KLÜBER LUBRICATION



The element that rolls the bearing

A selection of special lubricants for rolling bearings

Lubrication is our world



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Klüber speciality lubricants – always a good choice

Quality put to the test

- Klüber has more than 110 test rigs, which include standardised equipment as well as tools Klüber has developed to regularly test the quality of its products.
- Test results prove the high quality level and provide you with a solid basis for selecting the right lubricant.
- You can obtain Klüber products of consistent quality made at our production plants worldwide.

All-around service

- Comprehensive consulting and technical support
- Development of plant lubrication charts
- Automatic lube point monitoring by means of Klüber Maintenance Software (KMS)
- Analysis of your used lubricants and components
- Audits at your facility
- Tailor-made training for your staff

Benefit from experience

- Close cooperation with OEMs and operators since 1929
- Series supplier to many OEMs on all continents
- OEMs in all industries recommend Klüber lubricants for their components
- Alliances with partner companies for maximum user benefit
- The product range comprises oils, greases, pastes, waxes and bonded coatings, so the right lubricant for any application can be selected.

Time is money – we help to save you both by enabling

- Optimised processes
- Higher productivity
- Compliance with legal requirements and quality standards
- Reduction of maintenance times and repair costs
- Development partnerships giving you a head-start in innovation and differentiating yourself from the competition

Humans and the environment – what really counts

- Products that last a lifetime and enable minimum-quantity lubrication to be used help to save resources and reduce disposal quantities.
- Speciality lubricants optimised for higher efficiency reduce energy consumption and hence CO_2 emission.
- Clean, safe products that are easy to handle are the fundamental criteria used in the lubricant development by the Klüber experts.

High-temperature greases

Upper service temp.[1]	Speed factor [2] n·dm [min^{-1}·mm], approx.	Lower service temp.[1]	Base oil viscosity DIN 51562 [mm^2/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm^2/s] at approx. 100 °C / 212 °F	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener	Colour[5]
270 °C 518 °F	300 000	–60 °C –76 °F	290	85	240 to 270	PFPE	PTFE	white
260 °C 500 °F	600 000	–50 °C –58 °F	190	34	265 to 295	PFPE	PTFE	white
260 °C 500 °F	300 000	–40 °C –40 °F	420	40	265 to 295	PFPE	PTFE	white
220 °C 428 °F	300 000	–20 °C –4 °F	420[3]	34[3]	265 to 295	ester oil, PFPE	polyurea, solid lubricant	beige
200 °C 392 °F	1 000 000	–50 °C –58 °F	110	26.5	265 to 295	PFPE	PTFE	white
200 °C 392 °F	600 000	–40 °C –40 °F	130[3]	20[3]	240 to 270	PFPE, ester oil	PTFE, polyurea	beige

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.
2) Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.
3) The base oil viscosity stated herein is based on calculation as base oils are not miscible.



	Product	Article number	Description / application examples
	Klüberalfa® BH 83-292	090108	• Particularly wide service temperature range. • For reduced starting torque, also at low temperatures. • Long service life, also at medium speeds.
	BARRIERTA® KM 192	090122	• Wide service temperature range. • Very good corrosion protection. • Long service life under extreme alternating operating temperatures.
	BARRIERTA® L 55/2	090013	• The long-life grease for rolling bearings operating at high temperatures. • Very good long-term stability. • Very good corrosion protection. • Approved and recommended by many OEMs. • Tested and listed for use in the food processing industry according to NSF H1[4] .
	Klübersynth® BH 72-422	094072	• Patented hybrid grease concept for the long-term lubrication of slow, large rolling bearings, plain bearings and slideways. • Enables direct grease application on thin anticorrosion films, removing the need for initial cleaning.
	Klüberalfa® BF 83-102	090127	• For permanent high temperatures and speeds. • Speeds of more than 1 million mm x min^{-1} were achieved in testing.
	Klübersynth® BHP 72-102	094102	• Patented hybrid grease concept for long-term lubrication. • Suitable for wet and corrosive environments and in vibration applications.

4) This lubricant is certified as H1, which means that it has been designed and registered for incidental, technically unavoidable food contact. Experience shows that it can be used for equivalent applications in the cosmetic and pharmaceutical industry under the conditions described in the product information leaflet. Specific test results as e.g. biocompatibility, which could be an additional requirement for sensitive applications in the pharmaceutical industry, are not available for this product. Therefore, before using the lubricant adequate risk analyses have to be performed and, if necessary, suitable measures be taken by the manufacturer and user of installations in order to exclude the risk of health hazards and personal injuries.

