

KLÜBER
LUBRICATION

Extra-fine from a can



Lubricating oils, greases, fluids, pastes
or dry lubricants – Klüber sprays for
each and every application

Lubrication is our World



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We would like to thank Industriegemeinschaft Aerosole e. V. (Industry Association for Aerosols) for their kind supply of pictures.

Special lubricants at the press of a button

Lubricating oils, greases, pastes, fluids or dry lubricants; for coverage of large areas or spraying onto a precise spot as well as for guide lubrication; for assembly, cleaning or metal working; as a contact spray, Teflon coating, corrosion protection or rust removing agent – Klüber offers special lubricants in a spray can for every application.

Several decades ago, Klüber discovered the unique advantages of this application method for special lubricants: In the early 1960s, our first aerosol UMF-SPRAY (MOLYBKOMBIN UMF Spray today) was launched on the market. A synthetic high-temperature oil which, nowadays, is still in use for high-temperature lubrication points which are not easily accessible and, therefore, require extended relubrication intervals. Today, our standard programme comprises over 40 special lubricant sprays. On top of that, we offer around 100 'specials' which we manufacture for customers' private labels.

Sprays offer many advantages: Oils, fluids, pastes, greases and powders can be applied extremely easily and evenly as aerosols. Due to the fine distribution, only small quantities of lubri-

cant are required. This can lead to considerable savings, which is particularly interesting when costly lubricants are being applied. With sprays, even inaccessible friction points (e.g. in locks) can be reached. A useful benefit for both your maintenance and operational lubrication.

Over 80 years of experience in research, development and the application of special lubricants have confirmed to us that lubricants are design elements which have a decisive influence on the trouble-free operation of your production equipment. Klüber provides well-proven products which have been used successfully over many years. During comprehensive consultancy meetings, we will assist you in selecting the optimum special lubricant spray for your application – Klüber support and quality which, as

a global player with 30 subsidiaries, 14 production plants and over 1,700 employees, is at your disposal worldwide. We can supply you everywhere around the world reliably and on time – with a spray for every special lubricant application.

Make use of the benefits of this unique application with Klüber quality:

- Economical coverage with uniform film
- Reach every friction point at the press of a button
- Practice-proven over many years
- Consistent availability and quality worldwide
- Specialists in meeting your requirements

Optimum productivity with maximum profitability.





The fine art of lubricant application

Depending on the spray head geometry and the lubricant to propellant gas ratio, the spray pattern can be set to suit your exact process requirements. The lubricant quantities are dispensed precisely and economically to your advantage.

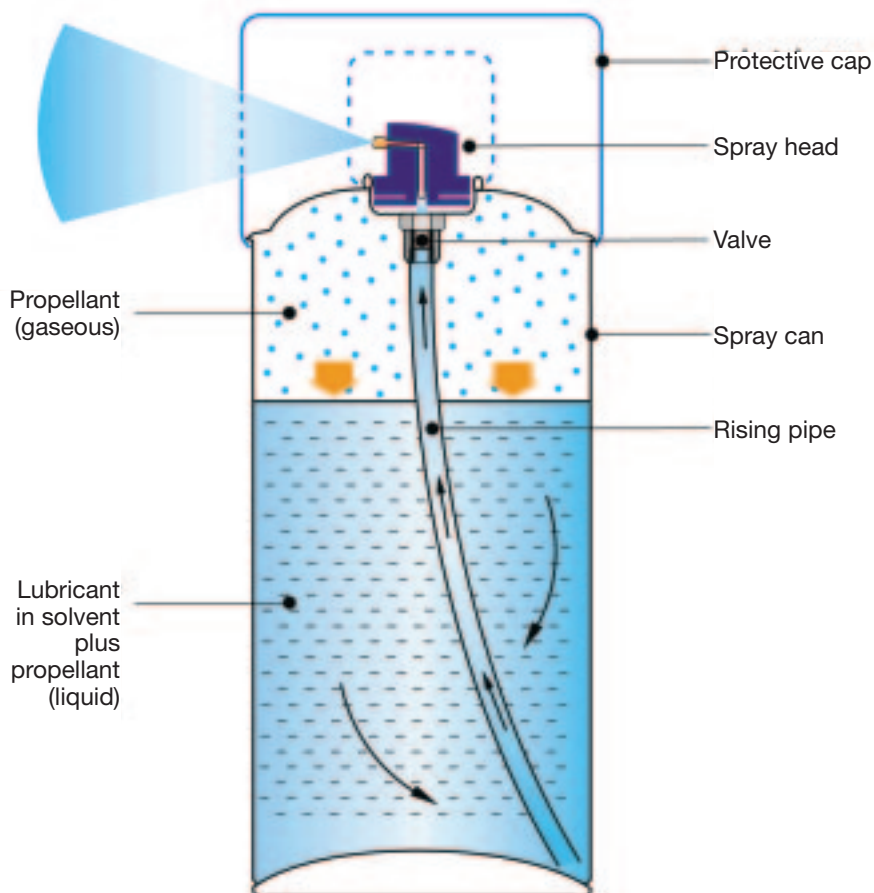
The spray – an application method with many possibilities

