance and care. TUNAP is a co-operation partner of almost all major vehicle manufacturers.



TUNAP national companies



TUNAP distributors



TUNAP – We protect values

Our strengths lie particularly in the area of speciality lubricants and cleaners.

Thanks to our in-house development and production, our customers benefit from our comprehensive product expertise. With products for a wide range of industries and applications, we have set ourselves the goal of improving people's daily lives. That's why we inspire our partners with intelligent product concepts, applications and service of the highest quality.

With customised solutions, we make our contribution to personal well-being, health and resource conservation and show how we can jointly fulfil our responsibility for sustainability. Our aim is to deliver the best quality and at the same time fulfil the highest standards in terms of health and environmental compatibility.

231
Million in Turnover

15
Companies

3
Plants

718
Employees

TUNAP

Production facilities



TUNAP produces and sells a comprehensive portfolio of chemical-technical products at several production sites for a wide range of industrial sectors, for trade and manufacturer brands in the field of technology, as well as products and systems for the maintenance and repair of machines and vehicles.



Wolfratshausen

The company headquarters and one of 3 production sites is located in Wolfratshausen near Munich. The central research and development department is also located here.

At our location in Wolfratshausen, we develop and produce the following:

- ✓ Chemical-technical products and services for the automotive sector: for maintenance, repair and problem solving
- ✓ High-performance and speciality lubricants for various industrial applications from heavy industry to the food sector and the plastics industry
- ✓ Assortments for private label sales in the technology, drugstore and multilevel retail sectors

This production site is certified to ISO 9001 (quality management), ISO 14001 (environment) and ISO 45001 (occupational health and safety) and ISO 21469 (H1 lubricants).

 **MADE IN GERMANY**

Lichtenau

We produce the following in Lichtenau:

- ✓ Aerosol cans up to 300 mm high, in standard and special dimensions
- ✓ Aerosol products on six filling machines
- ✓ Chemical-technical aerosols for own, third-party and private labels

The propellants processed by TUNAP include pro-pan-butane mixtures, dimethyl ether, nitrogen, CO₂ and air.

This production site is certified according to ISO 9001 (quality management), ISO 14001 (environment), ISO 45001 (occupational health and safety) and ISO 21469 (H1 lubricants)



Märstetten

In Märstetten, we produce:

- ✓ Aerosols and liquids
- ✓ For the international market
- ✓ In particular brake cleaner, rust remover and lubricant

The propellants used are propane, butane and CO₂ are processed.

The company is equipped with several bottling lines, which generate an annual output of up to 30 million cans.

These are state of the art in terms of performance and safety.

The systems run in shifts and produce 50 to 60 aerosol cans per minute.

TUNAP

Solutions for more sustainability

We work together. Worldwide.

As a family-run company with a long tradition, protecting our environment has always been close to our hearts. We therefore see it as our duty to make our contribution by developing sustainable solutions in the field of lubricants, greases and aerosols and thus continue to make the world a place worth living in.

It is our aim to fulfil the highest standards in terms of health and environmental compatibility while still developing products of the best possible quality and providing our customers with effective technologies and high-performance lubricants with outstanding performance.

That is why we emphasise the continuous improvement of ingredients and product packaging. In addition, we always think holistically in our product developments and endeavour to develop solutions that can be used for a wide range of applications. With a view to improving overall processes, our high-performance lubricants not only help to reduce environmental pollution, but also minimise operating costs for our customers and users in many areas.

With intelligent and customised solutions that we adapt to our customers' needs and circumstances, we make an important contribution to health, resource conservation and economic efficiency.

In addition to the safety of people and systems, the use of high-performance lubricants from TUNAP has a major influence on the functionality and service life of components and therefore plays a decisive role in achieving sustainability goals.



Our products, Your advantages:

- ✓ Reduction of friction and avoidance of wear on machines and systems
- ✓ Extension of maintenance intervals
- ✓ Surface protection and prevention of failures
- ✓ Increasing energy efficiency

Our products, Your benefits:

- ✓ Conservation of resources
- ✓ CO₂-emissions reduction
- ✓ Extending the service life of components
- ✓ Avoidance of expensive repairs and the replacement of sometimes complex machine components

Our products, Your profits:

- ✓ Lower environmental impact
- ✓ Time saving
- ✓ Lower energy costs
- ✓ Cost savings for machine operators, as fewer breakdowns and faults need to be rectified
- ✓ Higher capacity utilisation and improved efficiency of your machines and systems

**We think along. We think on.
We think ahead. For you and with you.**



TUNAP

Quality with responsibility

Memberships and certifications as a sign of our commitment

In order to continuously expand our knowledge and actively shape the environment, TUNAP is a member of the Industrie-Gemeinschaft Aerosol (IGA), the Verband der Chemischen Industrie (VCI), the Verband der Schmierstoff Industrie (VSI), the European Lubricating Grease Institute (ELGI) and the Deutsches Institut für Normung (DIN), among others.

We also co-operate with Ökoprofit and are a member of the Environmental Pact. As a lubricant manufacturer, TUNAP is aware of its special responsibility. We express our high standards of efficiency, environmental and health compatibility through various registrations and certifications:



Certifications as a quality feature

With our ISO 21469 certification, TUNAP fulfils the most comprehensive hygiene requirements for the production of H1 lubricants. International certification is the most demanding proof of safety, reliability and product responsibility.

The standard requires a holistic view of the life cycle of an NSF H1 product.

Strict regulation of the recipe regarding ingredients, production, handling, packaging, storage and use ensures the highest quality. With two further certifications, TUNAP demonstrates a reliable quality and environmental management system. The commitment to sustainability is an integral part of TUNAP's corporate strategy, as evidenced by the ISO 14001 certificate. ISO 9001 certification attests to TUNAP's reliable quality management and ensures consistently high product and service quality.

TUNAP

Product range overview



Successful out of passion

TUNAP has stood for success and outstanding quality for 50 years.

On the one hand, we are solution specialists for pastes, lubricating greases, lubricating oils, cleaners and maintenance products. On the other hand, we are constantly working on concepts to make the ingredients, packaging and applications of our lubricants more sustainable.

Lubricant solutions for every requirement

Higher, faster, further: the demands on technical constructions are constantly increasing. This also presents lubrication technology and tribology with the challenge of developing ever more efficient and comprehensive lubricant solutions.

We are the right partner at your side.

Our engineers and scientists from the areas of development, research and application technology work out solutions tailored to your requirements and specifically to your wishes.

TUNAP works.



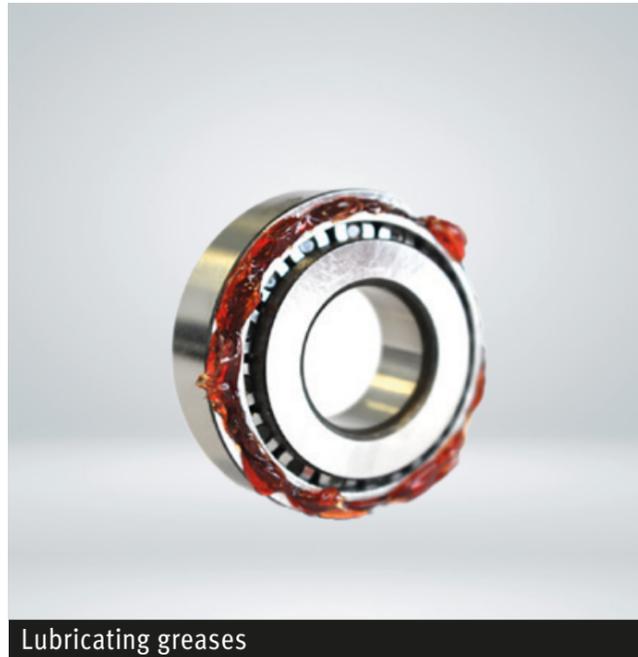
Pastes

Pastes for the smooth operation of your machines

Whether for high-temperature applications, protection against fretting corrosion, support during assembly and disassembly or to prevent stick-slip: Our pastes provide support even under difficult production conditions and when high demands are placed on constructions that require high load-carrying capacity, special emergency running behaviour or permanent media resistance. Innovation and quality are at the heart of our pastes, which not only enable cost savings through reduced wear and longer maintenance intervals, but also maximise the reliability of systems and machines.

Our portfolio includes:

- ✓ Lubricating pastes
- ✓ Assembly and release pastes
- ✓ Metal-containing release pastes
- ✓ Metal-free pastes



Lubricating greases



Lubricating oils



Cleaners



Maintenance products

Lubricating greases for many industrial and mechanical application

With our wide range of high-performance lubricating greases, we offer solutions for the requirements of many industrial sectors. Our product portfolio includes solutions for various operating conditions, application areas and industries.

Our high-quality lubricating greases open up new potential, particularly in demanding environments where extreme temperatures and high loads occur, as well as for increasing energy efficiency and extending relubrication intervals and component service lives.

Our portfolio includes:

- ✓ Calcium sulphonate complex greases
- ✓ Aluminium complex greases
- ✓ Lithium greases
- ✓ PTFE greases
- ✓ Bentonite greases
- ✓ Inorganically thickened greases

Optimal solutions for special requirements

Our portfolio of high-performance lubricating oils ranges from multifunctional oils and gear oils to speciality oils for medical technology.

Our products therefore not only contribute to the reliability and process safety of our customers' production processes, but also offer considerable cost savings thanks to longer oil change intervals and an improved service life of machines and systems. Our lubricating oils offer the optimum tribological solution for lubricating systems and elements, as the formulations are tailored to the specific requirements of each component.

Our portfolio includes:

- ✓ Multi-purpose oils
- ✓ Chain oils
- ✓ Gear oils
- ✓ Compressor oils
- ✓ Glass machine oils
- ✓ Cutting oils
- ✓ Hydraulic oils
- ✓ Inert and silicone oils
- ✓ Speciality oils
- ✓ Heat transfer oils

For removing stubborn residues

Our cleaners reliably remove stubborn dirt and residues. The focus is on maximising performance while minimising the health impact on your employees and users.

Reliable cleaning often determines the success of subsequent processes, such as surface coating, and therefore has a direct influence on the added value of manufacturing companies.

Our portfolio includes:

- ✓ Solvent cleaners
- ✓ Safety cleaners
- ✓ Aqueous cleaners

For a high degree of purity and lubricification

Our portfolio of high-performance maintenance products supports maintenance when cleaning, lubricating and protecting components and surfaces. Easy handling and targeted application of the maintenance products is possible with advanced aerosol packagings.

They therefore make a significant contribution to increasing efficiency in maintenance and to cost savings in production. At the same time, the service life of machines and systems can be extended, costs for repairs and spare parts can be saved and resources can be conserved.

Our portfolio includes:

- ✓ Multifunctional oils
- ✓ Grease sprays
- ✓ Rust removers
- ✓ Dry lubricants and bonded coatings
- ✓ Wax sprays
- ✓ Release agents and lubricants
- ✓ Silicone sprays
- ✓ Protective coatings



TUNAP Pastes



Lubricating pastes

TUNPAS WP – WHITE ASSEMBLY PASTE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Adhesive, lubricating and assembly paste for high temperatures with protection against tribocorrosion</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> • Non-contaminating • Neutral to most synthetic materials • Very high load-carrying capacity • Prevents tribocorrosion • Lubricating and separating • Prevents stick-slip • For reliable assembly thanks to constant preload forces • Particularly suitable for easy disassembly of parts treated with it, even after long periods of operation and under extreme conditions 	<ul style="list-style-type: none"> • At high temperatures, high pressure loads and corrosive influences • Assembly lubrication for screw and plug connections • Flanges and gaskets, against burning, scaling, welding and bonding • On boilers, engines, turbines, apparatus, fittings, flanges and exhaust gas ducts • Chemical and petrochemical plants, refineries, ceramics, glass and smelting works, drying plants and furnaces 	<ul style="list-style-type: none"> • Colour space: white • Density (20°C) [g/cm³]: 1,2 • Base oil: synthetic • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 30 • NLGI class (DIN 51818): 2 • Operating temperature [°C]: -30 to 250; Dry lubrication up to 1450

Assembly and release pastes

TUNPAS H1 – HIGH PERFORMANCE GREASE PASTE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Fully synthetic, high-performance, white, paste with NSF H1, based on high-quality solid lubricants</p> <p>Suitable cleaners: TUNCLEAN 700 916</p>	<ul style="list-style-type: none"> • For reliable assembly of screws thanks to constant preload forces • Particularly suitable for easy disassembly of parts treated with it, even after long periods of operation and under extreme conditions • Adhesive and resistant to water • Excellent corrosion protection • Reliable wear protection • Prevents stick-slip, even at low sliding speeds 	<ul style="list-style-type: none"> • For the lubrication and separation of components in the food and beverage industry that are exposed to high static and dynamic loads. These include, e. g., screw connections as well as sliding guides, plain bearings and screw drives. • Assembly and disassembly work is made easier, fretting corrosion is prevented. • The paste has good adhesion and resistance even under the influence of water. 	<ul style="list-style-type: none"> • Colour space: white • Density (20°C) [g/cm³]: 1,12 • Base oil: synthetic • Thickener: calcium sulphonate complex soap • Drop point [°C]: > 280 °C • Base oil viscosity (40°C) [mm²/s]: 220 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: 6000 • Operating temperature [°C]: -45 to 200; Dry lubrication up to 800



TUNAP | PASTES

PASTES
Highest reliability achieved through optimal separation protection and excellent lubrication performance

TUNPAS MS – MOS2 ASSEMBLY PASTE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Synthetic assembly paste with inorganic thickener and MoS2 Suitable cleaners: TUNCLEAN 895 915	<ul style="list-style-type: none"> • Highest pressure absorption capacity and low friction coefficients • Particularly suitable for running-in lubrication • Outstanding wear protection and separating effect protect the surface • Special solid lubricant combination prevents stick-slip • For reliable assembly lubrication due to constant preload forces 	<ul style="list-style-type: none"> • For basic lubrication during assembly work • For running-in lubrication guides, bearings, joints and sliding surfaces • To protect the surfaces in fittings and press-fittings • For the protection of bolted joints and to achieve uniform friction coefficients • In metal forming to prevent tool damage, to reduce pressures and to improve the surfaces of the workpieces 	<ul style="list-style-type: none"> • Colour space: grey • Density (20°C) [g/cm³]: 0,94 • Base oil: synthetic • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 220 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: 3200 • Operating temperature [°C]: -30 to 200; Dry lubrication up to 650