5) Product colours may vary depending on the materials used.

High-temperature greases

Upper service temp.[1]	Speed factor[2] n·dm [min^{-1} ·mm], approx.	Lower service temp.[1]	Base oil viscosity DIN 51562 [mm^2/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm^2/s] at approx. 100 °C / 212 °F	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener	Colour[3]
180 °C 356 °F	1 000 000	–30 °C –22 °F	55	8.8	280 to 310	ester oil	polyurea	whitish pink
180 °C 356 °F	1 000 000	-40 °C -40 °F	80	11	250 to 280	ester oil	polyurea	beige
180 °C 356 °F	700 000	-40 °C -40 °F	97.5	14	265 to 295	ester oil	polyurea	beige
180 °C 356 °F	250 000	-20 °C -4 °F	435	36	250 to 280	ester oil	polyurea	beige
180 °C 356 °F	250 000	-30 °C -22 °F	440	36	310 to 340	ester oil	polyurea	light beige
160 °C 320 °F	500 000	-30 °C -22 °F	165	18	265 to 295	mineral oil, synthetic hydrocarbon	polyurea	light beige - light brown

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.
2) Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.
3) Product colours may vary depending on the materials used.

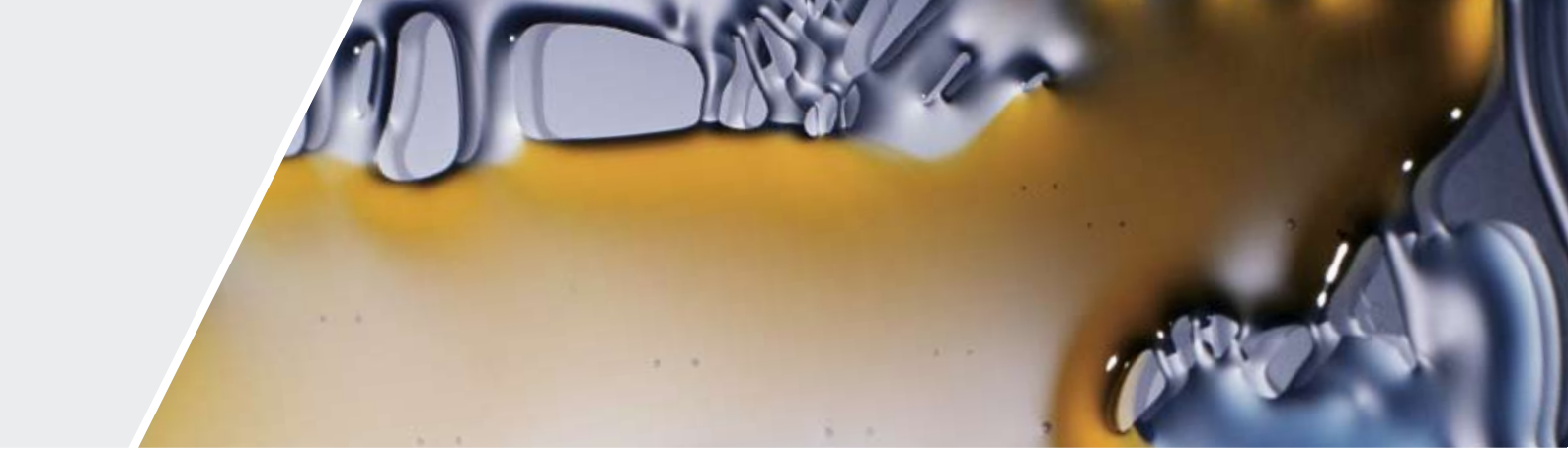


	Product	Article number	Description / application examples
	Klübersynth® HB 72-52	094028	• For the long-term lubrication of EPDM materials. • For electric motor bearings in ABS systems.
	Klübersynth® BEP 72-82	094092	• Excellent corrosion protection. • Long bearing life due to wear protection additives preventing premature material fatigue caused by vibration, high temperatures and high speeds. • For motor vehicle applications, e.g. pulleys, generators, clutch release bearings, fan bearings, wiper motors and drive-by-wire systems.
	Klübersynth® HB 72-102	094068	• For long-term lubrication within a wide service temperature range. • Very good corrosion protection. • For clutch release bearings in motor vehicles.
	PETAMO GHY 443	094052	• For the initial lubrication of highly loaded rolling and plain bearings. • For applications in plant and machine building, e.g. load rollers in conveyors, continuous casting machines.
	PETAMO GHY 441	094051	• For the relubrication of highly loaded rolling and plain bearings initially lubricated with PETAMO GHY 443.
	PETAMO GHY 133 N	094061	• For the long-term lubrication of, e.g., electric motor bearings, pulley bearings in motor vehicles, water pump bearings, hub units.