When the spray head is pressed, a mixture of lubricant, propellant and solvent is released due to the pressure inside the can. The propellant evaporates within a split second releasing a fine jet of lubricant spray – an aerosol.

No other distribution method can achieve this unique, fine and even distribution and thus a more economical, uniform and drier application. This fineness of distribution can be individually adjusted via the spray head and the lubricant to propellant gas ratio to suit your requirements.

For example, to protect the surfaces of open gears (gear wheels, racks) a relatively thick, adhesive lubricant film is required, whilst an extremely thin film is needed for preserving machine elements and components.

Our spray product portfolio is as wide and comprehensive as the operational and maintenance lubrication requirements in the many different areas of industry – always providing the optimum spray pattern to ensure trouble-free operation of your machinery.



The benefits: fine, exact and economical

When applied correctly, sprays offer a number of economic and process-related benefits:

- ❑ **Savings in maintenance and material costs:** thanks to minimal quantity lubrication and long durability in the can.
- ❑ **Lubrication according to your process requirements:** Whether it be economical coverage, drip-free, thick-film, precisely metered or applied with pin-point accuracy using a special application tube – the friction point remains clean and is always accurately and sufficiently lubricated.
- ❑ **Opt for reliable high-quality lubricants** over several years. Even after many operations, the lubricant remains protected in the clean, air-tight environment of the can, whilst the quality of lubricants in open containers may be affected by dust and dirt, micro-organisms or simply by exposure to air.
- ❑ **Make use of one of the most practical application methods:** A spray is ready for use straight away and can reach even inaccessible friction points at the press of a button, e.g. in lock lubrication.

All in all: with sprays you can combine economical and optimised process lubrication of reliably high quality with convenience of application. This keeps your machines and production running and hence contributes to your profitability.

A quick glance back in history

In 1927 the Norwegian Eric Rotheim applied for the first spray can patent. At that time he did not have the faintest idea of the importance this specific application method would gain in the future. It was not before 1945 that the first spray cans – filled with insecticide – came on the market. They proved to be successful and became the forerunner of a whole new range of products, whose application advantages would soon be used by many industries: Hair sprays, chain oils, paints, corrosion protection agents, ironing aids, Teflon sprays or nowadays even cosmetic water – industry and everyday life would be inconceivable without aerosol atomisers. Even the crisis in the 1980s, when CFC propellants fell into disrepute, was overcome quickly with the introduction of alternative, environmentally friendly propellants.

Sprays are becoming ever more popular.





Klüber sprays cover everything

For over 80 years we have constantly been facing new tribological challenges. This experience has enabled us to develop a product portfolio of over 2000 products and gain worldwide recognition as a competent special lubricants supplier. Our spray range is equally comprehensive, well-proven in practice and covering wide-ranging applications.

With our in-depth and broad industry based know-how, we help solve lubrication problems in all market segments and industries worldwide. Klüber high-performance special lubricants are successfully used by many OEMs (Original Equipment Manufacturers) for the initial lubrication of their machinery and are often exclusively recommended in their relubrication schedules. This is the best reference for our

Lubricating oils

Lubricating greases

Lubricating and assembly pastes

Corrosion protection agents and rust removers

Cleaning agents and metal working fluids

and the best reason for offering them in spray versions to complete and simplify your maintenance and operational lubrication requirements.