TUNPAS CU – COPPER PASTE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Synthetic metal-containing release paste with inorganic thickener, copper pigments and a synergistic additive combination Suitable cleaners: TUNCLEAN 895 915	<ul style="list-style-type: none"> • For reliable assembly thanks to constant preload forces • Particularly suitable for easy disassembly of parts treated with it, even after long periods of operation and under extreme conditions • Lubricating and separating • Good sealing against dust • Protects against wear, corrosion and oxidation 	<ul style="list-style-type: none"> • Adhesive and water-resistant • Assembly lubrication for screw and plug connections, flanges and seals, against burning, scaling, scuffing and bonding • At high temperatures, high pressure loads and corrosive influences • On boilers, engines, turbines, apparatus, fittings, flanges and exhaust gas ducts • Chemical and petrochemical plants, refineries, ceramics, glass and smelting works, drying plants and furnaces 	<ul style="list-style-type: none"> • Colour space: copper-coloured • Density (20°C) [g/cm³]: 1,2 • Base oil: synthetic • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 110 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: 3400 • Operating temperature [°C]: -35 to 250; Dry lubrication up to 1100

Metal-containing release pastes

TUNPAS AL – ALUMINIUM PASTE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Synthetic metal-containing separating paste with inorganic thickener, metal pigments and a synergistic additive combination Suitable cleaners: TUNCLEAN 895 915	<ul style="list-style-type: none"> • Resistant to low and high temperatures • Protects against corrosion, wear and oxidation • Protects against seizing, coking and scaling • Adhesive and water-resistant 	<ul style="list-style-type: none"> • In mechanical and plant engineering for basic and separating lubrication of highly loaded sliding points • For boilers, turbines, motors and components exposed to high temperatures • For fittings, flanges, screw and plug connections • For guideways, slide rails and plain bearings • In the chemical and petrochemical industry, refineries, glass and smelting works 	<ul style="list-style-type: none"> • Colour space: silver • Density (20°C) [g/cm³]: 1,1 • Base oil: synthetic • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 220 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: 2200 • Operating temperature [°C]: -30 to 250

Metal-free pastes

TUNGREASE CF-33			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Metal-free grease paste as a lubricant Suitable cleaners: TUNCLEAN 895	<ul style="list-style-type: none"> • Soft multi-purpose paste for the lubrication of highly loaded sliding points • Highest pressure absorption and excellent release effect • Good adhesion and particularly water-resistant • Excellent resistance to salt water • Reduces friction and wear • Minimises corrosion 	<ul style="list-style-type: none"> • For basic and thin-film lubrication, to prevent friction and wear. As separating lubrication for reliable, problem-free disassembly and to prevent fretting corrosion: • In mechanical and plant engineering: • For refineries, glass and smelting works • For boilers, turbines, engines and all components exposed to high temperatures • For fittings, flanges, screw and plug connections • For guideways, slide rails and bearings • At refineries, glassworks and smelting works • In the drilling industry • In oil production 	<ul style="list-style-type: none"> • Colour space: blue • Density (20°C) [g/cm³]: 1,29 • Base oil: mineral oil • Thickener: calcium sulphonate complex soap • Drop point [°C]: > 280 • Base oil viscosity (40°C) [mm²/s]: 200 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: > 7500 • Operating temperature [°C]: -20 to 200



TUNAP Lubricating greases

Calcium sulphonate complex greases

TUNGREASE CK-2 – HIGH LOAD GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
High-pressure grease with high wear and corrosion protection	<ul style="list-style-type: none"> High-pressure grease with a wide range of applications High sealing and adhesion effect Resistant to ageing and shear Optimum wear protection and extension of component service life due to high pressure absorption capacity Reliable lubrication even when exposed to water or in outdoor applications thanks to exceptional water resistance and high corrosion protection Support for variety reduction Resistant to cold and hot water Dirt and water repellent 	<ul style="list-style-type: none"> Highly loaded rolling and plain bearings at medium speeds and unfavourable environmental influences as well as long-term lubrication in all areas of mechanical engineering In open weather, wet conditions, dust, vibrations, shock loads and high-pressure loads In the general wet area, in the textile finishing industry, in filling stations, in the paper industry and leather processing In hydraulic engineering and shipbuilding, harbour and shipyard facilities, barrages and hoists For long-term lubrication of motor vehicles, construction machinery, agricultural vehicles, cranes, forklifts and lifting equipment In the high temperature range: On autoclaves, fan bearings, furnace bearings, deflection wheels, guides and joints 	<ul style="list-style-type: none"> Colour space: brownish Density (20°C) [g/cm³]: 1 Base oil: mineral oil Thickener: calcium sulphonate complex soap Drop point [°C]: > 290 Base oil viscosity (40°C) [mm²/s]: 180 NLGI class (DIN 51818): 2 Four-Ball test (DIN 51350-2) [N]: 4800 Operating temperature [°C]: -20 to 140
Suitable cleaners: TUNCLEAN 895 915			



LUBRICATING GREASES

Optimisation of machines and systems with high-performance products for different temperature ranges, loads and for long-lasting performance as well as efficiency



TUNAP

Lubricating greases



TUNGREASE CM-2/460 – HIGH PRESSURE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Versatile high-pressure grease with high wear and corrosion protection	<ul style="list-style-type: none"> • Optimum wear protection and extension of component service life due to high pressure absorption capacity • Reliable lubrication even when exposed to water or in outdoor applications thanks to exceptional water resistance and high corrosion protection • Versatile high-performance lubricating grease to support grade reduction • High wear and corrosion protection • High sealing and adhesion effect 	<ul style="list-style-type: none"> • Highly loaded rolling and plain bearings at medium speeds and unfavourable environmental influences as well as long-term lubrication in all areas of mechanical engineering • In open weather, wet conditions, dust, vibrations, shock loads and high-pressure loads • In the general wet area, in work rolls for steel production, in the textile finishing industry, in filling stations, the paper industry and leather processing • In hydraulic engineering and shipbuilding, harbour and shipyard facilities, barrages and hoists • For maintenance-free long-term lubrication of motor vehicles, construction machinery, agricultural vehicles, cranes, forklifts and lifting equipment • In the high temperature range: On autoclaves, fan bearings, furnace bearings, deflection wheels, guides and joints 	<ul style="list-style-type: none"> • Colour space: brown • Density (20°C) [g/cm³]: 1,01 • Base oil: mineral oil • Thickener: calcium sulphonate complex soap • Drop point [°C]: > 270 • Base oil viscosity (40°C) [mm²/s]: 460 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: > 5000 • Operating temperature [°C]: -20 to 160
Suitable cleaners: TUNCLEAN 895 915			

TUNGREASE CP-2/25 – FULLY SYNTHETIC HIGH-PERFORMANCE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
H1 high-performance grease, especially for low-temperature and high-speed applications	<ul style="list-style-type: none"> • High pressure absorption capacity enables optimum wear protection and thus extends component service life • Exceptional water resistance and high corrosion protection allow reliable lubrication even when exposed to water or in outdoor applications • Versatile high-performance lubricating grease to support grease variety reduction in the food, beverage and pharmaceutical industries • Oxidation and shear stable for a long grease life 	<p>Speciality H1 lubricating grease for many diverse operating conditions in the food processing industry:</p> <ul style="list-style-type: none"> • For loaded rolling and fast-moving rolling and plain bearings, joints and other sliding pairs on machines and systems, e.g. on filling stations, autoclaves, deflection wheels, fans, ovens, as well as linear guides and drives • Also suitable for applications outside the food industry 	<ul style="list-style-type: none"> • Colour space: beige • Density (20°C) [g/cm³]: 0,94 • Base oil: synthetic • Thickener: calcium sulphonate complex soap • Drop point [°C]: > 270 • Base oil viscosity (40°C) [mm²/s]: 25 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: 3800 • Operating temperature [°C]: -50 to 120
Suitable cleaners: TUNCLEAN 700 TUNCLEAN FDB 915			

TUNGREASE CP-X/50 – FULLY SYNTHETIC HIGH PERFORMANCE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Dynamically light, fully synthetic H1 high-performance grease with high wear and corrosion protection	<ul style="list-style-type: none"> • High pressure absorption capacity enables optimum wear protection and thus extends component service life • Exceptional water resistance and high corrosion protection allow reliable lubrication even under the influence of water or in outdoor applications • Versatile high-performance lubricating grease to support grease variety reduction in the food, beverage and pharmaceutical industries • Oxidation and shear stable for a long grease life 	<p>Speciality lubricating grease for a wide range of operating conditions in the food, beverage and pharmaceutical industries:</p> <ul style="list-style-type: none"> • For loaded rolling and plain bearings, joints and other sliding pairs on machines and systems, e.g. at filling stations, autoclaves, deflector wheels Fans and ovens • Linear guides and drives <p>Also for applications outside the food industry where water resistance, a wide temperature range and/or high loads are the decisive criteria or special regulations require the use of non-critical lubricants</p>	<ul style="list-style-type: none"> • Colour space: beige • Density (20°C) [g/cm³]: 0,94 • Base oil: PAO • Thickener: calcium sulphonate complex soap • Drop point [°C]: > 270 • Base oil viscosity (40°C) [mm²/s]: 50 • NLGI class (DIN 51818): 00, 0, 1 und 2 • Four-Ball test (DIN 51350-2) [N]: 4200 • Operating temperature [°C]: -40 to 140
Suitable cleaners: TUNCLEAN 700 TUNCLEAN FDB 915			

TUNAP Lubricating greases



TUNGREASE CP-2/200 – FULLY SYNTHETIC HIGH PERFORMANCE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Fully synthetic H1 high-performance grease with high wear and corrosion protection Suitable cleaners: TUNCLEAN 700 TUNCLEAN FDB 915	<ul style="list-style-type: none"> Excellent load-carrying capacity for optimum wear protection for extended component and machine service life The special water resistance and excellent corrosion protection enable reliable lubrication even under harsh conditions or in outdoor applications Versatile high-performance lubricating grease to support grade reduction in the food, beverage and pharmaceutical industries Oxidation and shear stable for a long grease life 	<p>Speciality lubricating grease for a wide range of operating conditions in the food, beverage and pharmaceutical industries:</p> <ul style="list-style-type: none"> Loaded rolling and plain bearings, joints and other sliding pairs on machines and systems e.g. in filling stations, autoclaves, deflection wheels, fans, ovens Linear guides and drives <p>Also for applications outside the food industry, where water resistance, a wide temperature range and/or high loads are the decisive criteria or special regulations require the use of non-critical lubricants</p>	<ul style="list-style-type: none"> Colour space: beige Density (20°C) [g/cm³]: 0,97 Base oil: synthetic Thickener: calcium sulphonate complex soap Drop point [°C]: > 270 Base oil viscosity (40°C) [mm²/s]: 200 NLGI class (DIN 51818): 2 Four-Ball test (DIN 51350-2) [N]: 3800 Operating temperature [°C]: -40 to 160



TUNGREASE CP-2/460 – FULLY SYNTHETIC HIGH PERFORMANCE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Fully synthetic H1 high-performance grease with high wear and corrosion protection Suitable cleaners: TUNCLEAN 700 TUNCLEAN FDB 915	<ul style="list-style-type: none"> Excellent load-carrying capacity for optimum wear protection for extended component and machine service life The special water resistance and excellent corrosion protection enable reliable lubrication even under harsh conditions or in outdoor applications Versatile high-performance lubricating grease to support grade reduction in the food, beverage and pharmaceutical industries Oxidation and shear stable for a long grease life 	<p>Speciality lubricating grease for a wide range of operating conditions in the food, beverage and pharmaceutical industries:</p> <ul style="list-style-type: none"> Loaded roller and plain bearings, joints and other sliding pairs on machines and systems, e.g. in filling stations, autoclaves, deflection wheels, fans, ovens Linear guides and drives <p>Also for applications outside the food industry where water resistance, a wide temperature range and/or high loads are the decisive criteria or special regulations require the use of non-critical lubricants</p>	<ul style="list-style-type: none"> Colour space: beige Density (20°C) [g/cm³]: 0,95 Base oil: synthetic Thickener: calcium sulphonate complex soap Drop point [°C]: > 285 Base oil viscosity (40°C) [mm²/s]: 460 NLGI class (DIN 51818): 2 Four-Ball test (DIN 51350-2) [N]: 3500 Operating temperature [°C]: -40 to 160

Aluminium complex greases



TUNGREASE H1/EP-X – FULLY SYNTHETIC H1-MULTI-PURPOSE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Fully synthetic H1 multi-purpose grease for the food processing industry Suitable cleaners: TUNCLEAN 700 TUNCLEAN FDB 915	<ul style="list-style-type: none"> Good adhesion Very good corrosion protection Reduces friction and wear High load-carrying capacity Very good water resistance Very good oxidation and ageing resistance Versatile high-performance lubricating grease to support grade reduction in the food, beverage and pharmaceutical industries Good corrosion protection reduces the risk of premature bearing failure 	<ul style="list-style-type: none"> Specially developed for use in areas where there is a risk of direct, technically unavoidable contact with food. For the lubrication of plain and roller bearings, lifting cylinders, joints, guide rods, cams, etc. Use even under difficult conditions (low and high temperatures, high loads, shock and impact loads as well as the influence of water) 	<ul style="list-style-type: none"> Colour space: beige Density (20°C) [g/cm³]: 0,875 Base oil: PAO Thickener: aluminium complex soap Drop point [°C]: > 240 Base oil viscosity (40°C) [mm²/s]: 350 NLGI class (DIN 51818): 000, 00, 1 und 2 Four-Ball test (DIN 51350-2) [N]: 2600 Operating temperature [°C]: -30 to 130

Lithium greases

TUNGREASE EP-2 – LITHIUM SOAP GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Multipurpose EP lithium soap grease Suitable cleaners: TUNCLEAN 895 915	<ul style="list-style-type: none"> Good load-carrying capacity High shear stability High adhesion Versatile EP grease to support grease variety reduction Good corrosion protection reduces the risk of premature bearing failure 	<ul style="list-style-type: none"> For the lubrication of loaded plain, roller and ball bearings, guides and joints Shock and vibration applications in industry, transport and agriculture 	<ul style="list-style-type: none"> Colour space: yellow Density (20°C) [g/cm³]: 0,88 Base oil: mineral oil Thickener: lithium soap Drop point [°C]: > 185 Base oil viscosity (40°C) [mm²/s]: 220 NLGI class (DIN 51818): 2 Four-Ball test (DIN 51350-2) [N]: 2200 Operating temperature [°C]: -30 to 120

TUNGREASE LMO-X/40 – HIGH PERFORMANCE GREASE WITH MICRO FLOW SURFACE SMOOTHENING

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
High-performance lubricating grease for friction reduction and long-term lubrication Suitable cleaners: TUNCLEAN 895 915	<ul style="list-style-type: none"> Lubrication at increased loads Proven long-term and lifetime lubrication Reduces friction and wear Improved running-in Reduces corrosion Oxidation and shear stable 	<ul style="list-style-type: none"> For the lubrication of roller and plain bearings, highly loaded small gears, guides and joints, even under high loads for stable long-term lubrication Use in almost all areas to increase operational safety and storage life 	<ul style="list-style-type: none"> Colour space: red Density (20°C) [g/cm³]: 0,875 Base oil: semi-synthetic Thickener: lithium soap Drop point [°C]: > 185 Base oil viscosity (40°C) [mm²/s]: 40 NLGI class (DIN 51818): 2 Four-Ball test (DIN 51350-2) [N]: > 4000 Operating temperature [°C]: -30 to 140

