OKS®

Speciality Lubricants for
industrial applications

www.oks-germany.com

INTELLIGENT PRODUCTS
FOR CRITICAL FIELDS OF APPLICATION

Issue
2013/2014

Speciality Lubricants
Maintenance Products

35 YEARS OF TRIBOLOGICAL EXPERTISE – MADE IN GERMANY

OKS – your professional partner for chemotechnical special products

The OKS brand stands for high-performance products for reducing friction, wear and corrosion. Our products are used in all the areas of production and maintenance technology in which the performance limits of classic lubricants are exceeded.

Quality – Made in Germany

The continued success of OKS for 35 years is decisively characterised by the high quality and reliability of our products, as well as the fast implementation of customer requirements through innovative solutions.

The products developed by OKS engineers and chemists are produced under strict quality requirements in Maisach near Munich, Germany, our company's headquarters. Worldwide distribution is carried out just-in-time from Maisach, supported by a modern logistics centre.

The long-standing certifications by the TÜV SÜD Management Service GmbH in the fields of quality (ISO 9001: 2008), environment (ISO 14001: 2004) and work protection (OHSAS 18001: 2007) are proof of the high OKS quality standard.

A company of the Freudenberg Group

Since 2003 OKS Spezialschmierstoffe GmbH has been part of the international Freudenberg Group, with headquarters in Weinheim, Germany. We utilize the comprehensive know-how and the innovative power of the Freudenberg Chemical Specialities (FCS) division for the further development of new products and markets to ensure the continued dynamic growth of our company in the future.

OKS – Partner to Trade

Our speciality lubricants and chemotechnical maintenance products are sold exclusively via the technical and mineral oil trades. The consistent strategy of "sales only via trade", the smooth processing of orders and our comprehensive technical service make us one of the preferred partners for demanding customers worldwide. Use our specialist's know-how. Put us to the test.

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We focus on the development of customer-specific lubricant solutions in close cooperation with our trade partners.

Experts from a wide range of different disciplines work in our laboratories with state-of-the-art systems and test equipment to modify existing or develop new products for special application cases.

Pastes for easy assembly and dismantling

The structure of pastes basically corresponds to that of greases. However, the share of solid lubricants is notably higher. This ensures reliable lubricating, separating and corrosion protection effects also when used under extreme temperature and pressure conditions and aggressive media. Pastes are used at screwed connections as well as when pressing in pins and bolts and furthermore at gearwheels.

Characteristics of pastes

Characteristics	Standard	Description
Press-fit test		Provides information about the lubricating effect of pastes at very high pressure and low sliding speed (relevant for assembly pastes)
Thread friction coefficient	DIN EN ISO 16047	The friction coefficient μ when screws and nuts are tightened is determined on a screw test bench (relevant for screw pastes)
Breakaway torque	DIN 267-27	Ratio of the required breakaway torque when loosening the screwed connection to the tightening torque
Operating temperature		Lubrication: Oil and solid lubricants are effective Separation: After the oil has evaporated, separating effect through solid lubricants

Fields of application of pastes

The field of application of pastes is determined to a great extent by the solid lubricant contained.

Solid lubricant	Maximum operating temperature [°C]	Field of application
PTFE	< 300	Mounting, medium influence
MoS_2	< 450	Mounting, press-on processes
Aluminium	< 1100	High-temperature screwed connections
Copper	< 1100	High-temperature screwed connections, "Anti-Seize" paste, el. conductivity
"Oxide" ceramics	< 1400	Extreme-temperature screwed connections, stainless steel screwed connections

Oils with high-performance additives for reliable lubrication

Oils dissipate heat well from the lubricating point. In addition, they have an notedly good creep and wetting behaviour. Therefore oil lubrication is often used at high temperatures or high speeds of rotation. Typical fields of application are gears, chains, friction bearings, hydraulics and compressors.