To give you a small insight into our performance portfolio we would firstly like to introduce you to a few all-rounders. The product tables on the following pages will give you a more complete overview of our special lubricant sprays.

QUIETSCH-EX Universal fluid

A brief spray is all you need to eliminate squeaking and jerky movements. Smoother running and sliding all round, no rust or, where rust has already formed, easy release of the components, and no more freezing – whether it be (car) locks, antennas, hinges or cables.

- Lubricates, cleans and displaces moisture**
- Easy disassembly of rusty screws etc.**
- Makes working with plastics and metals simple: saws and drills will cut through materials more easily**
- Drawers etc. run smoother**

ISOFLEX TOPAS L 32 N Low-temperature grease

A best-seller in the automotive industry with many OEM approvals, we have made this grease available in a spray can for one of the major German car manufacturers – a new business idea guaranteeing this customer huge turnover in his after-sales business with door lock greases. ISOFLEX TOPAS L 32 N Spray is a special low-temperature grease for gears, guideways, sliding and rolling bearings and Bowden cables. It can also be used as a contact spray for electrical systems in the car.

- Eliminates squeaking and creaking noises in vehicle interiors**
- Contains a UV indicator to ensure quality control for minimum lubricant quantities**
- Resistant to ageing and oxidation for optimum corrosion protection**

KONTASYNTH BA 100 Contact spray

Well-proven in practice for the lubrication of electrical contacts, friction points which are difficult to reach and for thin film lubrication.

- ❑ **Suitable for a wide variety of applications due to its good compatibility with plastics and seals**
- ❑ **Extremely easy application**
- ❑ **Safe lubrication at low and high temperatures**
- ❑ **Uniform quality over a long period of time**

An automotive supplier of leather and synthetic-fibre car seats found an interesting new application, which he had tested and approved: Applied economically in the right quantity, KONTASYNTH BA 100 is also very good at preventing creaking.

MOLYBKOMBIN UMF T4 High-temperature oil

Over its many years in use, this synthetic high-temperature oil has been continuously improved. It contains MoS₂ and is the ideal product for friction points exposed to high temperatures and with difficult access.

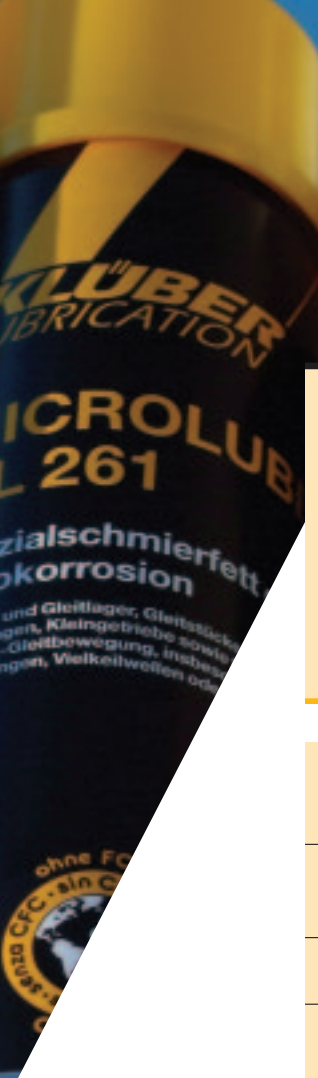
- ❑ **Extended relubrication intervals**
- ❑ **Improved running-in**
- ❑ **Counteracting seizure and wear**
- ❑ **Enabling non-destructive dismantling of screws and bolts**

Easy and economical operational and maintenance lubrication.