TUNGREASE LN-2/100 – SPECIAL LITHIUM GREASE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Dynamically light lithium special grease for long-term lubrication</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> Protects rolling bearings against fatigue damage, in particular white etching cracks (WEC) and wear Very good protection of metal surfaces due to effective corrosion protection and good water resistance Extremely wide temperature range Very good running behavior at the start with low temperatures for reduced peak currents and noise development Synthetic base oils ensure excellent high-temperature resistance and enable extended relubrication intervals and even lifetime lubrication 	<p>Lubrication of fast rotating roller bearings, e.g. in tension rollers, fans, electric motors, etc.</p>	<ul style="list-style-type: none"> Colour space: yellowish Density (20°C) [g/cm³]: 0,9 Base oil: synthetic Thickener: lithium speciality soap Drop point [°C]: > 180 Base oil viscosity (40°C) [mm²/s]: 100 NLGI class (DIN 51818): 2 Operating temperature [°C]: -40 to 160

TUNGREASE LP-1 – FULLY SYNTHETIC SPECIAL GREASE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Fully synthetic and easy running special grease for low-temperature applications</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> Excellent corrosion protection Damping properties Good compatibility with ABS, PC and POM Low starting and running resistance, especially at low temperatures, for increased efficiency and energy savings Oxidation and shear stable for a long grease life A wide operating temperature range and excellent compatibility with common plastics enables a wide range of applications in electrical/electronic components and small drives 	<ul style="list-style-type: none"> For lifetime lubrication of electrical/electronic components, especially those coated with brass, copper, tin, nickel, silver and gold, e.g. main switches, circuit boards and potentiometers in electrical/electronic components in the automotive industry TUNGREASE LP-1 is also suitable for the lubrication of moving contact mechanisms made of plastic For the lubrication of rolling bearings, especially at particularly low temperatures 	<ul style="list-style-type: none"> Colour space: beige Density (20°C) [g/cm³]: 0,816 Base oil: synthetic Thickener: lithium speciality soap Drop point [°C]: > 185 Base oil viscosity (40°C) [mm²/s]: 30 NLGI class (DIN 51818): 1 Operating temperature [°C]: -40 to 130

TUNGREASE LP-2 – FULLY SYNTHETIC SPECIAL GREASE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Fully synthetic special grease for a particularly easy running even at low temperatures</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> Excellent corrosion protection Damping properties Good compatibility with ABS, PC and POM Low starting and running resistance, especially at low temperatures, for increased efficiency and energy savings Oxidation and shear stable for a long grease life A wide operating temperature range and excellent compatibility with common plastics enable a wide range of applications in electrical/electronic components and small drives 	<ul style="list-style-type: none"> For lifetime lubrication of electrical/electronic components, especially those coated with brass, copper, tin, nickel, silver and gold, e.g. mains switches, circuit boards and potentiometers in electrical/electronic components in the automotive industry TUNGREASE LP-2 is also suitable for the lubrication of moving contact mechanisms made of plastic For the lubrication of roller bearings, especially at particularly low temperatures 	<ul style="list-style-type: none"> Colour space: beige Density (20°C) [g/cm³]: 0,816 Base oil: PAO Thickener: lithium soap Drop point [°C]: > 185 Base oil viscosity (40°C) [mm²/s]: 30 NLGI class (DIN 51818): 2 Operating temperature [°C]: -40 to 140

TUNGREASE LP-2/D6 – FULLY SYNTHETIC SPECIAL GREASE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Special synthetic grease developed for longer component life in a wide temperature range</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> Very good damping and noise behaviour due to a high base oil viscosity and solid lubricant additives Protection against wear and corrosion for reliable long-term lubrication Good adhesive properties Prevents the formation of metal oxides Good compatibility with common plastics 	<ul style="list-style-type: none"> TUNGREASE LP-2/D6 was developed for the long-term lubrication of components such as plain bearings, roller bearings, small gears and linear guides. For the lubrication of friction contacts with plastics Tests show good compatibility with ABS, PC and POM. Typical applications are subject to low or medium loads and must function easily and smoothly 	<ul style="list-style-type: none"> Colour space: white Density (20°C) [g/cm³]: 0,82 Base oil: synthetic Thickener: lithium soap Base oil viscosity (40°C) [mm²/s]: 600 NLGI class (DIN 51818): 2 Operating temperature [°C]: -30 to 150

TUNAP Lubricating greases



PTFE greases

TUNGREASE 250 – HIGH TEMPERATURE GREASE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Synthetic high-performance lubricating grease with organic thickener and OMC₂ technology</p> <p>Suitable cleaners: TUNCLEAN 895 TUNCLEAN EL 915</p>	<ul style="list-style-type: none"> • With OMC₂ technology • Very good corrosion protection • Excellent temperature consistency • Especially for the material pairing steel/steel • High pressure absorption capacity extends operating times and enables optimum wear protection • Extremely low friction coefficient supports energy savings and promotes smooth running even under the highest pressure loads, vibration, shock loads and in highly loaded rolling and plain bearings • Reliable long-term and lifetime lubrication 	<ul style="list-style-type: none"> • For long-term lubrication of roller and plain bearings in high-temperature applications • Typical applications: Conveyor systems, fans, dryers, motors, pumps, calanders and compressors, e.g. in painting lines, film stretching systems, extraction systems, textile machines, in corrugated cardboard production such as calander rolls or in chemical plants • In addition, in apparatus and plant engineering and in the precision engineering sector 	<ul style="list-style-type: none"> • Colour space: white • Density (20°C) [g/cm³]: 0,95 • Base oil: synthetic • Thickener: organic • Base oil viscosity (40°C) [mm²/s]: 200 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: 6000 • Operating temperature [°C]: -30 to 200

TUNGREASE 300 – HIGH TEMPERATURE GREASE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Chemically inert H1 special grease for long-term lubrication at high temperatures</p> <p>Suitable cleaners: TUNCLEAN 700 TUNCLEAN EL 915</p>	<ul style="list-style-type: none"> • Particularly high thermal and oxidative stability with extremely low evaporation loss enables extended relubrication intervals • Ideal for applications under the influence of aggressive media due to exceptional chemical resistance • Good compatibility with common plastics and elastomers • Non-flammable 	<ul style="list-style-type: none"> • For long-term lubrication in high-temperature applications of roller and plain bearings and other lubrication points exposed to extreme temperatures • For long-term and lifetime lubrication in aggressive environments • For the lubrication of oxygen fittings • Typical applications: Coating lines, fans, calanders, kiln cars, film stretching plants, extraction plants, textile machines, chemical plants, bleaching plants, dyeing plants, galvanising plants, acid factories, paper and food industry 	<ul style="list-style-type: none"> • Colour space: white • Density (20°C) [g/cm³]: 1,9 • Base oil: PFPE • Thickener: organic • Base oil viscosity (40°C) [mm²/s]: 500 • NLGI class (DIN 51818): 000, 00, 1, 2 • Operating temperature [°C]: -40 to 250



TUNGREASE ST-3 – H1 CHEMICAL INERT SPECIAL GREASE			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Fully synthetic H1 silicone grease for long-term lubrication of fittings</p> <p>Suitable cleaners: TUNCLEAN 700 TUNCLEAN FDB 915</p>	<ul style="list-style-type: none"> • Fully synthetic H1 silicone grease for long-term lubrication of fittings made of plastic, metal and ceramic as well as seals, e.g. made of NBR, EPDM and FKM with a high PTFE content • Approvals for drinking water fittings from KTW, WRAS and ACS as well as NSF 61 compliant • High thermal stability • Very good sealing effect • Good resistance to numerous media such as water, water vapour or disinfectants and cleaning agents. 	<ul style="list-style-type: none"> • Specially developed fitting and sealing grease for the food industry • Processing industry, lubrication of ceramic sealing discs and moving parts in the fittings and domestic water industry, e.g. single-lever mixer taps, thermostatic fittings, shower switches and heads, swivelling spouts etc. • Especially for lubricating the material pairings plastic/plastic, plastic/metal, plastic/ceramic, ceramic/ceramic 	<ul style="list-style-type: none"> • Colour space: white • Density (20°C) [g/cm³]: 1,2 • Base oil: silicone oil • Thickener: PTFE • Base oil viscosity (40°C) [mm²/s]: 750 • NLGI class (DIN 51818): 3 • Operating temperature [°C]: -40 to 160



Bentonite greases

TUNGREASE BE-2/220 – SPECIAL GREASE FOR ELASTOMER AND PLASTIC MATERIALS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Special grease for the lubrication of friction contacts in combination with elastomer materials such as NBR, EPDM, FKM and silicone as well as plastics</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> • Selected ester oils in combination with an inorganic thickener • Very good material compatibility with typical elastomer materials such as NBR, EPDM, FKM and silicone • Reduces friction and promotes easy running • Enables a reduction in the variety of lubricants and thus complexity in manufacturing processes 	<p>Lubrication of all mechanically stressed friction points with EPDM and/or NBR elastomers, on shut-off and control valves, on shower and radiator fittings and generally for seal lubrication in all areas where an EPDM, NBR, FKM or silicone-compatible grease is required.</p>	<ul style="list-style-type: none"> • Colour space: light brown • Density (20°C) [g/cm³]: 0,99 • Base oil: special ester oil • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 220 • NLGI class (DIN 51818): 2 • Operating temperature [°C]: -20 to 140

TUNAP Lubricating greases



TUNGREASE BS – SPECIAL GREASE FOR LUBRICATION THE MATERIAL PAIRING NON-FERROUS METAL/STEEL

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Synthetic grease with inorganic gel thickener and OMC ₂ technology	<ul style="list-style-type: none"> • With OMC₂ technology • Especially for the material pairing non-ferrous metal/steel • Extremely high adhesion and therefore extremely high site fidelity • Optimum wear protection and extension of component service life due to high pressure absorption capacity • Energy savings due to extremely low coefficient of friction • Promotion of smooth running even under the highest pressure loads, vibration and shock loads • Activates the self-lubrication of all bronze materials 	<ul style="list-style-type: none"> • For the lubrication of plain and roller bearings, splined shafts, cardan and universal joints, spindles, guides, cams, transport chains and sprockets • Especially for trapezoidal threaded spindles on scissor lift tables 	<ul style="list-style-type: none"> • Colour space: greenish • Density (20°C) [g/cm³]: 0,916 • Base oil: synthetic • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 2000 • NLGI class (DIN 51818): 1 • Operating temperature [°C]: -20 to 140
Suitable cleaners: TUNCLEAN 895 915			

Inorganic thickened greases

TUNGREASE BA – H1-HIGH TEMPERATURE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Chemically inert H1 special grease for lubrication at extremely high temperatures	<ul style="list-style-type: none"> • Good compatibility with common plastics and elastomers • Extremely low evaporation rate provides best possible lubrication in furnace systems even at more than +300°C • Particularly high thermal stability with extremely low vapour loss enables extended relubrication intervals • High chemical resistance to aggressive media or oxidative influences allows use even under adverse environmental conditions 	<ul style="list-style-type: none"> • Especially for the lubrication of slideways and rollers in oven systems • For lifetime lubrication in aggressive environments • For rolling and plain bearings at low speed, e.g. in dryers, electric motors and fans as well as joints and other sliding surfaces 	<ul style="list-style-type: none"> • Colour space: white, pink • Density (20°C) [g/cm³]: 1,9 • Base oil: PFPE • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 1000 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: 6000 • Operating temperature [°C]: -20 to 350
Suitable cleaners: TUNCLEAN 700 TUNCLEAN EL 915			

TUNGREASE FBN – HIGH TEMPERATURE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Chemically inert H1 special grease for long-term lubrication at high temperatures	<ul style="list-style-type: none"> • Good compatibility with common plastics and elastomers • Very low evaporation rate offers best possible lubrication in furnace systems even up to +300°C • Particularly high thermal stability with extremely low vapour loss enables extended relubrication intervals • High chemical resistance to aggressive media or oxidative influences allows use even under adverse environmental conditions 	<ul style="list-style-type: none"> • Especially suitable for the lubrication of slideways and rollers in oven systems • For rolling and plain bearings at low speed, e.g. in dryers, electric motors and fans as well as joints and other sliding surfaces • Suitable for lifetime lubrication in aggressive environments 	<ul style="list-style-type: none"> • Colour space: white • Density (20°C) [g/cm³]: 1,9 • Base oil: PFPE • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 500 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: 6000 • Operating temperature [°C]: -40 to 300
Suitable cleaners: TUNCLEAN FDB TUNCLEAN EL 915			

TUNGREASE DAB – H1-MULTI-PURPOSE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
H1 multi-purpose grease containing white oil with multifunctional additive combination for the food industry	<ul style="list-style-type: none"> • Physiologically harmless and water-clear paraffin oil according to DBA and FDA • Absolute taste and odour neutrality • Good oxidation and ageing stability • Excellent corrosion protection • Suitable as a base material for cosmetic preparations • Versatile multi-purpose lubricating grease based on white oil for the food, beverage and pharmaceutical industries • Specially developed for use in areas where there is a risk of direct, technically unavoidable contact with foodstuffs • Cleans, cares and protects at the same time • Reduces friction and wear • Economical to use 	<ul style="list-style-type: none"> • Lubrication and care of seals, joints, chains and all moving parts where there is a risk of direct contact between lubricant and foodstuff. • Suitable for all oil lubrication points on machines in the food industry (including filling machines, packaging machines, sealing machines, chains and conveyors, gears, plain bearings, joints, pistons, guides, pipework, roller bearings, as a release agent and lubricant, for stainless steel care in breweries, bakeries, meat factories, canteen kitchens and hospitals and as corrosion protection in the entire food industry) 	<ul style="list-style-type: none"> • Colour space: colourless • Density (20°C) [g/cm³]: 0,9 • Base oil: medical white oil • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 120 • NLGI class (DIN 51818): 2 • Four-Ball test (DIN 51350-2) [N]: 2200 • Operating temperature [°C]: -20 to 130
Suitable cleaners: TUNCLEAN 700 915			