Characteristics of oils

Characteristics	Standard	Description
Viscosity	DIN 51562 P1	Dimension for the inner friction of liquids
ISO VG	DIN 51519	Classification of oils into viscosity classes based on DIN 51561
Operating temperature		Temperature range of the optimal performance
Flashing point	DIN ISO 2592	Lowest temperature at which the vapour-air mixture catches fire through extraneous ignition
Setting point	DIN ISO 3016	The lowest temperature at which the oil is still just capable of flowing

Properties of base oils

The base oil plays a decisive role in the selection of a lubricating oil. Mineral oils, synthetic hydrocarbons (polyalphaolefines = PAO), ester, polyglycols and silicone oils differ notably in their physical properties and chemical behaviour.

Properties	Mineral oils	Synthetic hydro-carbons (PAO)	Ester oils	Polyglycol oils	Silicone oils
Density 20°C [g/ml] approx.:	0.9	0.85	0.9	0.9 – 1.1	0.9 – 1.05
Setting point [°C] approx.:	-40 → -10	-50 → -30	-70 → -35	-55 → -20	-80 → -30
Flashing point [°C] approx.:	< 250	< 200	200 → 270	150 → 300	150 → 350
Resistance to oxidation	-	+	+	+	++
Thermal stability	-	+	+	+	++
Compatible with plastics	+	+	-	type-dependent	+

The miscibility of different lubricating oils is influenced considerably by the base oils and has to be observed correspondingly when changing the lubricating oil, under consideration of the viscosity.

Greases for long-term lubrication under critical operation conditions

If, for structural reasons, no oil lubrication is possible or if a cooling function is not required, a lubricating grease is used in most cases. Greases consist of a base oil that is bound by a thickener (soap). This ensures that the lubricant remains at the lubricating point. There it ensures permanently effective protection against friction and wear and seals the lubricating point against external influences such as moisture and foreign matter. Greases are often used at rolling and friction bearings, spindles, fittings, seals, guides, but also at chains and gears.

Characteristics of greases

Characteristics	Standard	Description
Base oil viscosity	DIN 51 562 P1	Influences the speed range and load capacity of a grease
Drop point	DIN ISO 2176	Exceeding of this temperature results in destruction of the grease structure
Operating temperature	DIN 51 805 – Min DIN 51 821/2 – Max	Temperature range of the optimal performance at roller bearing greases
Speed parameter (DN factor)		Maximum rotating speed up to which a grease can be used in a roller bearing
Consistency	DIN ISO 2137	Dimension for the stability of a grease (worked/unworked penetration)
NLGI grade	DIN 51 818	Classification to the consistency classes to DIN ISO 2137
Four-ball test	DIN 51 350	Determining of the wear protection and of the maximum load capacity of a roller bearing grease

Influence of the thickener on the performance features of a grease

The main difference in the structure of greases compared to oil is the thickener which determines the typical performance features of a grease.

Thickener (soap)	Operating temperature [°C]		Drop point [°C]	Water resistance	Load capacity
	Mineral oil	Synthetic oil			
Calcium	-30 → 50	not applicable	< 100	++	+
Lithium	-35 → 120	-60 → 160	170/200	+	-
Al-complex	-30 → 140	-60 → 160	> 230	+	-
Ba-complex	-25 → 140	-60 → 160	> 220	++	++
Ca-complex	-30 → 140	-60 → 160	> 190	++	++
Li-complex	-40 → 140	-60 → 160	> 220	+	-
Bentonite	-40 → 140	-60 → 180	without	+	-
Polycarbamide	-30 → 160	-40 → 160	250	+	-

In addition to the miscibility of the base oils, the compatibility of the thickeners has to be taken into account at greases.

Dry lubricants – the alternative for special application cases

Dry lubricants can be classified into powdery solid lubricants, wax-like sliding films and solid-content bonded coatings.

Structure of bonded coatings

Bonded coatings are solid lubricants (usually MoS_2, graphite or PTFE) that are embedded in a binder. A solvent that evaporates during the curing or drying time is added for the distribution of the bonded coating.

Application of bonded coatings

Coating with a bonded coating is carried out after thorough preparation of the surface through immersion, spraying or painting. The dry bonded coating layer is between 10 and 20 µm thick. It withstands high pressure loads and extreme temperatures, does not take up soiling and is characterised by very high chemical stability and an excellent long-lasting lubrication.