Klüber Sprays at a glance

Noise-dampening, biodegradable, neutral in taste and odour or resistant to temperatures – Klüber special sprays facilitate operational and maintenance

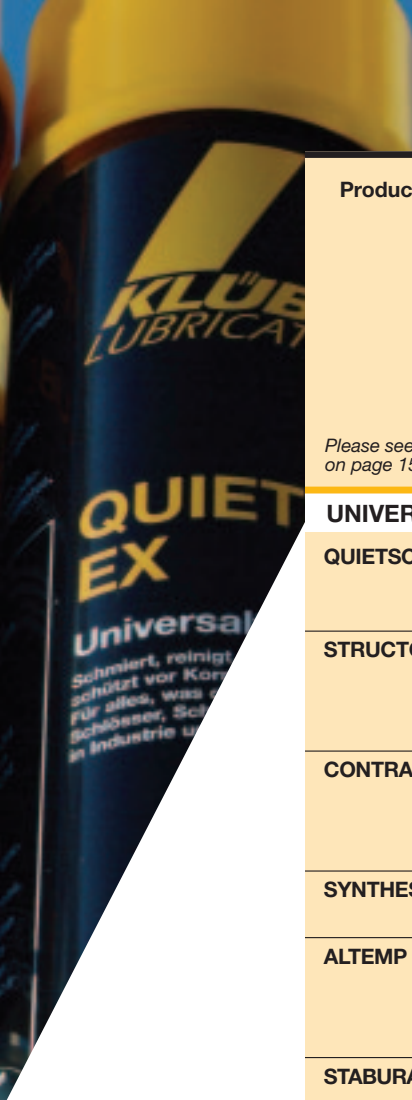


Product	Article number	Description	Application									
			Valves & Fittings	Bolts, screws	Seals	Electric contacts	Springs	Threaded spindles/spindles	Plain bearings/guides	Chains	Metalworking	Assembly
<i>Please see safety advice on page 15</i>												
SPRAYS FOR HIGH TEMPERATURES												
HOTEMP 2000	081133	Adhesive, fully synthetic high-temperature chain oil						x	x			
MOLYBKOMBIN UMF T4	081005	Molybdenum disulphide in a synthetic high-temperature oil		x			x		x	x		
UNIMOLY HTC METALLIC	081047	High-temperature paste containing graphite and metal		x						x		
WOLFRACOAT C	081150	High-temperature lubricating paste		x						x		
SPRAYS FOR LOW TEMPERATURES												
ISOFLEX TOPAS L 32 N	081282	Special low-temperature grease			x			x				
Klübersynth MZ 4-17	081258	Lubricating and anticorrosion oil with good low-temperature behaviour						x	x	x	x	
CONTACT SPRAYS												
Klüberalfa YM 3-30	081281	Electric contact and assembly spray			x					x		
KONTASYNTH BA 100	081225	Contact spray			x							
READILY BIODEGRADABLE SPRAYS												
Klüberbio CA 2-100	081236	Readily biodegradable multi-purpose oil						x	x			
Klüberbio Z 2-5	081223	Readily biodegradable rust removing agent								x	x	
UNIVERSAL APPLICATIONS AND LUBRICATING AND ASSEMBLY PASTES												
Klüberoil CM 1-220	081294	Universal chain oil							x			

lubrication for all main application types.
You don't believe us? Try them yourself!

			Approvals	Advantages/benefits	Pack sizes		
Ropes, Bowden cables	Rolling bearings	Gearwheels/gears	NSF H1	NSF H2	Readily biodegradable		
x	x			x		Highly viscous, fully synthetic oil for high temperatures; high adhesiveness, good penetrating properties; for the ejector lubrication in pressure diecasting; also for motor-cycle chains.	400 ml aerosol can
						Extended relubrication intervals for hard-to-reach lubrication points; improves running-in processes; protects against seizure and wear; ensures non-destructive disassembly of screws and other fasteners.	400 ml aerosol can
						Spray paste ensuring easy disassembly even after exposure to high temperatures, prevents stick-slip; electrically conductive up to 1200 °C.	400 ml aerosol can
						Good separation and lubrication of power-locking connections subject to static friction. Efficient lubrication of friction points subject to sliding or rolling friction. Improved sliding for easier assembly of press and transition fits. Non-destructive disassembly of power-locking connections.	250 ml aerosol can
x	x	x			x	Resistant to oxidation and ageing, good corrosion protection; contains UV indicator, which ensures quality checking even with minimum quantity lubrication. Also prevents creaking noise; approved by many car manufacturers.	400 ml aerosol can
x						Smooth running at low temperatures; good corrosion protection even when subjected to salt water; good wear protection.	400 ml aerosol can
						Non-flammable lubricating fluid. Easy to apply; resistant to most chemicals, extended relubrication intervals. Neutral towards most elastomers and plastics.	250 ml aerosol can
						For the thin-film lubrication of electric contacts; easy to apply; high ageing stability; wide service temperature range; contains a special base oil and is free of solvents; neutral towards most plastics and elastomers. Used in the automotive industry to prevent creaking noise of e.g. leather.	400 ml aerosol can
	x	x			x	Readily biodegradable, therefore particularly suitable for agriculture, forestry, water resources industry, horticulture and DIY.	250 ml aerosol can
					x	Fully synthetic, readily biodegradable rust-removing agent. Distributes and penetrates readily; no gumming; cleans and lubricates; provides good corrosion protection.	400 ml aerosol can
	x	x				Good corrosion protection, protects chains even when exposed to moisture; good penetrating properties ensure lower lubricant consumption, clean application; minimum chain wear due to good wear protection. Extends the service life of the chain and relubrication intervals. Reduced maintenance and spare parts costs.	400 ml aerosol can