TUNAP Lubricating greases



TUNGREASE SG – H1-SPECIAL GREASE CHEMICAL INERT

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Chemically inert H1 special grease for Long-term lubrication at high temperatures up to approx. 300°C</p> <p>Also available as a spray</p> <p>Suitable cleaners: TUNCLEAN 700 TUNCLEAN EL 915</p>	<ul style="list-style-type: none"> • Very good compatibility with common plastics and elastomers • Enables long service life even with minimum quantity lubrication • Enables extended reforging intervals due to extremely high thermal stability • Very good positional consistency, i.e. the moulded parts can be assembled without additional cleaning 	<ul style="list-style-type: none"> • For the lubrication of ejector pins, especially with very low tolerances • For the lubrication of folding units, slides, latches etc. with low tolerances in the plastic injection moulding industry • Use in the food-related industry where unintentional contact with food or food packaging is possible 	<ul style="list-style-type: none"> • Colour space: colourless • Density (20°C) [g/cm³]: 1,8 • Base oil: PFPE • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 500 • NLGI class (DIN 51818): 2 • Operating temperature [°C]: -40 to 300



TUNSIL A1 – FULLY SYNTHETIC SILICONE GREASE

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Fully synthetic silicone grease for seals and fittings</p> <p>Suitable cleaners: TUNCLEAN 700 TUNCLEAN FDB 915</p>	<ul style="list-style-type: none"> • Synthetic silicone grease with low proportions of high-purity and finely dispersed thickener • High thermal stability at high temperatures • Very good lubricating and flow behaviour at low temperatures • Outstanding resistance to water and water vapour • Compatible with most plastics and sealing materials including PC and EPDM 	<ul style="list-style-type: none"> • Lubrication of components with the material pairing plastic/plastic, metal/plastic, ceramic/plastic and ceramic/ceramic • Compatibility with plastics elastomers is given, except for silicone-based materials 	<ul style="list-style-type: none"> • Colour space: whitish, transparent • Density (20°C) [g/cm³]: 1 • Base oil: silicone oil • Thickener: inorganic • Base oil viscosity (40°C) [mm²/s]: 35 • NLGI class (DIN 51818): 1-2 • Operating temperature [°C]: -50 to 140

**Future-proof technology
calcium sulphonate:
greases for the highest
requirements in
the H1-area**





TUNAP Lubricating oils



Multi-purpose oils



TUNFLUID DAB			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>H1 multi-purpose oil also for the food processing, beverage and pharmaceutical industries</p> <p>Suitable cleaners: TUNCLEAN 700 TUNCLEAN FDB 915</p>	<ul style="list-style-type: none"> Versatile and powerful multifunctional oil ideal for variety reduction Good corrosion protection for a long component service life Good oxidation and ageing stability Cleans, cares and protects at the same time Reduces friction and clogging Very economical to use Particularly suitable for stainless steel care 	<ul style="list-style-type: none"> Lubrication and care of seals, joints, chains and all moving parts Suitable for all oil lubrication points on machines in the food industry, filling machines, packaging machines, sealing machines, chains and conveyor systems, gears, plain bearings, joints, pistons, guides, pipework, roller bearings As a release agent and lubricant For stainless steel care in breweries, bakeries, meat factories, canteen kitchens and hospitals 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,81 Base oil: medical white oil Flash point [°C]: > 245 Pourpoint [°C]: -10 Operating temperature [°C]: -5 to 120 Kinematic viscosity (40°C) [mm²/s]: 68



TUNFORM PO – WATER MISCIBLE LUBRICANT AND ANTI-FRICTION AGENT			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Water-miscible multifunctional oil based on synthetic base oils with synergistic additives</p> <p>Suitable cleaners: TUNCLEAN FDB TUNCLEAN 700 915</p>	<ul style="list-style-type: none"> Reduces friction and wear Prevents stick-slip effects Reduces static charge Reduces the effect of UV radiation and premature embrittlement Protects against mechanical damage 	<p>As a universal lubricant and anti-friction agent for all types of plastics:</p> <ul style="list-style-type: none"> Lubrication of moving plastic parts, for material pairings plastic / plastic and plastic / metal Protection of plastic surfaces Prevention of mechanical damage during transport, Protection against premature ageing and UV exposure, Lubricants and release agents in the manufacture of containers for the food, beverage, cosmetics and pharmaceutical industries 	<ul style="list-style-type: none"> Colour space: yellowish Density (20°C) [g/cm³]: 1,015 Base oil: special oil Flash point [°C]: > 200 Kinematic viscosity (40°C) [mm²/s]: 53

LUBRICATING OILS

Excellent selected base oils and high-performance additives for every challenge



FOR LUBRICATING OILS

Chain oils

TUNFLUID HT 200 – HIGH PERFORMANCE CHAIN OIL			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Synthetic high-temperature oil for chain lubrication with OMC₂ technology</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> • Excellent wear protection for reliable chain operation • Increased energy efficiency and lower operating temperatures through the OMC₂ additive technology for friction reduction • Very good penetration and adhesion • Extremely low vapour residue • Economical consumption due to high thermal stability with extremely low evaporation loss • Does not build up resinify or stick • High flash point 	<p>Chain lubrication in the high temperature range:</p> <ul style="list-style-type: none"> • Stenter and drying frames in the textile industry • Chains in drying and painting systems 	<ul style="list-style-type: none"> • Colour space: green, clear • Density (20°C) [g/cm³]: 0,92 • Base oil: ester • Flash point [°C]: > 240 • Pourpoint [°C]: -23 • Operating temperature [°C]: -30 to 240 • Kinematic viscosity (40°C) [mm²/s]: 200

TUNFLUID HT 2200 – SYNTHETIC HIGH TEMPERATURE ADHESIVE OIL			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Synthetic high-temperature adhesive oil for chain lubrication with OMC₂ technology</p> <p>Also available as an aerosol</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> • Particularly strong adhesion to prevent spin-off and drip-off contamination • Increased energy efficiency and lower operating temperatures through the OMC₂ additive technology with friction reduction • Economical consumption due to high thermal stability with extremely low evaporation loss • Extremely low vapour residue • Excellent wear protection for reliable chain operation • Reliable corrosion protection 	<p>Chain lubrication in the normal and high temperature range up to approx. +220°C:</p> <ul style="list-style-type: none"> • Stenter and drying frame in the textile industry • Drive and transport chains in the chemical industry, in painting shops, in wood and plastics processing • Chains in shrink, baking, vulcanising and drying ovens • Chains, ropes, spindles and gear wheels in wet areas • Washing and drying systems • Sewage treatment plants, harbour, lock and shipyard facilities 	<ul style="list-style-type: none"> • Colour space: reddish, clear • Density (20°C) [g/cm³]: 0,92 • Base oil: ester • Flash point [°C]: > 230 • Pourpoint [°C]: -10 • Operating temperature [°C]: 0 to 220 • Kinematic viscosity (40°C) [mm²/s]: 2200

TUNFLUID HTC – SYNTHETIC HIGH TEMPERATURE OILS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Synthetic high-temperature oils for chain lubrication with low evaporation rate</p> <p>Suitable cleaners: TUNCLEAN 700 915</p>	<ul style="list-style-type: none"> • Excellent creep ability • Very economical in consumption due to high thermal stability with extremely low evaporation loss • Clean to use, as no lacquer-like residues are formed even at high operating temperatures • Excellent wear protection for reliable chain operation • Very high load carrying capacity 	<ul style="list-style-type: none"> • Drive, control and conveyor chains in high-temperature applications, e.g. in the field of surface treatment, drying or coating of various industrial goods • Transport systems in the automotive industry, metalworking or coating of household goods or packaging manufacturers • Conveyor chains in dryers, e.g. in gypsum or mineral wool production 	<ul style="list-style-type: none"> • Colour space: yellowish, clear • Density (20°C) [g/cm³]: 0,904 • Base oil: ester • Flash point [°C]: > 250 • Pourpoint [°C]: -20 • Operating temperature [°C]: -30 to 250 • Kinematic viscosity (40°C) [mm²/s]: 100, 260

TUNFLUID HTFG – SYNTHETIC HIGH TEMPERATURE OILS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>H1 synthetic high-temperature oils for chain lubrication in the food processing, beverage and pharmaceutical industries</p> <p>Suitable cleaners: TUNCLEAN 700 915</p>	<ul style="list-style-type: none"> • Extremely resistant to high temperatures • Very clean application, especially at very high temperatures due to low residue formation • Excellent wear protection for reliable chain operation • Particularly resistant to UV radiation • Excellent creep properties • Outstandingly economical in consumption due to high thermal stability with extremely low vapour loss • Very high load-carrying capacity 	<ul style="list-style-type: none"> • Drive, control and conveyor chains in high-temperature applications, e.g.: • In baking lines and vending machines • In the area of surface treatment, drying or coating of various industrial goods or packaging materials, which are subject to the highest hygienic standards 	<ul style="list-style-type: none"> • Colour space: yellowish, clear • Density (20°C) [g/cm³]: 0,97 • Base oil: ester • Flash point [°C]: > 250 • Pourpoint [°C]: -20 • Operating temperature [°C]: -10 to 250 • Kinematic viscosity (40°C) [mm²/s]: 100, 260



TUNAP

Lubricating oils



Gear oils

TUNGEAR – HIGH PERFORMANCE GEAR OILS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Mineral oil-based high-performance gear oils with OMC ₂ technology for reliable long-term lubrication	<ul style="list-style-type: none"> Reliable operation thanks to high protection against scuffing (LS ≥ 14) and micropitting (GFT medium) Increasing energy efficiency and reducing operating temperatures Extension of component service life due to particularly high wear protection Smoothing and prevention of pitting and other gearbox damage thanks to the special OMC₂ technology Excellent corrosion protection 	<ul style="list-style-type: none"> For industrial gearboxes of all types under high loads and for long-term lubrication For gearboxes with a high sliding component, high surface pressure and impact loads Straight, helical and arrow-toothed gearboxes, hypoid gearboxes, worm gearboxes, chain gearboxes, variable speed gearboxes, couplings, rolling and plain bearings Gearboxes for extruders, mills, cement plants, lifts and other drive units 	<ul style="list-style-type: none"> Colour space: green, brown Density (20°C) [g/cm³]: 0,9 Base oil: mineral oil Flash point [°C]: > 220 Operating temperature [°C]: -20 to 120 Kinematic viscosity (40°C) [mm²/s]: 68, 100, 150, 220, 320, 460
Suitable cleaners: TUNCLEAN 895 915			

TUNGEAR H1 – FULLY SYNTHETIC GEAR OILS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Fully synthetic gear oils with H1 registration for the food processing industry	<ul style="list-style-type: none"> Extended oil change intervals due to the particularly high thermal stability of synthetic base oil compared to mineral oil-based gear oils Gear oils in the TUNGEAR H1 series are based on synthetic oils with high lubricating performance, refined with wear, oxidation and corrosion inhibitors Reliable operation thanks to high protection against scuffing (LS ≥ 14) and micropitting (GFT medium) 	<ul style="list-style-type: none"> Food manufacturing and processing industry: Gearboxes, especially under extreme conditions such as high or low temperatures and a high sliding component, high surface pressure and impact loads Bakeries, bread factories, dairies, slaughterhouses, meat factories, animal farms, beverage and packaging industry Plain and roller bearings, spindles, guides, cams, universal joints 	<ul style="list-style-type: none"> Colour space: colourless, light yellow Density (20°C) [g/cm³]: 0,8475 Base oil: PAO Flash point [°C]: > 250 Pourpoint [°C]: -40 Operating temperature [°C]: -40 to 140 Kinematic viscosity (40°C) [mm²/s]: 68, 100, 150, 220, 320, 460
Suitable cleaners: TUNCLEAN FDB 915			



TUNGEAR CGLP 220			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
H1 fully synthetic gear and guideway oil	<ul style="list-style-type: none"> High viscosity index Very good adhesion Reduction of friction and wear High pressure absorption capacity Corrosion protection, stable to ageing and shear Reduction of running noise and vibrations 	<ul style="list-style-type: none"> Bed and slideways Gearboxes, especially under extreme conditions such as high or low temperatures and a high sliding component, high surface pressure and impact loads Plain and roller bearings, spindles, guides, cams, universal joints In bakeries, bread factories, dairies, slaughterhouses, meat factories, animal farms, beverage and packaging industries, among others 	<ul style="list-style-type: none"> Colour space: colourless, light yellow Density (20°C) [g/cm³]: 0,848 Base oil: synthetic Flash point [°C]: > 250 Pourpoint [°C]: -40 Operating temperature [°C]: -30 to 140 Kinematic viscosity (40°C) [mm²/s]: 220
Suitable cleaners: TUNCLEAN FDB TUNCLEAN 700 915			



TUNGEAR CLP – MULTIPURPOSE GEAR OILS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Mineral oil-based multi-purpose gear oils	<ul style="list-style-type: none"> Extended component service life due to particularly high wear protection Excellent corrosion protection Prevention of pitting and other gearbox damage 	<ul style="list-style-type: none"> For industrial gearboxes of all kinds For low to medium-high loaded, straight, helical and arrow-toothed gears, chain gears, variable speed gears, couplings, roller and plain bearings Gearboxes for extruders, mills, cement plants, lifts and other drive units 	<ul style="list-style-type: none"> Colour space: green, brown Density (20°C) [g/cm³]: 0,9 Base oil: mineral oil Flash point [°C]: > 210 Pourpoint [°C]: -20 Operating temperature [°C]: -20 to 100 Kinematic viscosity (40°C) [mm²/s]: 68, 100, 150, 220, 320, 460
Suitable cleaners: TUNCLEAN 895 915			

Compressor oils

TUNAIR X – FULLY SYNTHETIC COMPRESSOR OILS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Fully synthetic compressor oils for trouble-free long-term operation	<ul style="list-style-type: none"> For reliable operation thanks to excellent wear protection For trouble-free operation at high temperatures Reliable long-term operation with reduced oil change and maintenance intervals Reduced oil mist and oil consumption Excellent chemical resistance even at high temperatures 	<ul style="list-style-type: none"> Compressors and vacuum pumps of various types Rotary, screw and piston compressors for air and most technical gases 	<ul style="list-style-type: none"> Colour space: yellowish, transparent Density (20°C) [g/cm³]: 0,95 Base oil: ester Flash point [°C]: > 240 Pourpoint [°C]: -20 Operating temperature [°C]: -40 to 140 Kinematic viscosity (40°C) [mm²/s]: 100, 150
Suitable cleaners: TUNCLEAN 895 915			

TUNAIR PAO – FULLY SYNTHETIC COMPRESSOR OILS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Fully synthetic H1 compressor oils for trouble-free long-term operation	<ul style="list-style-type: none"> Extended oil change intervals due to the particularly high thermal stability of synthetic base oil compared to mineral oil-based compressor oils Good elastomer compatibility Good corrosion protection Reduces operating costs Long oil change intervals 	<ul style="list-style-type: none"> Areas with possible contact with foodstuffs, e.g. screw compressors, vacuum pumps and small gearboxes Specially developed for use in the food processing industry 	<ul style="list-style-type: none"> Colour space: colourless, light yellow Density (20°C) [g/cm³]: 0,8425 Base oil: PAO Flash point [°C]: > 220 Pourpoint [°C]: -25 Operating temperature [°C]: -20 to 140 Kinematic viscosity (40°C) [mm²/s]: 32, 46, 68 und 100
Suitable cleaners: TUNCLEAN FDB TUNCLEAN 700 915			