Bonded coatings are used in many technical fields, e.g. for nuts, screws, bolts, washers, springs, sealing rings, gearwheels, slideways and threaded spindles.

In comparison to classical lubricants bonded coatings are characterised by

- Dry lubrication without oil and grease
- Clean lubrication without dirt adhesion
- Very low friction values can be achieved
- High temperature resistance
- No evaporation losses
- Use in vacuum possible
- Chemical-physical stability
- Effectiveness also at low sliding speeds
- Long-term and lifetime lubrication
- Highly economical

Increase in performance through additives

The task of the additives is to optimize lubricants for the respective application with regard to corrosion and wear protection, emergency running properties, oxidation stability, temperature characteristics and wetting behaviour. The careful selection and the intelligent combination of the additives guarantee the high performance of OKS speciality lubricants.

All OKS products with this trade mark contain organic molybdenum complex compounds for improved performance.

Mo_x - Active

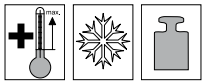
LUBRICANT SOLUTIONS FOR CRITICAL APPLICATION CONDITIONS

OKS experts stand for innovative ideas and product concepts

Movement without friction is a dream of mankind. But friction still remains a fact of life. To ensure "frictionless" running of your machines, OKS can provide a lubricant solution for almost any application. Whether the lubrication of roller bearings, chains or slideways, under extreme conditions of use or under the influence of aggressive media – with lubricants from OKS you solve your tribological problems safely and reliably.

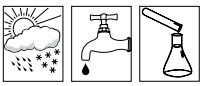
Extreme conditions of use

Ever more productive machines, combined with extended operating lives push materials and machine elements to their stress limits. OKS offers lubricants that unfold their full performance even under these conditions. Various OKS speciality lubricants resist extreme temperatures, high temperature fluctuations or high pressures.



Lubrication under the influence of aggressive media

Whether in permanent use with contact to acids or lyes at columns, boilers or pipings in process engineering industries, at corrosive influences, at outdoor weathering or under the influence of salt water, your plants remain completely operational also under these conditions thanks to OKS speciality lubricants.



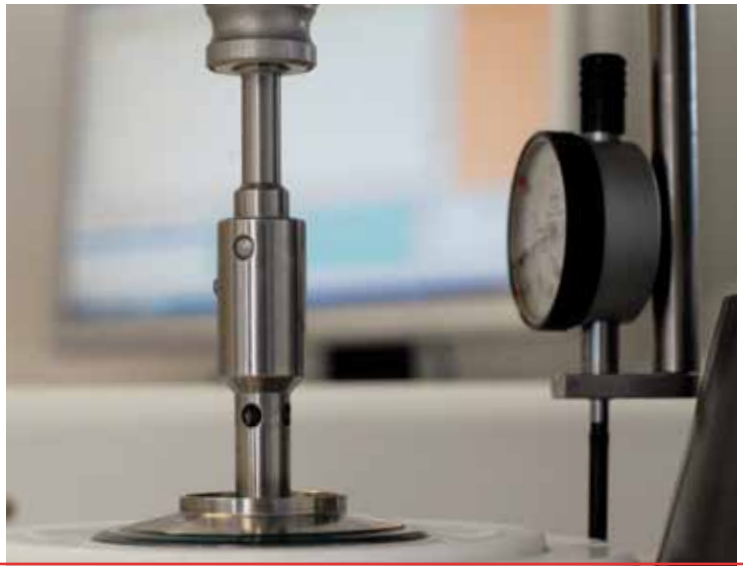
Plastic lubrication

New design developments mean that friction pairs are increasingly being used that place particular requirements of the compatibility of the lubricants. Special alloys or ceramic elements are used. Material combinations of plastic/metal and plastic/plastic are increasingly also being used. OKS provides lubricants that are compatible with many materials.

Speciality lubricants for food processing technology

OKS develops a wide range of lubricants specially for the demanding hygiene requirements in food processing technology.