Low-temperature greases

Lower service temp.[1]	Upper service temp.[1]	Base oil viscosity DIN 51562 [mm²/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm²/s] at approx. 100 °C / 212 °F	Speed factor [2] n·dm [min⁻¹ ·mm], approx.	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener	Colour[3]
–70 °C –94 °F	110 °C 230 °F	9	2.6	1 000 000	280 to 320	ester oil	lithium soap	light yellow
–85 °C –121 °F	220 °C 428 °F	90	25	300 000	265 to 295	PFPE	PFTE	white

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.
2) Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.
3) Product colours may vary depending on the materials used.



	Product	Article number	Description / Application examples
	ISOFLEX® PDL 300 A	004074	• Heavy-duty grease for particularly low temperatures and low friction moments.
	BARRIERTA® KL 092	090123	• High- and low-temperature grease for low running torque at low temperatures and reliable long-term stability under high temperatures and influence of media.

High-purity and low-noise greases

Speed factor[2] n·dm [min^{-1} ·mm], approx.	Upper service temp.[1]	Lower service temp.[1]	Base oil viscosity DIN 51562 [mm^2/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm^2/s] at approx. 100 °C / 212 °F	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener	Colour[4]
2 000 000	160 °C 320 °F	–40 °C –40 °F	70	10	220 to 250	synthetic hydrocarbon, ester oil	polyurea	beige
1 000 000	180 °C 356 °F	–45 °C –49 °F	72	9.5	250 to 280	ester oil	polyurea	beige
1 000 000	150 °C 302 °F	–50 °C –58 °F	40[3]	9[3]	245 to 275	PFPE, ester oil	lithium soap	beige-yellowish
1 000 000	150 °C 302 °F	–50 °C –58 °F	25	5	245 to 275	ester oil	lithium soap	beige-light yellow
700 000	180 °C 356 °F	–40 °C –40 °F	100	11	250 to 280	ester oil	polyurea	beige

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.
2) Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.
3) The base oil viscosity stated herein is based on calculation as base oils are not miscible.
4) Product colours may vary depending on the materials used.



	Product	Article number	Description / application examples
	Klüberquiet® BQ 74-73 N	094098	• For lifetime lubrication. • For vertically mounted bearings subject to high speeds and/or with a rotating outer ring.
	Klüberquiet® BQ 72-72	094008	• For lifetime and long-term lubrication at high and low temperatures. • For double-sealed and capped rolling bearings. • Applied, e.g. in electric motors, fans, air conditioning systems and hard disc drives.
	Klüberquiet® BHQ 42-32	094103	• Significantly extended service life of the lubricating grease due to the patented hybrid grease concept. • Constant low noise level for long running time. • For the lifetime lubrication of double-sealed ball bearings.
	Klüberquiet® BQ 42-32	094074	• For low temperatures and low friction moments. • For the lifetime lubrication of double-sealed ball bearings like miniature and instrument bearings.
	Klüberquiet® BQH 72-102	094023	• For the long-term and lifetime lubrication at high temperatures. • For double-sealed and capped rolling bearings. • Applicable in electric motors, car radiator fans and much more.

High-speed and spindle bearing greases

Speed factor[2] n·dm [min^{-1} ·mm], approx.	Upper service temp.[1]	Lower service temp.[1]	Base oil viscosity DIN 51562 [mm^2/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm^2/s] at approx. 100 °C / 212 °F	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener	Colour[3]
2 300 000	120 °C 248 °F	0 °C 32 °F	30	6	250 to 280	ester oil	lithium soap	beige
2 100 000	120 °C 248 °F	–50 °C –58 °F	22	5	220 to 250	synthetic hydrocarbon, ester oil	polyurea	beige
2 000 000	120 °C 248 °F	–50 °C –58 °F	22	5	250 to 280	ester oil, synthetic hydrocarbon	polyurea	beige
1 600 000	120 °C 248 °F	–50 °C –58 °F	24	5	265 to 295	ester oil, synthetic hydrocarbon	lithium special soap	beige
1 000 000	130 °C 266 °F	–40 °C –40 °F	21	4.5	265 to 295	mineral oil, ester oil, synthetic hydrocarbon	barium complex soap	beige
1 000 000	120 °C 248 °F	–50 °C –58 °F	15	3.5	265 to 295	mineral oil, ester oil	lithium soap	yellow

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.
2) Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.
3) Product colours may vary depending on the materials used.