TUNAIR TS – FULLY SYNTHETIC COMPRESSOR OIL			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Semi-synthetic compressor oil for trouble-free long-term operation	<ul style="list-style-type: none"> Extended oil change intervals due to particularly high thermal stability of the base oil combination in comparison to mineral oil-based compressor oils Reliable operation due to high wear protection 	<ul style="list-style-type: none"> For use in screw compressors with oil injection cooling Also ideal as a long-term gear oil For trouble-free long-term operation with extended oil change and maintenance intervals 	<ul style="list-style-type: none"> Colour space: yellowish, clear Density (20°C) [g/cm³]: 0,855 Base oil: semi-synthetic Flash point [°C]: > 220 Pourpoint [°C]: -15 Operating temperature [°C]: -15 to 100 Kinematic viscosity (40°C) [mm²/s]: 46
Suitable cleaners: TUNCLEAN 895 915			

Glass machine oils

TUNFLUID G 100 P – MINERAL LUBRICANT OIL			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Mineral oil-based lubricating oil with very low residue formation	<ul style="list-style-type: none"> Outstanding residue behaviour for loaded lubricating contacts Good oxidation resistance Reduces friction and wear Compatible with the most common elastomers and seals Ash-free 	<ul style="list-style-type: none"> For the general lubrication of IS glass machines For the lubrication of machines 	<ul style="list-style-type: none"> Colour space: brownish Density (20°C) [g/cm³]: 0,877 Base oil: mineral oil Flash point [°C]: > 220 Kinematic viscosity (40°C) [mm²/s]: 100
Suitable cleaners: TUNCLEAN 895 915			

TUNFLUID HTG – SYNTHETIC HIGH TEMPERATURE OILS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
H2 synthetic high-temperature oils for the lubrication of IS hollow glass machines	<ul style="list-style-type: none"> Established on IS and AIS machines Excellent wear protection for reliable machine operation Low residue formation for increased machine efficiency and lower cleaning costs Very economical in consumption due to high thermal stability of the synthetic base with extremely low evaporation loss Extremely adhesive Protects against corrosion and the effects of water Good creeping properties 	<ul style="list-style-type: none"> For lubrication in the high-temperature range, specially developed and proven for the lubrication of hollow glass machines: For lubrication points in the area of centralised lubrication systems (e.g. Lincoln etc.) For the lubrication of machines and springs in the normal and high temperature range Excellent high-temperature oil for the glass, ceramics, enamel and food industries (no food contact) 	<ul style="list-style-type: none"> Colour space: yellowish, clear Density (20°C) [g/cm³]: 0,87 Base oil: semi-synthetic Flash point [°C]: > 200 Pourpoint [°C]: -30 Operating temperature [°C]: -25 to 180 Kinematic viscosity (40°C) [mm²/s]: 200, 220
Suitable cleaners: TUNCLEAN 700 915			



Cutting oils

TUNCUT B 40			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Cutting and punching oil for metalworking and the electronics industry</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> Transparent, native oil with high-pressure additives, as well as oxidation and corrosion inhibitors Extends tool life due to excellent lubrication performance For high surface qualities Excellent adhesion Biodegradable Extreme lubrication performance 	<ul style="list-style-type: none"> As process oil in the metalworking and electronics industry Cutting oil for drilling, thread cutting, sawing and turning Forming oil for bending, flanging, folding, deep drawing, moulding and punching 	<ul style="list-style-type: none"> Colour space: yellowish, clear Density (20°C) [g/cm³]: 0,922 Base oil: native oil Flash point [°C]: > 280 Pourpoint [°C]: -10 Kinematic viscosity (40°C) [mm²/s]: 48



TUNCUT M 22			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>H1 semi-synthetic cutting oil for the corrugated board industry</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> Extension of the service life of cutting edges due to very good corrosion protection and outstanding lubricating effect Optimised starch and adhesive release properties to achieve a permanently clean cutting result Reduced lubricant consumption due to particularly good temperature and evaporation stability Very low risk, as there is little labelling 	<ul style="list-style-type: none"> Specially developed for the lubrication of slitting and grooving blades in the production of corrugated board Also for cleaning starch and adhesive residues as well as for Can be used to protect surfaces 	<ul style="list-style-type: none"> Colour space: clear, colourless Density (20°C) [g/cm³]: 0,922 Base oil: semi-synthetic Flash point [°C]: > 280 Pourpoint [°C]: -10 Kinematic viscosity (40°C) [mm²/s]: 48



TUNCUT STF			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Low residue evaporating process oil for the metalworking and electronics industry</p> <p>Suitable cleaners: TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> Combination of high-performance additives in rapidly evaporating solvents Evaporates Pressure-resistant and highly resilient Reduces friction and wear Increases tool life 	<p>All areas in which degreasing before further surface treatments is not required after forming:</p> <ul style="list-style-type: none"> Punching and fine blanking Drawing and deep drawing Bending, folding and moulding 	<ul style="list-style-type: none"> Colour space: light yellow, clear Density (20°C) [g/cm³]: 0,763 Base oil: mineral oil Flash point [°C]: > 56 Kinematic viscosity (40°C) [mm²/s]: 7

Hydraulic oils

TUNBAR HLP – HIGH PRESSURE HYDRAULIC OILS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Mineral oil-based high-pressure hydraulic oils with OMC₂ technology</p> <p>Suitable cleaners: TUNCLEAN FDB TUNCLEAN 700 915</p>	<ul style="list-style-type: none"> With OMC₂ technology High pressure absorption capacity Reduction of friction and wear Good oxidation and ageing resistance consistency Good elastomer compatibility Very good corrosion protection Neutral towards non-ferrous metals Good air and water separation capacity Excellent foaming behaviour 	<p>For hydraulic systems in which the properties of DIN 51524 Part 2 represent the minimum requirements:</p> <ul style="list-style-type: none"> In industrial trucks, tippers, tail lifts, control systems In lifts, cranes and lifting platforms For pipe bending, tooling and cutting machines, construction machinery, excavators and bulldozers 	<ul style="list-style-type: none"> Colour space: brown Density (20°C) [g/cm³]: 0,87 Base oil: mineral oil Flash point [°C]: 175 to 250 Pourpoint [°C]: -20 Operating temperature [°C]: -20 to 110 Kinematic viscosity (40°C) [mm²/s]: 32 to 220

Inert and silicone oils

TUNSIL M 350 – TRANSPARENT SILICONE OIL			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Transparent H1 lubricating, release and maintenance oil for a wide temperature range</p> <p>Suitable cleaners: TUNCLEAN 700 915</p>	<ul style="list-style-type: none"> Transparent lubricating, release and care oil based on silicone oil Maintains and protects surfaces High wetting capacity Low evaporation tendency and good ageing resistance Good material compatibility (except silicones) Eliminates squeaking noises 	<ul style="list-style-type: none"> As a lubricant for frictional contacts with metals, plastics and elastomers For the protection and care of plastic and elastomer materials As a mould release agent especially for the plastics processing industry 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,97 Base oil: silicone oil Flash point [°C]: > 320 Pourpoint [°C]: -40 Kinematic viscosity (40°C) [mm²/s]: 350



Special oils

TUNERT 766 – INERT SPECIAL OIL			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Water-light lubricant and care product</p> <p>Suitable cleaners: TUNCLEAN 895 TUNCLEAN EL 915</p>	<ul style="list-style-type: none"> Extremely oxidation and ageing resistant oil Very good material compatibility of the oil, especially with plastics Extremely high degree of purity and an inert molecular structure 	<p>Lubrication and care of seals, joints, chains and all moving parts in medical technology that place particularly high demands on chemical and thermal resistance</p>	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 1,54 Base oil: PFPE Flash point [°C]: > 62 Pourpoint [°C]: -25 Operating temperature [°C]: -20 to 250 Kinematic viscosity (40°C) [mm²/s]: 500

TUNERT FL 460 – FLUOROCARBON SPECIAL OIL			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Fluorocarbon special oil for high-temperature and seal lubrication</p> <p>Suitable cleaners: TUNCLEAN 895 TUNCLEAN EL 915</p>	<ul style="list-style-type: none"> • Extended relubrication intervals due to high thermal stability with extremely low exhaust vapour loss • Ideal for applications under the influence of aggressive media due to exceptional chemical resistance • Good compatibility with common plastics and elastomers • Absolutely odourless and tasteless • Also available with fluorescent dye for quality control 	<p>Lubrication and care of seals, joints, chains and all moving parts that place particularly high demands on chemical or thermal resistance</p>	<ul style="list-style-type: none"> • Colour space: colourless, clear • Density (20°C) [g/cm³]: 1,9 • Base oil: PFPE • Pourpoint [°C]: -25 • Operating temperature [°C]: -20 to 250 • Kinematic viscosity (40°C) [mm²/s]: 460

Heat transfer oils

TUNTHERM S 68 – SYNTHETIC HEAT CONDITIONING OIL			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
<p>Synthetic heat transfer oil for the use in unpressurised, closed heat transfer systems</p> <p>Suitable cleaners: TUNCLEAN FDB TUNCLEAN 700 TUNCLEAN 895 915</p>	<ul style="list-style-type: none"> • Can be used up to a flow temperature of 330°C (max. permissible film temperature 350°C) • Good thermal stability • High ageing stability • High initial boiling point at normal pressure • Good heat transfer properties • Very good viscosity-temperature behaviour • Low pour point • Low coking tendency • Good corrosion protection • Low flammability • High economic efficiency due to long service life • Low hazard in the event of leaks 	<p>Among other things, in heat transfer systems in the:</p> <ul style="list-style-type: none"> • Chemical industry, plastics industry, food industry • Paper and chipboard industry, wood industry, textile industry, washing and cleaning plants or asphalt plants 	<ul style="list-style-type: none"> • Colour space: colourless, light yellow • Density (20°C) [g/cm³]: 0,835 • Base oil: synthetic • Flash point [°C]: > 230 • Pourpoint [°C]: -40 • Operating temperature [°C]: to 350

Lubricant solutions with micro surface flow smoothing effect: OMC₂-technology





TUNAP Cleaners



Solvent cleaners

111 – BRAKES AND PART CLEANER			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Broadband cleaner	<ul style="list-style-type: none"> Removes oil, grease, resin and silicone Dissolves, binds and flushes abrasion dust Ventilates quickly High spray pressure for optimised cleaning effect even in hard-to-reach areas Good against paint-like residues Aprotic - non-polar: residues containing oil and grease Aprotic - polar: adhesive or paint residues Higher electrical quiescent conductivity (> 300 pS/m) 	<ul style="list-style-type: none"> For maintenance, repair and assembly in case of very oily and greasy residues For resin, silicone and salt-like residues 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,75 Flash point [°C]: > -18° Evaporation rate: 3,44

115 – UNIVERSAL CLEANER			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Cleaner for maintenance, repair and assembly work	<ul style="list-style-type: none"> Removes extreme soiling caused by oil, grease, resin, silicone and anti-corrosion coatings Binds and washes away abrasion dust Ventilates quickly High spray pressure for optimised cleaning effect even in hard-to-reach areas 	<ul style="list-style-type: none"> For maintenance, repair and assembly with oily and greasy residues For brake maintenance and repairs For clutch repairs 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,673 Flash point [°C]: -12° Evaporation rate: 1,39

CLEANERS

*Highly effective cleaners,
safe for people
and the environment*



TUNAP | CLEANERS



TUNCLEAN 895 – INTENSIVE CLEANER

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Quick degreaser and cleaner with a very good cleaning effect for maintenance, repair and assembly	<ul style="list-style-type: none"> Average evaporation rate Residue-free cleaning for grease-free surfaces and easy follow-up processes Contains no chlorinated or halogenated hydrocarbons Contains no carcinogenic hazardous substances, according to GefStoffV 	<ul style="list-style-type: none"> For maintenance, repair and assembly in case of extreme greasing and gumming For degreasing and activating parts before bonding and varnishing Removes oils and resin crusts, synthetic oil and silicone residues Ideal for residue-free cleaning Replaces TRI, PER, CHC-containing cleaners As a brake cleaner 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,755 Flash point [°C]: -17° Evaporation rate: 3,9

TUNCLEAN Z05 – SPECIAL DEGREASER

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Highly effective solvent-based special cleaner	<ul style="list-style-type: none"> Hydrocarbon alcohol-based, volatile cleaner Residue-free cleaning 100 % active ingredient content through gassing with compressed air Very good stain removal and degreasing effect Very good compatibility with glass, ceramics, metal and textiles Fast exhaust air time 	<ul style="list-style-type: none"> For maintenance, repair and assembly in case of extreme greasing and gumming For degreasing and activating parts before bonding and painting Removes oils and resin crusts, synthetic oil and silicone residues Ideal for residue-free cleaning 	<ul style="list-style-type: none"> Colour space: colourless, clear Flash point [°C]: -24°

TUNCLEAN Z45 – SPECIAL CLEANER

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Fast evaporating degreaser, cleaner and sealant remover for paint and coating technology	<ul style="list-style-type: none"> Residue-free cleaning 100 % active ingredient content through fumigation with compressed air Very good stain removal and degreasing effect Very good compatibility with glass, ceramics, metal and textiles 	<ul style="list-style-type: none"> For removing stubborn stains such as sealants, stickers or chewing gum residues As a silicone remover before painting As a stain remover on textiles Ideal for residue-free cleaning 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,75 Flash point [°C]: -24° Evaporation rate: 1,375

TUNCLEAN 700 – CLEANER FOR THE FOOD INDUSTRY

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
NSF H1 and K1 registered cleaner for maintenance, repair and assembly	<ul style="list-style-type: none"> Colourless, non-discolouring Good creeping properties Good compatibility with common plastics Removes oils, resin crusts and silicone residues Vaporises residue-free Slow evaporation for maximum exposure time 	<ul style="list-style-type: none"> Cleaning and temporary lubrication in physiologically and ecologically sensitive areas For maintenance, repair and assembly with extreme grease residues 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,792 Flash point [°C]: -61° Evaporation rate: 200

Safety cleaners

915 – CLEANER

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
K1 registered cleaner for maintenance, repair and assembly work	<ul style="list-style-type: none"> Spray jet, no spray mist Lower explosion limit > 1.5 % vol. High electrical quiescent conductivity, >1000 pS/m Removes dust, incrustations, oil, grease, resin and anti-corrosion coatings Good against paint-like residues Without n-hexane and flavourings 	<ul style="list-style-type: none"> Cleaning in physiologically and ecologically sensitive areas For maintenance, repair and assembly with oily and greasy residues and gumming 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,755 Flash point [°C]: -17° Evaporation rate: 4,5