x = preferred application



Product	Article number	Description	Application											
			Valves & Fittings	Bolts, screws	Seals	Electric contacts	Springs	Threaded spindles/spindles	Plain bearings/guides	Chains	Metalworking	Assembly	Maintenance, protection, separation	Cleaning
Please see safety advice on page 15														
UNIVERSAL APPLICATIONS AND LUBRICATING AND ASSEMBLY PASTES														
QUIETSCH EX	081071	Universal fluid							x	x	x		x	
STRUCTOVIS BHD	120108	Special lubricant based on mineral oil								x				
CONTRAKOR FLUID H1	081016	Thin-bodied, versatile fluid	x		x	x		x	x	x		x	x	
SYNTHESO W	081034	Lubricating wax with anticorrosive and separating effect						x	x		x	x		
ALTEMP Q NB 50	081038	Lubricating and assembly paste	x				x	x			x	x		
STABURAGS NBU 30 PTM	081275	Lubricating and assembly grease	x					x			x			
WOLFRAKOTE SSP	120102	Lubricating, assembly and screw paste	x					x			x			
SPRAYS FOR ROLLING AND PLAIN BEARINGS														
Klüberplex BE 11-462	081007	Grease based on mineral oil for rolling and plain bearings							x					
SPRAYS FOR THE FOOD-PROCESSING AND PHARMACEUTICAL INDUSTRIES														
Klüberoil 4 UH 1-15	081240	Low-viscous lubricating oil for the food-processing and pharmaceutical industries		x						x			x	
Klüberoil 4 UH 1-1500 N	081263	High-viscous lubricating oil for the food-processing and pharmaceutical industries					x		x					
PARALIQ P 40	081171	Food-grade lubricating oil				x	x	x	x					
PARALIQ 91	081042	Special food-grade lubricating oil and release agent for baking tins and molds											x	
Klüberfood NH1 14-222	081280	Universal food-grade lubricating grease						x			x			
Klüberfood NH1 K 32	081276	Food-grade anticorrosion lubricant, H1-registered											x	