	Product	Article number	Description / application examples
	Klüberspeed® BFP 42-32	004271	• For hybrid bearings, angular contact ball and cylindrical roller bearings. • For horizontal, vertical and inclined mounting positions. • For very high speeds.
	Klüberspeed® BF 72-23	004246	• For high-speed spindle bearings. • Especially for inclined and vertical, but also for horizontal shafts in machine tools.
	Klüberspeed® BF 72-22	004043	• Very good resistance to water. • Very good corrosion protection. • For high-speed spindle bearings in machine tools. • Preferably for horizontal shafts.
	Klüberspeed® BF 42-12	004048	• For high-speed spindle bearings. • Preferably for horizontal shafts in machine tools. • Applicable, e.g. in cylindrical and tapered roller bearings.
	ISOFLEX® NBU 15	004026	• The spindle bearing grease for machine tools. • Tried and tested over many years and in many applications.
	ISOFLEX® LDS 18 Special A	004013	• Light grease with low starting torque for low temperatures and high speeds in rolling and plain bearings. • Applicable in, e.g., starter motors, machine tool spindles, textile spindles and spindles in electric utensils. • For horizontal shafts only.

High-load and heavy-duty greases for industrial applications

Speed factor[2] n·dm [min^{-1} ·mm], approx.	Upper service temp.[1]	Lower service temp.[1]	Base oil viscosity DIN 51562 [mm^2/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm^2/s] at approx. 100 °C / 212 °F	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener	Colour[3]
Heavy-duty lubricating greases								
400 000	140 °C 284 °F	–30 °C –22 °F	130	15	265 to 295	synthetic hydrocarbon, mineral oil	lithium special soap, solid lubricant	yellow
300 000	140 °C 284 °F	–20 °C –4 °F	540	32	265 to 295	mineral oil	lithium soap	brown
100 000	150 °C 302 °F	–10 °C 14 °F	1500	60	310 to 340	mineral oil	lithium soap, solid lubricant	black-grey
Heavy-duty greases for wet processing zones								
500 000	140 °C 284 °F	–15 °C 5 °F	220	19	245 to 275	mineral oil	calcium special soap	light brown
350 000	130 °C 266 °F	–20 °C –4 °F	220	19	285 to 315	mineral oil	barium complex soap	light brown
200 000	140 °C 284 °F	–10 °C 14 °F	500	31	245 to 275	mineral oil	calcium special soap	light brown

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.
2) Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.
3) Product colours may vary depending on the materials used.



	Product	Article number	Description / application examples
	Klüberlub® BEM 41-122	020158	• For pivoting bearings, plain bearings and rolling bearings subject to high surface pressure and/or oscillating movements. • Decreases tribocorrosion by forming tribo-layers.
	Klüberlub® BE 41-542	020269	• For low and medium speeds.
	Klüberlub® BE 41-1501	097115	• For low speeds.
	Klüberplex® BE 31-222	017132	• For ball bearings subject to high loads in wet processing zones. • At medium rotating speed.
	STABURAGS® NBU 12/300 KP	017062	• Hot water resistant. • Long-term grease for rolling and plain bearings. • Good pressure absorption capacity. • For rolling bearings with high percentages of sliding friction.
	Klüberplex® BE 31-502	017126	• For ball bearings subject to high loads in wet processing zones. • For low speeds.

High and heavy-duty greases for industrial applications

Speed factor[2] n·dm [min^{-1} ·mm], approx.	Upper service temp.[1]	Lower service temp.[1]	Base oil viscosity DIN 51562 [mm²/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm²/s] at approx. 100 °C / 212 °F	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener	Colour[3]
Lubricating greases for oscillating movements.								
600 000	150 °C 302 °F	–40 °C –40 °F	130	14	310 to 340	synthetic hydrocarbon, mineral oil	lithium special soap	yellow
400 000	140 °C 284 °F	–35 °C –31 °F	130	15.5	265 to 295	synthetic hydrocarbon, mineral oil	calcium special soap	beige-light brown
300 000	140 °C 284 °F	–30 °C –22 °F	290	20	310 to 340	mineral oil	lithium special soap	yellow-brown
Lubricating greases for roller bearings.								
1 000 000	160 °C 320 °F	–40 °C –40 °F	48	7.6	245 to 275	ester oil, synthetic hydrocarbon	lithium special soap	yellow-brown
600 000	150 °C 302 °F	–50 °C –58 °F	100	14.5	265 to 295	synthetic hydrocarbon	lithium soap	beige

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.
2) Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.
3) Product colours may vary depending on the materials used.