916 – UNIVERSAL CLEANER PLUS			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
K1 registered special fluid for cleaning in physiologically and ecologically sensitive areas	<ul style="list-style-type: none"> Residue-free cleaning for grease-free surfaces and easy follow-up processes Removes and dissolves oily dirt, grease and silicone Removes oil, grease, resin, silicone and anti-corrosion coatings Binds and washes away abrasion dust Ventilates quickly High spray pressure for an optimised cleaning effect even in hard-to-reach areas n-hexane-free 	<ul style="list-style-type: none"> Cleaning in physiologically and ecologically sensitive areas For maintenance, repair and assembly of stubborn grease residues 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,701 Flash point [°C]: > 6° Evaporation rate: 2,96



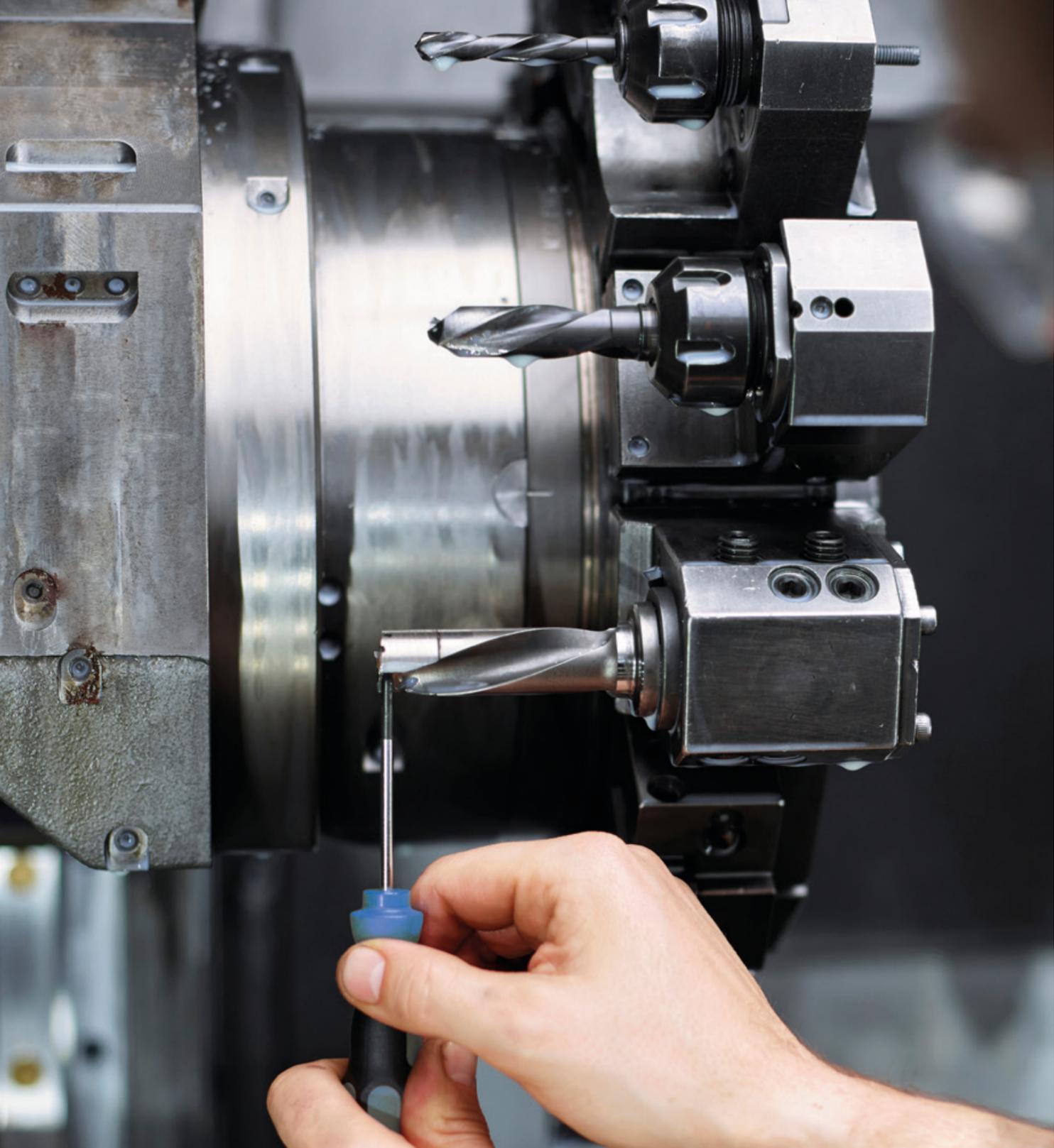
TUNCLEAN FDB			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Physiologically safe NSF H1 and K1 registered cleaner for maintenance, repair and assembly	<ul style="list-style-type: none"> Colourless, transparent, non-discolouring Removes oils, resin crusts and silicone residues Good creep properties Good compatibility with common plastics Vaporises residue-free 	<ul style="list-style-type: none"> Cleaning and temporary lubrication in physiologically sensitive areas For maintenance, repair and assembly with extreme grease residues 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,74 Flash point [°C]: > 36 Evaporation rate: 60



TUNCLEAN EL – SAFETY CLEANER			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Non-flammable safety cleaner	<ul style="list-style-type: none"> Very good solvency with oils and greases, even with fluorocarbon and silicone oil Odourless and aromatic-free Very kind to the skin Excellent wetting and creeping properties Excellent compatibility with metals, paintwork, plastics or rubber Evaporates residue-free Non-flammable 	<ul style="list-style-type: none"> Cleaning of live contacts and units that need to be cleaned during operation For sensitive applications in the electronics industry where absolute material compatibility must be guaranteed For cleaning electrical and electronic contacts and plug connections in the automotive sector For cleaning perfluorinated lubricants 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 1,5 Evaporation rate: 1

Aqueous cleaners

TUNCLEAN 5110 – PROFESSIONAL CLEANER			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Multifunctional, water-based cleaner for vehicles, buildings and machines	<ul style="list-style-type: none"> For an optimum cleanliness with oil, grease, wax and similar residues Dissolves grease, oil, dirt and dirt deposits Ensures fast and effective cleaning No mechanical processing necessary in most cases Easily biodegradable 	In all areas where heavy soiling occurs: Buildings and facilities, processing halls, floor and wall areas, interior and exterior vehicles, machine tools and processing equipment	<ul style="list-style-type: none"> Colour space: orange Density (20°C) [g/cm³]: 1,062



TUNAP Maintenance



Multifunctional oils

100 – MULTIFUNCTIONAL OIL

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
5-in-1: lubricates, maintains, protects, cleans and dissolves rust	<ul style="list-style-type: none"> Universally applicable multifunctional oil for five areas of application: lubrication, rust removing, cleaning, corrosion protection and as a contact spray Very good protection against wear Excellent water displacement Very good corrosion protection Excellent rust penetration Very good creep properties Improves electrical conductivity and eliminates leakage currents Resin-, acid- and silicone-free Does not attack rubber, paint and plastics 	<ul style="list-style-type: none"> Lubricates door locks, locking cylinders, locks, hinges, bushes, chains Stops squeaking and creaking and makes anything that is stuck or jammed slide smoothly Loosens rusted bolts, screws, nuts and joints Prevents corrosion on metals and electrical assemblies Infiltrates and displaces moisture in electrical and electronic areas 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,77

TUNGARD FD

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Synthetic H1 multi-purpose oil with good wetting properties	<ul style="list-style-type: none"> Colourless, transparent, non-discolouring Formulation free of white oil/mineral oil Non-ferrous metal corrosion protection Excellent corrosion protection Good creeping properties Good oxidation and ageing protection n-hexane-free Improved work and user protection thanks to a high flash point 	<ul style="list-style-type: none"> Lubrication and maintenance of joints, chains, seals and all moving parts As a release agent As corrosion protection All applications where the use of physiologically harmful products based on mineral oil, critical additives and/or critical solvents is not desired 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,805 Base oil: synthetic Flash point [°C]: > 61 Pourpoint [°C]: -52 Kinematic viscosity (40°C) [mm²/s]: 32 Operating temperature [°C]: -40 to 180

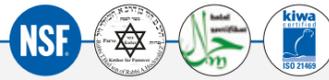


MAINTENANCE

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High-performance products
for an easy application*



TUNAP | MAINTENANCE



TUNGARD H1			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Synthetic high-performance oil for the food industry	<ul style="list-style-type: none"> • Non-discolouring • Reduces wear • Good creeping properties • Non-ferrous metal corrosion protection • Good oxidation and ageing protection • Contains no white oil/mineral oil • n-hexane free • High flash point • Excellent corrosion protection 	<ul style="list-style-type: none"> • Lubrication and maintenance of joints, chains, seals and all moving parts • As a release agent • As corrosion protection • All applications where the use of physiologically harmful products based on mineral oil, critical additives and/or critical solvents is not desired • All applications where the use of flammable products is not desired 	<ul style="list-style-type: none"> • Colour space: colourless, clear • Density (20°C) [g/cm³]: 0,823 • Flash point [°C]: > 61 • Kinematic viscosity (40°C) [mm²/s]: 150

TUNGARD OG			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Multifunctional lubricant spray with white solid lubricants	<ul style="list-style-type: none"> • Contains white solid lubricants for emergency running properties and reliable lubrication during oscillating movements • Displaces moisture and humidity • Protects against corrosion and fretting corrosion • Clean to use • High creep and penetration properties • Does not resinify or stick • Toxicologically not subject to labelling • n-hexane-free 	<ul style="list-style-type: none"> • For the lubrication of joints, hinges, linkages, levers, chains and guides. • Wherever a hydrodynamic lubricating film cannot be built up due to slow or oscillating movement. • Particularly suitable for lubrication points that are difficult to access due to its excellent creeping properties. • In applications where extremely high pressures occur or where there is a risk of tribocorrosion due to strong vibrations. 	<ul style="list-style-type: none"> • Colour space: yellowish, cloudy • Density (20°C) [g/cm³]: 0,8375 • Base oil: synthetic • Flash point [°C]: > 61 • Pourpoint [°C]: -60 • Operating temperature [°C]: -30 to 80

Grease sprays



TUNFLUID TAC 2000 – FULLY SYNTHETIC ADHESIVE LUBRICANT			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
H1 fully synthetic adhesive lubricant for the food processing industry	<ul style="list-style-type: none"> • Colourless, transparent, non-discolouring • Precise aerosol application with strong adhesive effect • Versatile multifunctional oil with very good sealing and corrosion protection • Physiologically harmless, synthetic adhesive lubricant for the food, beverage and pharmaceutical industries. • Water resistant • Optimal protection against wear, corrosion, non-ferrous metal corrosion and oil deterioration • High creeping capabilities • High operational reliability even under extreme conditions 	<p>Lubrication of chains, ropes, open drives, levers, joints, linkages, hinges, sliding points and bearings where there is a risk of direct contact between the lubricant and foodstuffs:</p> <ul style="list-style-type: none"> • Filling machines, packaging machines, capping machines, chains and conveyors, gearboxes • Joints, pistons, guides, tube tracks and plain and roller bearings 	<ul style="list-style-type: none"> • Colour space: colourless, clear • Density (20°C) [g/cm³]: 0,816 • Flash point [°C]: > 200 • Pourpoint [°C]: -6 • Kinematic viscosity (40°C) [mm²/s]: 2000

TUNGREASE HLW			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Modern assembly and maintenance spray	<ul style="list-style-type: none"> • Very good adhesion and media resistance, e.g. under the influence of water and moisture • Very good protection against corrosion and fretting corrosion • Very good wear protection • Splash water and temperature resistant • Very good low-temperature and high-temperature behaviour • Fully synthetic base for a long-lasting lubricating effect 	<ul style="list-style-type: none"> • For the lubrication of bearings, chains, levers, joints, etc. • Aerosol supports application at hard-to-reach lubrication points • For the protection and preservation of metal surfaces 	<ul style="list-style-type: none"> • Colour space: white • Density (20°C) [g/cm³]: 0,795 • Operating temperature [°C]: -40 to 180

Rust removers

103 – RUST REMOVER			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Extremely fast rust remover with maximum penetrating ability and lubricating effect	<ul style="list-style-type: none"> MoS₂ particles ensure maximum safety against re-blocking Loosens corroded and oxidised screw and plug connections in seconds Extreme creeping effect Extremely high lubricating effect, therefore also high disassembly safety Effective even at elevated temperatures Highly effective even on light and non-ferrous metals 	<ul style="list-style-type: none"> Quick removal of rusted screws, bolts, tie rods, etc. Making joints mobile 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,79

TUNPRO – BIO RUST REMOVER			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Rust remover with excellent penetrating properties Also available as an aerosol Suitable cleaners: TUNCLEAN FDB TUNCLEAN 700 915 916	<ul style="list-style-type: none"> For reliable dismantling thanks to excellent creep and rust loosening properties High creep and penetration effect Does not harden or stick Contains renewable raw materials 	<ul style="list-style-type: none"> When dismantling corroded machine elements For loosening or releasing tight screws, etc. Bolts, levers, cable pulls and joints General assignments in machine and vehicle construction, where environmentally friendly and clean work is required 	<ul style="list-style-type: none"> Colour space: yellowish Density (20°C) [g/cm³]: 0,8125 Base oil: synthetic Flash point [°C]: > 13

130 – SPECIAL REMOVER			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Water-based special rust remover	<ul style="list-style-type: none"> For dissolving thick layers of rust, corroded and stuck components using an innovative complexing agent reaction Effective deep effect thanks to easily degradable speciality surfactants Contains glycerine as a human-compatible lubricating component Skin-neutral pH value Non-corrosive 	<ul style="list-style-type: none"> Dismantling of stuck (rusted) injection valves or injectors Removal of stuck rims on the wheel hub Disassembly of tight screw connections 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,982

903 – RUST REMOVER			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
H1 highly effective synthetic rust remover	<ul style="list-style-type: none"> Synthetic rust dissolving fluid with high creeping properties Loosens oxidised screw and plug connections in seconds Outstanding disassembly safety thanks to special lubricant Very good creeping effect due to the use of innovative active ingredients Effectively displaces moisture and wetness Outstanding disassembly safety thanks to special lubricant Can be used on light and non-ferrous metals Can be used in elevated temperature ranges n-hexane free 	<ul style="list-style-type: none"> For dismantling rusted screw and plug connections (e.g. in the exhaust area) Suitable for making track rods, joints and locking cylinders moveable Drastically reduced health risks through the use of the human technology Particularly suitable for use in vehicle interiors 	<ul style="list-style-type: none"> Colour space: colourless, clear Density (20°C) [g/cm³]: 0,772