			Approvals	Advantages/benefits	Pack sizes		
Ropes, Bowden cables	Rolling bearings	Gearwheels/gears	NSF H1	NSF H2	Readily biodegradable		
	x					Low-viscous universal fluid which can be used as lubricating oil, penetrating oil, rust remover, anticorrosion agent, cleaning oil or cutting oil. Also suitable to prevent freezing of locks, cables, car doors, gates, etc.	50 ml aerosol can 250 ml aerosol can
x		x		x		Highly viscous chain lubricant offering good corrosion and wear protection; very adhesive, considerably reduces or prevents the risk of contamination due to leakage especially in high-speed chains; adjustable spray nozzle.	250 ml aerosol can
						Long-term corrosion protection; dissolves rust and oxide layers; excellent lubricity; improves sliding; good distribution and penetration in narrow lubrication gaps due to low base oil viscosity; repels moisture and humidity; cleans, protects metal surfaces, also electric contacts.	400 ml aerosol can
	x					Multiple uses; thin-film lubrication; no raw materials containing silicone; forms a protective film resistant to salt water when dry.	400 ml aerosol can
						Universally applicable for assembly purposes and especially suitable for friction points subject to small and very small sliding movements under high static and dynamic loads. Prevents stick-slip and tribocorrosion; high pressure resistance.	400 ml aerosol can
						Assembly grease protecting against tribocorrosion. Excellent water resistance, therefore particularly suitable for outdoor applications and/or high humidity. Proven successful in hot and cold water valves and taps.	250 ml aerosol can
						Protects surfaces against fretting at high temperatures up to 1400 °C.	250 ml aerosol can
	x					Good wear protection and pressure resistance, therefore suitable for lubricating points subject to high loads; adhesive, water-resistant, good corrosion protection, wide service temperature range.	400 ml aerosol can
		x		x		Suitable for the lubrication of spindles and joints as well as chains subject to low loads and temperatures.	400 ml aerosol can
		x		x		Suitable for the lubrication of lifting, drive and conveyor chains in the food-processing industry.	400 ml aerosol can
		x		x		Neutral in odour and taste; complies with the German food regulations (LMBG para 30 and para 31), and with DIN V 10517 (food-grade lubricants). Can be used for many lubrication points in the food-processing and pharmaceutical industries.	250 ml aerosol can
				x		Neutral in odour and taste; low in germs < 100 CFU/g; NSF H1-registered; acc. to the German food regulations (LMBG) defined as accessory agent in the manufacture of food products, therefore it is particularly suitable as release agent for baking tins and molds.	400 ml aerosol can
	x			x		Good water resistance and corrosion protection even when exposed to humidity. Extended service life and relubrication intervals due to good wear protection.	400 ml aerosol can
				x		Excellent corrosion protection and suitability for use in the food-processing-industry.	400 ml aerosol can

x = preferred application



Product	Article number	Description	Application									
			Valves & Fittings	Bolts, screws	Seals	Electric contacts	Springs	Threaded spindles/spindles	Plain bearings/guides	Chains	Metalworking	Assembly
Please see safety advice on page 15												
SPRAYS CONTAINING SOLID MATTER												
MOLYBKOMBIN M 5	081026	Solid lubricant suspension in mineral oil						x				
GRAFLOSCON CA ULTRA	081215	Adhesive lubricant containing graphite						x	x	x		
GRAFLOSCON CA 901 ULTRA	081229	Extremely adhesive lubricant containing graphite						x	x			
UNIMOLY PA	081045	Sprayable, highly concentrated molybdenum disulphide paste	x					x		x		
SILICON AND TEFLON SPRAYS												
UNISILKON M 2000	081161	Silicone spray										x
FLUOROPAN T 20 mit Teflon	120129	Teflon spray	x					x		x		
SPRAYS AGAINST TRIBOCORROSION												
MICROLUBE GL 261	120101	Special lubricating grease for boundary friction conditions and tribocorrosion						x		x		
COATINGS												
MOLYBKOMBIN UMF T4	081005	Air-drying coating based on molybdenum disulphide-	x				x	x		x		
UNIMOLY C 220	081053	Bonded coating based on molybdenum disulphide	x			x	x			x	x	
CLEANING AGENTS												
Klüber Metallreiniger SMR	081244	Cleaning agent for metal and brakes										x
SPRAYS FOR METAL CUTTING												
Klübercut CO 6-102	081259	Metalworking oil								x		