	Product	Article number	Description / application examples
	Klüberplex® BEM 41-141	020320	• For heavy-duty rolling and plain bearings. • For vibrations and oscillations. • Applicable, e.g., in main bearings in wind turbines.
	Klüberplex® BEM 34-132	017141	• For the long-term and lifetime lubrication of rolling bearings and linear motion guides. • Good wear protection in oscillating and small movements. • For applications like car hub units, water pump bearings and shaft bearings in power trains.
	MICROLUBE GL 261	20195	• For rolling and plain bearings. • For vibration and oscillating movements. • Good pressure absorption capacity. • Good wear protection. • Pumpable through auto lubrication systems.
	Klübersynth® BL 42-42	004264	• Optimised oil supply for rolling bearings with linear contact. • Product streamlining is possible due to manifold application options enabled by a wide service temperature range.
	ISOFLEX® TOPAS L 152	004144	• For medium-sized and large rolling bearings with an increased percentage of sliding friction. • Wide service temperature range, particularly suitable for low temperatures.

Greases for food-processing technology and the pharmaceutical industry

Speed factor[2] n·dm [min^{-1} ·mm], approx.	Upper service temp.[1]	Lower service temp.[1]	Base oil viscosity DIN 51562 [mm^2/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm^2/s] at approx. 100 °C / 212 °F	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener	Colour[4]
700 000	120 °C 248 °F	–45 °C –49 °F	30	6	310 to 340	synthetic hydrocarbon, ester oil	aluminium complex soap	whitish-yellow
500 000	150 °C 302 °F	–40 °C –40 °F	65	10	265 to 295	ester oil, synthetic hydrocarbon	silicate	beige
300 000	260 °C 500 °F	–40 °C –40 °F	420	40	265 to 295	PFPE	PTFE	white
300 000	120 °C 248 °F	–45 °C –49 °F	150	22	310 to 340	synthetic hydrocarbon	aluminium complex soap	beige
100 000	140 °C 284 °F	–30 °C –22 °F	420	45	265 to 295	synthetic hydrocarbon	silicate	beige

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.
2) Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.
3) This lubricant is certified as H1, which means that it has been designed and registered for incidental, technically unavoidable food contact. Experience shows that it can be used for equivalent applications in the cosmetic and pharmaceutical industry under the conditions described in the product information leaflet. Specific test results as e.g. biocompatibility, which could be an additional requirement for sensitive applications in the pharmaceutical industry, are not available for this product. Therefore, before using the lubricant adequate risk analyses have to be performed and, if necessary, suitable measures be taken by the manufacturer and user of installations in order to exclude the risk of health hazards and personal injuries.
4) Product colours may vary depending on the materials used.



	Product[3)]	Article number	Description / application examples
	Klübersynth® UH1 14-31	096029	• Smooth running grease. • Particularly suitable for low temperatures. • Good water resistance. • Good corrosion protection. • Good pumpability characteristics in central lubrication systems.
	Klübersynth® UH1 64-62	096046	• Good resistance to high and low temperatures. • Good water resistance. • Good corrosion protection. • For the long-term lubrication of, e.g., rolling bearings, joints, lifting cylinders, cam discs.
	BARRIERTA® L 55/2	090013	• The long-life grease for high-temperature rolling bearings. • Very good long-term stability. • Very good corrosion protection. • Approved and recommended by many OEMs.
	Klübersynth® UH1 14-151	096037	• Very good low-temperature characteristics. • Good wear protection. • Less susceptible to corrosion and premature bearing failure due to good water resistance. • For medium rotating speeds.
	Klüberfood® NH1 64-422	096076	• Good wear protection. • Good water resistance. • Good corrosion protection. • For the long-term lubrication of rolling bearings with low rotating speeds.