Dry lubricants and bonded coatings

TUNCOAT SBM – BONDED COATING			
PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Air-drying, inorganic and non-slip MoS ₂ bonded coating with outstanding load carrying capacity	<ul style="list-style-type: none"> Quick drying Low friction coefficient For extremely high loads Also for low speeds No dirt adhesion Very good water and weather resistance Reduces friction and wear Temperature range from -180 °C up to +450 °C (+630 °C with exclusion of oxygen) 	<ul style="list-style-type: none"> As a lubricant for guides, sliding surfaces, conveyor belts, transport rollers, etc. where lubrication containing oil and grease is not desired. As basic lubrication for guideways in combination with standard lubricants to prevent stick-slip As a coating for cylinder head bolts and switches For running-in highly loaded gear wheels 	<ul style="list-style-type: none"> Colour space: grey, black Density (20°C) [g/cm³]: 1



TUNPRO TR – DRY LUBRICANT

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
H2 synthetic high-performance dry lubricant with solid lubricants	<ul style="list-style-type: none"> • Excellent adhesion of the wax film • Excellent corrosion protection for a long component service life even under adverse conditions • No dirt or dust adhesion due to the dry surface 	<ul style="list-style-type: none"> • For lubrication at high speeds without dripping or rubbing off • For the lubrication of all sliding surfaces, splined shafts, cardan and universal joints, spindles, guides, transport chains and gear wheels, especially in dusty environments 	<ul style="list-style-type: none"> • Colour space: beige • Density (20°C) [g/cm³]: 0,71 • Flash point [°C]: > -4

TUNSOLID TE 812 – PTFE BONDED COATING

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Air-drying bonded coating with light-coloured PTFE solid lubricants and high-pressure absorption capacity	<ul style="list-style-type: none"> • Quick drying • Light and transparent • Good compatibility with rubber, plastics and metal • No dirt adhesion • Water resistant • Very good adhesion to metal surfaces for reliable wear protection of the bonded coating • For greater operational safety with clean and dry surfaces 	<p>As the sole lubricant for guideways and sliding surfaces with medium loads, where it is important to have a high level of lubrication oil and grease-free lubrication.</p> <p>As basic lubrication of guideways and bed ways in conjunction with appropriate lubricants to prevent stick-slip</p>	<ul style="list-style-type: none"> • Colour space: white, cloudy • Density (20°C) [g/cm³]: 0,852

Wax sprays

TUNPRO WK – TRANSPARENT ANTI-CORROSION WAX

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Wax spray for temporary protection with good penetration and corrosion protection properties	<ul style="list-style-type: none"> • Wax spray for temporary protection with good penetration and corrosion protection properties • Also available with red dye for easy visual inspection • Excellent water resistance 	<p>For sealing and lubricating hard-to-reach areas, semi-finished products and finished parts.</p> <p>Use in the industry:</p> <ul style="list-style-type: none"> • As a non-volatile punching and drawing agent • For parts that tend to corrode • Corrosion protection on open sliding such as bedway guides • For the protection and lubrication of tools, especially for injection moulds 	<ul style="list-style-type: none"> • Colour space: clear • Density (20°C) [g/cm³]: 0,71
Available variants: Colourless Red (n-hexane free)			

Release agents and lubricants



TUNSIL FB

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
H1 lubricant and release agent based on silicone oil	<ul style="list-style-type: none"> • Transparent • Non-contaminating and non-greasy • High wetting capacity • Eliminates squeaking noises • For reliable demoulding in plastic injection moulding • Versatile use due to good compatibility with common plastics, paints and elastomers 	<ul style="list-style-type: none"> • As a lubricant for all types of machines, especially in the plastics sector • For the lubrication of all moving parts • For the protection and care of surfaces • As a mould release agent especially for the plastics processing industry 	<ul style="list-style-type: none"> • Colour space: colourless, clear • Density (20°C) [g/cm³]: 0,79 • Base oil: silicone oil • Pourpoint [°C]: -50

TUNSLIP SF

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Silicone-free release agent and lubricant with excellent compatibility with plastics	<ul style="list-style-type: none"> • Protection against static charge on plastics • High wetting capacity • Non-contaminating, non-greasy and transparent • Lemon fragrance • For reliable silicone-free demoulding in plastic injection moulding 	<p>Use in the industry:</p> <ul style="list-style-type: none"> • As a release agent and antistatic agent • As mould release agent especially for the plastics processing industry • In the assembly of plastic parts • For the care and maintenance of plastic fabric surfaces • For the lubrication of slide rails, bearings and other machine elements 	<ul style="list-style-type: none"> • Colour space: colourless • Density (20°C) [g/cm³]: 0,759 • Flash point [°C]: > 0 • Pourpoint [°C]: -50

TUNAP Maintenance



Silicone sprays



907 – SILICONE PROTECT

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
H1 synthetic active spray	<ul style="list-style-type: none"> Prevents unwanted noise in the area of plastic against each other as well as against metal and rubber Non-contaminating and non-greasy Temperature resistant from -40°C to +200°C Particularly adhesive on plastic and rubber Highly durable and water-repellent protective layer Without nerve-damaging n-hexane Without toxicologically relevant labelling 	For creaking noises and for lubricating: <ul style="list-style-type: none"> Plastic to rubber Plastic to metal and ceramic Rubber to painted surfaces, e.g. door seals 	<ul style="list-style-type: none"> Colour space: white Density (20°C) [g/cm³]: 0,97

Protective coatings

291 – METAL PROTECTIVE COATING

PRODUCT DESCRIPTION	ADVANTAGES	APPLICATION AREA	TECHNICAL DATA
Metal-protecting polymer repair paint	<ul style="list-style-type: none"> Based on high-purity, electro-chemically active zinc metal powder combined with ultra-fine metal pigments Protects treated surfaces permanently against corrosion Suitable for damage to hot-dip and electrolytically zinc-plated surfaces Very high long-term corrosion protection Can be painted over and stoved Temperature stable up to +500°C Resistant to salt water Silver-bright paint film 	<ul style="list-style-type: none"> To maintain the rust-through guarantee on replacement parts in accordance with the factory conditions for galvanised car bodies On all damaged, hot-dip galvanised and electro-galvanised surfaces After all welding work Before spot welding 	<ul style="list-style-type: none"> Colour space: silver Density (20°C) [g/cm³]: 0,9925



TUNAP

Industry solutions and application areas



High-performance lubricants for the industry

TUNAP develops a wide range of speciality lubricants for various industrial sectors, each of which is suitable for specific applications and requires individual solutions. We offer customised combinations of lubricants and applications that are precisely tailored to your needs. By correctly lubricating your machines or systems with our lubricants, we ensure that they function reliably and safely.



Food industry

Lubricants used in the food and beverage industry must be food compatible and particularly safe for consumers as they may come into direct contact with food products. Food-grade greases are mainly used for the care and moisture protection of machine parts, especially under demanding conditions such as cold, heat, steam and water. The requirements for lubricating greases for the food and beverage industry are diverse, as the production conditions often involve extreme temperatures of over 200 °C or even down to -40 °C. In addition to temperature resistance, these lubricants often have to be adhesive, resistant to acids and alkalis and resistant to water and surfactants in order to protect metal or plastic surfaces.

In this context, TUNAP offers a high-performance and food-safe range of release agents, lubricants, cleaners and surface protection products with NSF-H1 registration. In addition to the technical requirements, hygiene, product safety and certification take centre stage. The use of TUNAP food grade greases leads to less downtime and longer maintenance intervals for plant and machinery, which in turn results in considerable time and cost savings.

Plastics industry

Flawless quality and maximum production efficiency are of crucial importance in the production process of the plastic injection moulding industry. Various processes are used to mould plastics into the desired shape.

The machines and systems used in this process are subject to extreme loads. They are exposed to enormous forces of several hundred kilonewtons and temperatures of over 200 °C. To ensure that these machines and systems can produce reliably for many years, speciality lubricants are required that are precisely matched to the tribological requirements of the individual lubrication points.

Although the investment in high-quality lubricants only accounts for a comparatively small part of the maintenance budget of a plastic injection moulding system, these lubricants can significantly increase the productivity of the entire system.

As a manufacturer, TUNAP offers a professional range of release agents, lubricants, cleaners and surface protection products. This range makes it possible, for example, to achieve the highest possible number of shots in the plastic injection moulding industry.



Glass industry

In the industrial production of hollow glass, lubricants are continuously exposed to extremely high temperatures of well over 200 °C. Depending on the size of the system, there are numerous different lubrication points that need to be reliably lubricated.

Many products from the glass industry are used in the food industry, which makes the use of NSF-registered lubricants in the COLD-END sector a potentially decisive safety and competitive advantage. This allows you to operate your machines and systems reliably and at the same time reduce maintenance and repair costs. TUNAP offers a comprehensive range of lubricants, cleaners and surface protection products that have been specially developed to increase production performance. TUNAP products are characterised by low residue formation. In addition, the lubrication intervals are extended by the supply via centralised lubrication systems. This allows you to operate your machines and systems reliably and at the same time reduce maintenance and repair costs.



Corrugated board industry

Corrugated board and paper are exposed to extreme conditions during production, including high temperatures, aggressive chemicals and high pressure. Speciality lubricants play a crucial role in ensuring the safety, durability and continuous operation of the entire production system. These lubricants protect against wear and operating failures, which in turn increases productivity. The increased demands on lubricants and maintenance products, which both increase productivity and protect people and machines, are of great importance.

At TUNAP, we have developed a comprehensive lubrication and maintenance portfolio that covers all aspects from the roller in the wet section of the system to the oil for the cutting machine. Our aim is to guarantee our customers continuous and trouble-free production.

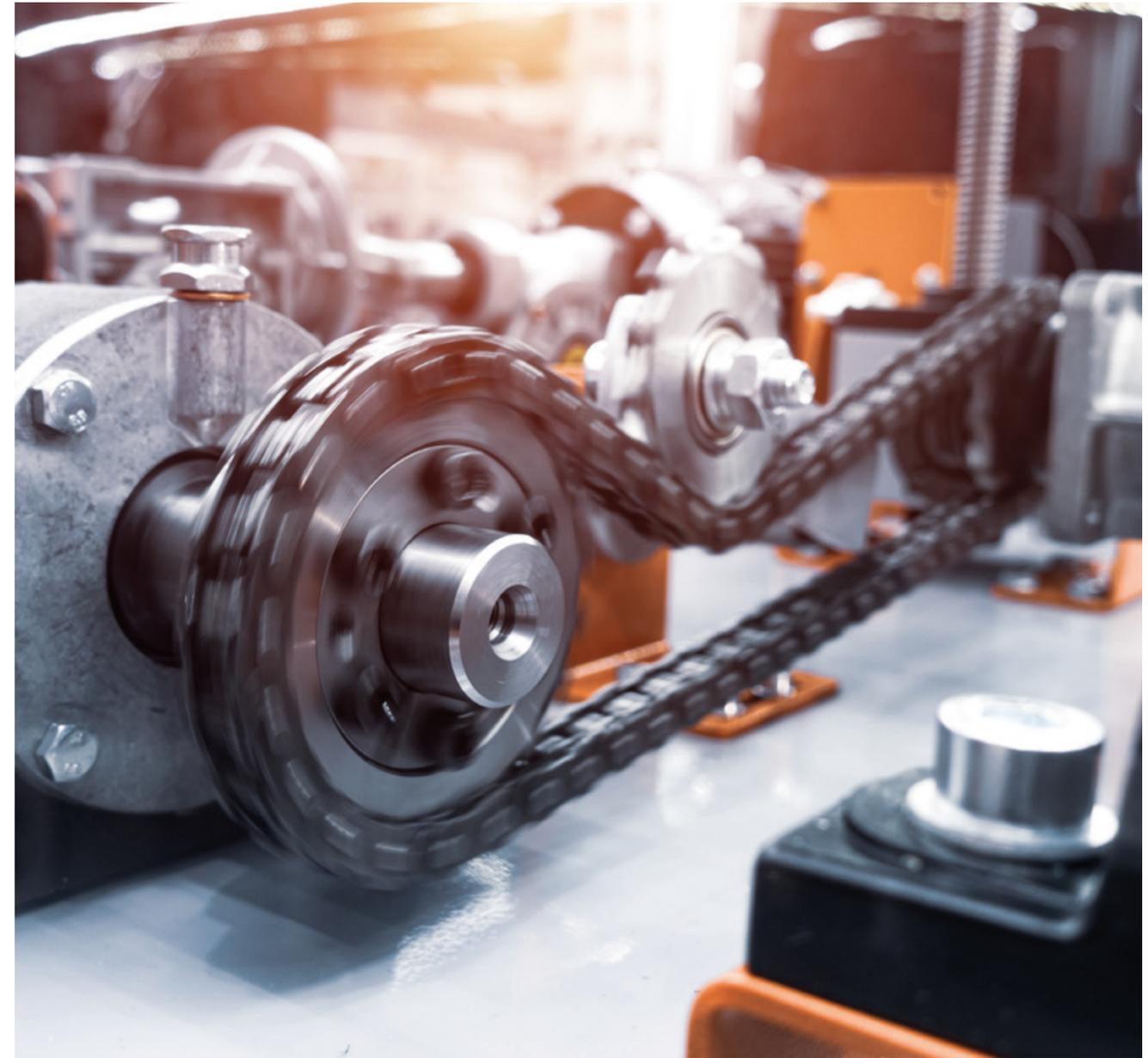
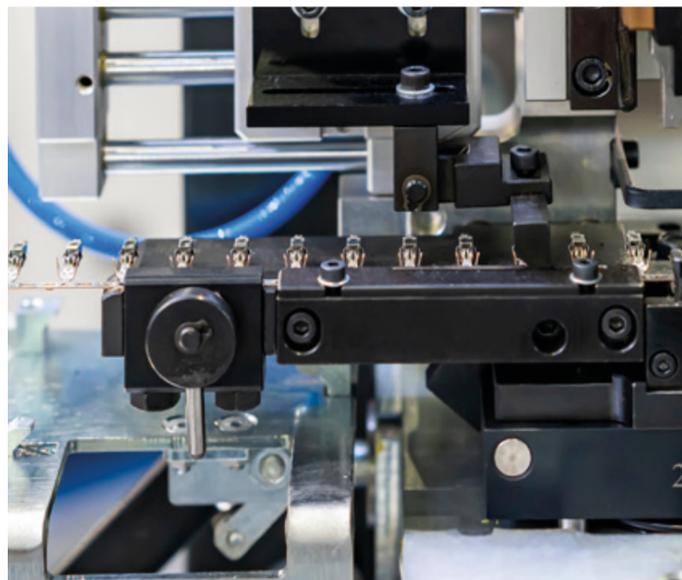


Machine tool industry

The lubrication of machine tools primarily has the task of ensuring that the machine operates at the limits of what is possible in terms of the process and material under extreme loads. The challenges this poses for the lubrication and maintenance of the machine are immense. These include the ingress of processing fluids, moisture and heat.

The functionality of the machine can only be ensured under these conditions if the bearings, punching and cutting tools, gears and chains are lubricated at regular intervals with the correct quantity of the appropriate lubricants.