			Approvals	Advantages/benefits	Pack sizes		
Ropes, Bowden cables	Rolling bearings	Gearwheels/gears	NSF H1	NSF H2	Readily biodegradable		
	x					Reduces friction and wear; molybdenum disulphide provides good emergency lubricating properties and improves running-in.	400 ml aerosol can
x	x					Easy to apply; resistant to high pressures; free from raw materials containing bitumen, heavy metals and chlorine; suitable to check the dynamic load-carrying pattern. Good water resistance.	400 ml aerosol can
x	x					Very adhesive and resistant to high pressures; free from raw materials containing bitumen, heavy metals and chlorine. Good corrosion protection.	400 ml aerosol can
	x					A special solid lubricant mixture protects against running-in damage and prevents fretting and clattering of slideways.	400 ml aerosol can
			x			Sliding and release agent for lubricating points subject to low loads; non-greasy; efficient surface protection, prevents sticking, residue formation and nozzle clogging. Also suitable for demoulding processes of rubber and plastic.	250 ml aerosol can
						Dry separating and lubricating agent, assembly aid; good wear resistance; low friction coefficient and stick-slip at low sliding speeds; good adhesion on iron, non-ferrous and solvent-resistant plastics and wood.	400 ml aerosol can
	x	x				Minimises running-in wear and prevents tribo-corrosion.	250 ml aerosol can
						Dry lubrication protects against the adhesion of dirt; particularly suitable for the lubrication of threaded spindles in textile stenter frames; can also be used as assembly aid; good adhesion to clean metal surfaces; high pressure resistance. Also for cores and ejector pins in pressure diecasting.	250 ml aerosol can
	x	x				Dry surfaces; high pressure resistance; low friction values when subjected to high surface pressures; improves running-in processes and smoothens surfaces subject to high loads; suitable for vacuum applications; dry surfaces in steel forming, therefore no degreasing necessary; suitable for materials susceptible to cold welding (e.g. special steel nuts and bolts).	400 ml aerosol can
						For badly soiled parts; dissolves oil and grease and removes wax; evaporates without forming residues; also suitable for cleaning brakes.	400 ml aerosol can
					x	Readily biodegradable; non-water polluting; low consumption; swarf can be directly transferred to scrapping re-cycling; no disposal of coolants; almost dry machines, tools and workpieces; improved working environment, less oil mist or oil vapour; longer tool life and better surface quality, because the undiluted metalworking oil reduces friction and heat generation.	400 ml aerosol can

x = preferred application



Wherever you need us

Lubricate your most difficult-to-access friction points economically, reliably and at the press of a button. Extend your oil change intervals and machine service life, reduce planned and unplanned maintenance downtime and increase the productivity of your plant – a number of added values whose benefits you can make use of for your operational and maintenance lubrication worldwide.

With addresses on all continents,
14 production plants and over
1,700 employees we can supply you
around the world reliably and on time.
You will find us wherever you need us –
a service which is unique within the
special lubricant world. Test us – it
will pay off for you.

Safety advice

The handling of spray cans is safe as long as the hazard warnings on the spray can labels are observed:

- ❑ **Protect the spray can from direct sunlight and temperatures above 50 °C** – this will increase the pressure of the gas mixture in the can and lead to risk of explosion.
- ❑ **Only use spray cans in well-ventilated areas** – inhaling large amounts of spray particles could affect your health and the build-up of aerosol spray in a confined space could lead to an increased risk of explosion.
- ❑ **Do not pierce or burn spray cans, even when empty** – this may lead to risk of explosion and hazard to health.
- ❑ **Never spray onto a naked flame or extremely hot objects** – as the solvent and gas mixture may ignite.
- ❑ **Do not smoke while using spray cans** – as the gas mixture may ignite.
- ❑ **Spray cans are not play things and must, therefore, be kept out of the reach of small children** – spray cans are a risk to your children's health.

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The data in this technical brochure is based on our general experience and knowledge at the time of printing and is intended to give information of possible applications to a reader with technical experience. It constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary tests with the selected product. We recommend contacting our Technical Consulting Staff to discuss your specific application. If required and possible we will be pleased to provide a sample for testing.

Klüber products are continually improved. Therefore, Klüber Lubrication reserves the right to change all the technical data in this technical brochure at any time without notice.



We are where you are.

Klüber Lubrication – the world market leader in speciality lubricants

- subsidiaries in over 30 countries
- more than 1,700 staff
- products available worldwide

Klüber Lubrication offers expert tribological solutions.

Through our worldwide presence, we meet customers' needs reliably and on time.

We supply tailor-made speciality lubricants to customers from nearly all branches of industry and around the world – oils, greases, bonded coatings, pastes and many more. Over 80 years of experience, industry-specific know-how, and exceptional test facilities all help to optimise our solutions.



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