Electroconductive lubricating greases

Electric resistance based on DIN 53482[3] [Ω x cm]	Upper service temp.[1]	Lower service temp.[1]	Base oil viscosity DIN 51562 [mm²/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm²/s] at approx. 100 °C / 212 °F	Speed factor[2] n·dm [min⁻¹ ·mm], approx.	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener
≤ 10 000	150 °C 302 °F	–40 °C –40 °F	150	19	1 000 000	280 to 295	synthetic hydrocarbon	lithium soap, solid lubricant

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.
2) Speed factors are guide values which depend on the type and size of the rolling bearing type and the local operating conditions, which is why they have to be confirmed in tests carried out by the user in each individual case.
3) Spark gap 1 cm, electrode surface 1 cm²
4) Product colours may vary depending on the materials used.



	Colour[4)]	Product	Article number	Description / application examples
	black	Klüberlectric® BE 44-152	091053	• For the long-term lubrication of rolling bearings subject to static electricity, e.g. in electric motors, paper making machines, copying machines, film stretchers, guides in belt conveyors and fans.

Cleaning and protecting rolling bearings

Description / application examples	Solvent
Solvent and cleansing agent for the cleansing of metallic surfaces.	hydrocarbon
Solvent and cleansing agent for pre-cleaning that can be used in order to achieve optimum adhesion for the subsequent application of PFPE / PTFE-based grease.	PFPE

Description / application examples	Base oil	Thickener	
Anticorrosion fluid with lubricating effect for rolling bearings offering good wear protection in case of micro-movements.	synthetic hydrocarbon	lithium soap	
Synthetic lubricating and corrosion protection oil for the protection of rolling bearings.	ester oil, synthetic hydrocarbon	not applicable	
PFPE-based anticorrosion fluid for bearing protection. Can be followed by PFPE/PTFE greases without pre-cleaning.	PFPE	not applicable	

1) Product colours may vary depending on the materials used.



	Colour[1)]	Product	Article number
	colourless	Klüber Metallreiniger SMR-Spray	081244
	colourless, clear	Klüberalfa® XZ 3-1	810033

	Base oil viscosity DIN 51562 [mm²/s] at approx. 40 °C / approx. 104 °F	Colour[1)]	Product	Article number
	40	beige, milky	Klübersynth® BZ 44-4000	047076
	20	brown, clear	Klübersynth® MZ 4-17	047122
	–	colourless, clear	Klüberalfa® XZ 3-3	810036

Assembly pastes

Description / application examples	Upper service temp.[1]	Lower service temp.[1]	Base oil viscosity DIN 51562 [mm²/s] at approx. 40 °C / 104 °F	Base oil viscosity DIN 51562 [mm²/s] at approx. 100 °C / 212 °F
High-temperature lubricating paste for the assembly of rolling bearings and positive connections. Above 200 °C/392 °F it acts as a dry lubricant. Makes dismantling easier.	1 000 °C 1 832 °F	–40 °C –40 °F	42	10
Fretting corrosion-preventing lubricating and assembly paste with solid lubricants that is suitable for pressing on and pressing in of rolling bearings.	150 °C 302 °F	–15 °C 5 °F	46	6.5
White lubricating and assembly paste for applications in the food processing and pharmaceutical industry.[2]	120 °C 248 °F	–45 °C –49 °F	200	75

1) Service temperatures are guide values which depend on the lubricant's composition, the intended use and the application method. Lubricants change their consistency, apparent dynamic viscosity or viscosity depending on the mechano-dynamical loads, time, pressure and temperature. These changes in product characteristics may affect the function of a component. The service temperatures stated herein do not necessarily refer to DIN 51825.

2) This lubricant is certified as H1, which means that it has been designed and registered for incidental, technically unavoidable food contact. Experience shows that it can be used for equivalent applications in the cosmetic and pharmaceutical industry under the conditions described in the product information leaflet. Specific test results as e.g. biocompatibility, which could be an additional requirement for sensitive applications in the pharmaceutical industry, are not available for this product. Therefore, before using the lubricant adequate risk analyses have to be performed and, if necessary, suitable measures be taken by the manufacturer and user of installations in order to exclude the risk of health hazards and personal injuries.

3) Product colours may vary depending on the materials used.



	Worked penetration DIN ISO 2137 [0.1 mm], approx.	Base oil	Thickener	Colour[3)]	Product	Article number
	325 to 340	ester oil, PAG	combination of solid lubricants	black	Klüberpaste® HEL 46-450	089032
	250 to 280	mineral oil	calcium complex soap	beige	Klüberpaste® ME 31-52	005115
	310 to 340	synthetic hydrocarbon	PTFE/solid lubricants	white	Klüberpaste® UH1 84-201	005113

Notes

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