Products from TUNAP help to fulfil these requirements, reduce costs, increase productivity and protect users. Our product portfolio ranges from lubrication solutions, including minimum quantity lubrication, for linear drives, bearings and spindles to chains, bedway guides and presses.



Rolling bearing industry

Rolling bearings are used to transmit force between moving parts with the aid of rolling elements. They are used in a wide range of machines and systems, from watches to ships. It is essential that they, like all moving components, are sufficiently lubricated to fulfil their specific requirements.

In this context, lubrication not only fulfils the task of preventing corrosion, wear and friction, but also provides protection against external environmental influences and ensures the removal of heat and dirt. These requirements are particularly demanding, as normally only a limited amount of lubricant is actually involved in the lubrication process.

The high-performance lubricants from TUNAP have therefore been precisely tailored to these requirements. They help to extend the service life and reliability of your rolling bearings while increasing efficiency and reducing noise levels.

TUNAP

Product selection guide

Rolling bearings



All-purpose grease	Watery environment	Heavy load	Moderate load	High temperatures	Extremely high temperatures	Food processing (NSF H1, halal, kosher)	High speed	Chemical resistance	Formulation without silicone oils	Product	NLGI	Lower service temperature in °C	Upper service temperature in °C	Further remarks	Page
		✓			✓	✓		✓	✓	TUNGREASE BA	2	-20	350	Extreme chemical stability	28
		✓			✓	✓		✓	✓	TUNGREASE 300	2	-40	250	Excellent material compatibility	26
		✓			✓	✓		✓	✓	TUNGREASE FBN	2	-40	300	Long-term lubrication	29
		✓		✓					✓	TUNGREASE 250	2	-30	200	High loads	26
	✓	✓		✓					✓	TUNGREASE CM-2/460	2	-20	160	High wear and corrosion protection	20
	✓	✓		✓		✓			✓	TUNGREASE CP-2/460	2	-40	160	Exceptional water resistance	22
✓	✓	✓		✓		✓			✓	TUNGREASE CP-2/200	2	-40	160	Optimum wear protection	22
✓	✓	✓		✓		✓			✓	TUNGREASE CP-2/50	2	-40	140	Optimum wear protection	21
	✓	✓				✓	✓		✓	TUNGREASE CP-2/25	2	-50	120	High speeds and heavy loads	21
✓		✓				✓			✓	TUNGREASE H1/EP-2	2	-30	130	Fully synthetic	23
✓			✓			✓			✓	TUNGREASE H1/EP-1 150	1	-40	130	Fully synthetic	23
✓			✓	✓			✓		✓	TUNGREASE LMO-2/40	2	-30	140	Particularly high ease of movement	23
✓	✓	✓	✓						✓	TUNGREASE CK-2	2	-20	140	High water resistance	19
✓			✓						✓	TUNGREASE DAB	2	-20	130	Food grease	29
✓			✓						✓	TUNGREASE EP-2	2	-30	120	Fully synthetic	23
✓			✓	✓			✓		✓	TUNGREASE LN-2/100	2	-40	160	Long-term lubrication	24
✓			✓	✓			✓		✓	TUNGREASE LP-2	2	-40	140	Low temperatures	24
✓			✓	✓			✓		✓	TUNGREASE LP-1 LT	1	-30	130	Low temperatures	25
		✓							✓	TUNGREASE LP-2/D6	2	-30	150	Damping	25

TUNAP

Product selection guide

Chains



Grease	Oil	Good adhesion	Low temperatures	High temperatures	Extremely high temperatures	High speed	Food processing (NSF H1, halal, kosher)	Formulation without silicone oils	Low dirt adhesion	Product	Base oil viscosity at 40 °C in mm ² /s	Lower service temperature in °C	Upper service temperature in °C	Further remarks	Page
✓		✓	✓	✓		✓	✓	✓		TUNGREASE CP-2/50	50	-40	250	Good creep behaviour, long-term lubrication and food-grade grease	21
	✓						✓	✓	✓	TUNFLUID DAB	70	-20	120	General purpose and food grade oil	33
	✓			✓				✓	✓	TUNFLUID HT 200	200	-30	240	OMC ₂ technology for friction optimisation	34
	✓	✓		✓		✓		✓		TUNFLUID HT 2200	2200	0	220	Excellent adhesion	34
	✓	✓				✓	✓	✓		TUNFLUID TAC 2000	2000	-25	180	Excellent adhesion	53
	✓			✓	✓			✓	✓	TUNFLUID HTC 100	100	-30	250	Good wetting properties	35
	✓			✓	✓	✓		✓		TUNFLUID HTC 260	260	-20	250	Good wetting properties	35
	✓			✓	✓		✓	✓	✓	TUNFLUID HTFG 100	100	-10	240	Good wetting properties	35
	✓			✓	✓	✓	✓	✓		TUNFLUID HTFG 260	260	-10	250	Good wetting properties	35
	✓				✓			✓		TUNERT FL 460	490	-20	250	Very low evaporation, excellent media resistance	42

TUNAP

Product selection guide

Valves and seals



Metal/plastic contact	Plastic contact	Chemical resistance	Drinking water certification	Food processing (NSF H1, halal, kosher)	Formulation without silicone oils	Product	NLGI	Lower service temperature in °C	Upper service temperature in °C	Further remarks	Page
✓	✓	✓		✓		TUNSIL A1	1-2	-50	160	Good compatibility with elastomers and plastics	30
✓	✓	✓		✓	✓	TUNGREASE 300	2	-40	250	Extremely high chemical stability	26
✓	✓	✓	✓	✓		TUNGREASE ST-3	3	-40	160	Drinking water approvals from KTW, ACS, WRAS	27
✓	✓				✓	TUNGREASE BE-2/200	2	-20	140	Compatibility with NBR, EPDM, FKM and silicone	27

Glass machinery

Centralised lubrication from IS machines	Centralised lubrication from AIS machines	Centralised lubrication from NIS machines	Plunger	Scissor knife	NSF registered	Food processing (NSF H1, halal, kosher)	Product	Base oil viscosity at 40 °C in mm ² /s	Lower service temperature in °C	Upper service temperature in °C	Further remarks	Page
			✓				TUNFLUID G 100 P	100	-20	120	Extremely low residue formation and very good oxidation stability	39
				✓			TUNFLUID HT 200	200	-30	200	Extremely low evaporation and residue formation	34
✓					H2		TUNFLUID HTG 200	200	0	220	Extremely low evaporation and residue formation	39
✓	✓			✓	H2		TUNFLUID HTG 220	220	-25	180	Extremely low evaporation and residue formation	39
✓	✓	✓	✓	✓	H1	✓	TUNFLUID HTFG 260	260	-30	250	Extremely low evaporation and residue formation	35

TUNAP

Product selection guide

Screws



Free from mineral	Metallic solids	No drop point	High load capacity	Release paste	Prevention from stick-slip	Protection from tribo-corrosion	Water resistant	Food processing (NSF H1, halal, kosher)	Product	Base oil viscosity at 40 °C in mm ² /s	Lower service temperature in °C	Upper service temperature in °C	Further remarks	Page
✓		✓							903	7	-40	60	Rust remover for disassembly	55
✓	✓	✓	✓	✓					TUNPAS AL	220	-40	250	Dry lubrication up to 1100 °C	16
✓	✓	✓		✓					TUNPAS CU	220	-35	250	Dry lubrication up to 1100 °C	17
✓		✓		✓			✓		TUNPAS MS	220	-40	200	Dry lubrication up to 650 °C	16
✓		✓	✓		✓	✓	✓		TUNPAS WP	220	-30	250	Dry lubrication up to 1450 °C	15
			✓	✓	✓	✓	✓		TUNGREASE CF-33	200	-20	200	Dry lubrication up to 1100 °C	17
✓			✓		✓	✓	✓	✓	TUNPAS H1	220	-45	200	Dry lubrication up to 800 °C	15

TUNAP

Product selection guide

Linear guides



All-purpose grease	Watery environment	Heavy load	Moderate load	High temperatures	Extremely high temperatures	Food processing (NSF H1, halal, kosher)	Low speed	High speed	Chemical resistance	Formulation without silicone oils	Product	NLGI	Lower service temperature in °C	Upper service temperature in °C	Further remarks	Page
		✓			✓	✓	✓		✓	✓	TUNGREASE BA	2	-20	350	Extreme chemical stability	28
		✓			✓	✓	✓		✓	✓	TUNGREASE 300	2	-40	250	Excellent material compatibility	26
		✓			✓	✓	✓		✓	✓	TUNGREASE FBN	2	-40	300	Long-term lubrication	29
		✓		✓			✓			✓	TUNGREASE 250	2	-30	200	High loads	26
	✓	✓		✓			✓			✓	TUNGREASE CM-2/460	2	-20	160	High wear and corrosion protection	20
	✓	✓		✓		✓	✓			✓	TUNGREASE CP-2/460	2	-40	160	Exceptional water resistance	22
✓	✓	✓		✓		✓	✓			✓	TUNGREASE CP-2/200	2	-40	160	Optimum wear protection	22
✓	✓	✓		✓		✓				✓	TUNGREASE CP-2/50	2	-40	140	Optimum wear protection	21
	✓	✓				✓		✓		✓	TUNGREASE CP-2/25	2	-50	120	High speeds and heavy loads	21
✓		✓				✓	✓			✓	TUNGREASE H1/EP-2	2	-30	130	Fully synthetic	23
✓			✓			✓				✓	TUNGREASE H1/EP-1 150	1	-40	130	Fully synthetic	23
✓			✓	✓				✓		✓	TUNGREASE LMO-2/40	2	-30	140	Particularly high ease of movement	23
✓	✓	✓	✓				✓			✓	TUNGREASE CK-2	2	-20	140	High water resistance	19
✓			✓							✓	TUNGREASE EP-2	2	-30	120	Fully synthetic	23
✓			✓	✓				✓		✓	TUNGREASE LN-2/100	2	-40	160	Long-term lubrication	24
✓			✓	✓				✓		✓	TUNGREASE LP-2	2	-40	140	Low temperatures	24
✓			✓	✓				✓		✓	TUNGREASE LP-1 LT	1	-30	130	Low temperatures	25
		✓					✓			✓	TUNGREASE LP-2/D6	2	-30	150	Damping	25

TUNAP

Product selection guide

Gearbox



Mineral oil	Fully synthetic	Heavy load	Moderate load	Low temperatures	Elevated temperatures	Wear protection	Friction optimisation	Food processing (NSF H1, halal, kosher)	Product	Viscosity index	Lower service temperature in °C	Upper service temperature in °C	Further remarks	Page
✓			✓						TUNGEAR CLP	≥ 100	-15	100	Extremely long service life	37
✓		✓				✓	✓		TUNGEAR	≥ 100	-20	120	Microfinishing with OMC ₂ technology	36
	✓	✓		✓	✓			✓	TUNGEAR H1	≥ 140	-40	140	Extremely long service life	36

Compressors

Mineral oil	Synthetic oil	Normal temperatures	Elevated temperatures	Longer oil life	Friction optimisation	Food processing (NSF H1, halal, kosher)	Product	Viscosity index	Lower service temperature in °C	Upper service temperature in °C	Further remarks	Page
✓	✓	✓					TUNAIR TS 46	≥ 110	-15	100	Semi-synthetic base oil	38
	✓	✓	✓	✓	✓		TUNAIR PAO	≥ 100	-20	120	Exceptionally efficient and thermally stable	38
	✓	✓	✓	✓		✓	TUNAIR	≥ 140	-40	140	Exceptionally efficient and thermally stable	38

TUNAP

Service and expertise

RESEARCH AND DEVELOPMENT AT HIGHEST LEVEL

Development | Quality control | Analysis | Chem.phys. properties | Test field | Performance tests

Extensive testing facilities are available at our headquarters in Wolfratshausen to determine the essential properties of lubricants. Our products undergo practical tests to assess their performance. These tests include the service temperature range, wear protection and corrosion protection, to name just a few examples. In addition, we subject our lubricating greases to further tests with regard to aspects such as rheology, shear behaviour and damping capacity.

Thanks to these extensive tests, TUNAP can carry out tests quickly and incorporate the findings into product development. This brings numerous advantages, including:

- ✓ Fast solutions thanks to high flexibility, short distances and development times
- ✓ Coordination of versatile testing options to individual customer requirements
- ✓ Ensuring and optimising performance

Measuring systems and test methods, among others:

- ✓ SRV tester according to DIN 51834
- ✓ Four-ball tester to DIN 51350
- ✓ Lubricant tester to Brügger to DIN 51347
- ✓ Salt spray test DIN EN ISO 9227
- ✓ EMCOR testing machine according to DIN 51802
- ✓ Thermogravimetric analysis
- ✓ FE9 rolling bearing testing machine to DIN 51819
- ✓ Determination of viscosity to DIN 51810-1
- ✓ Rolling stability tester to ASTM D 1831
- ✓ Determination of electrical conductivity according to DIN EN 27888



Customer proximity, flexibility and customized solutions

High-performance service

Advanced tribological test methods, specially adapted to the development requirements

Highest quality and environmental standards



Support from highly qualified chemists, engineers and technicians



Certified production and lubricants

TUNAP

Packaging sizes

Consultancy, development and production from a single source

We supply you with optimised containers so that you can design your processes effectively and cost-efficiently. We offer customised solutions that are precisely tailored to your needs. Our range of containers offers flexibility and guarantees efficiency and economy, saving resources and the environment, as well as reducing your in-house stock levels.

Depending on the product line, various containers are ready for use as required:

- ✓ Tube ✓ Aerosols ✓ Cartridge ✓ Hobcock ✓ IBC
- ✓ Cans ✓ Bottles ✓ Canister ✓ Barrel

We work with you to develop and produce your own brand.

We are also happy to work with you to develop product solutions tailored to the needs of your target group. Whether highly specialised or cost-optimised lubricating greases, oils and pastes, cleaners or additives of the highest quality - we supply what you need. As a manufacturer with our own aerosol filling facility, we have extensive knowledge of a wide range of application methods and packaging forms. This allows you to benefit from the optimum combination of product and application for your particular application.



TUNAP works.

We are at your disposal with help and advice to answer your questions and support you in selecting the right products, container sizes and packaging forms. We look forward to working with you and offering you high-quality lubricants and optimised solutions that meet your requirements.

We focus on your individual needs:



- Dispenser**
100 g
- Tubes**
20 ml up
to 300 ml
- Cartridges**
400 g / 500 g
- Two-chamber
cans / bag on
valve**
- Bottles**
30 ml up
to 1000 ml
- Single bag**
3 g up to 20 g

TUNAP

Common packaging sizes





For 50 years, the TUNAP Group has been an internationally operating manufacturer of aerosols and active ingredients for industrial and technical applications.

Research, development, production and sales from a single source: TUNAP systems maintain, protect and combine innovative chemistry with high sustainability standards.



We look forward to seeing you.

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