NSF



Fields of Application

- Roller bearings
- Friction bearings
- Chains
- Pivoting bearings
- Levers
- Slideways
- Linear guide systems
- Spindles
- Threaded connections
- Chucks
- Seals
- Valves
- Press fittings
- Moulding
- Splined shafts
- Camshafts
- Springs
- Brakes
- Open gears
- Closed gears
- Worm gears
- Cutting tools
- Measuring devices
- Precision mechanics
- Hinges
- Wire cables
- Hydraulics
- Compressors
- Separating – Mould release
- Separating – Weld release
- Cleaning
- Electrical contacts
- Dust removal
- Leak detection
- Belt drives
- Offshore
- Storage/Shipping
- Steel construction
- Sheet-metal processing
- Rust remover
- Foam cleaning

Properties

- High temperatures
- Low temperatures
- High speeds
- Heavy loading
- Effects of weathering
- Effects of water
- Effect of chemicals
- Corrosion protection
- Compatible with plastics
- Long-acting
- Environmentally friendly
- Workplace-friendly
- For food processing technology
- Sprayable with Airspray System
- Electrical engineering/ Electronics
- Foam forming

SELECTION TABLE

OKS No.														
Pastes														
217	●			●										
230	●			●										
235/2351	●													
252	●			●	●						●			
273		●			●					●				
277/2771				●	●	●	●			●				
280	●													
1103	●	●						●					●	
Oils														
30				●										
300				●										
310	●			●										
335	●			●										
350	●			●			●							
352/3521	●			●			●							
353	●			●			●							
354/3541	●			●		●	●							
360/361					●	●	●		●					
387	●			●							●			
1000	●	●								●				
3570/3571	●					●					●			
3710		●						●			●			
3720							●		●		●			
3725							●		●		●			
3730							●		●		●			
3740							●		●		●			
3750/3751					●		●		●		●			
3760					●		●		●		●			
3770							●		●		●			
3775							●		●		●			
3780							●		●		●			
3790											●			

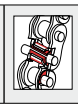
To provide a better overview only the main applications are listed.

																OKS No.
Pastes																
							●		●							217
				●	●	●			●							230
							●		●							235/2351
			●	●			●									252
	●		●	●		●						●				273
	●		●		●	●			●		●					277/2771
					●											280
																1103
Oils																
	●	●				●						●				30
	●				●	●						●				300
	●	●	●	●	●	●										310
	●		●		●	●	●									335
	●	●		●	●											350
	●	●	●	●	●	●								●	●	352/3521
	●	●	●	●	●	●								●	●	353
	●	●	●	●	●	●								●	●	354/3541
																360/361
	●	●	●	●	●	●										387
				●	●				●						●	1000
		●	●		●											3570/3571
	●	●		●	●											3710
●	●	●										●				3720
●	●	●										●				3725
●	●	●										●				3730
●	●	●										●				3740
	●	●	●	●	●									●	●	3750/3751
	●	●	●	●	●							●		●	●	3760
	●	●			●											3770
	●	●			●											3775
	●	●			●											3780
		●		●												3790

SELECTION TABLE

OKS No.														
Greases														
403					●	●	●		●					
404	●								●					
410				●										
416		●	●											
418	●													
420	●			●			●							
422	●		●			●	●		●					
424	●			●	●									
425	●		●			●	●		●					
427	●			●	●	●	●							
428				●										
432	●					●	●							
433				●					●					
464	●	●							●	●			●	
467									●	●				
468									●	●	●			
469									●	●	●			
472		●	●		●					●	●			
473					●		●				●	●		
474					●	●	●					●		
475		●	●		●					●	●			
477								●			●			
479	●						●				●			
490	●		●	●	●	●								
495				●		●								
1112							●	●		●				
1133		●				●	●			●				
1140	●						●							

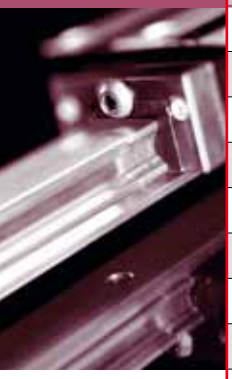
To provide a better overview only the main applications are listed.

																OKS No.
																	Greases
●	●	●	●	●	●	●					●			●		403
●	●		●	●	●	●										404
●	●		●	●	●	●										410
●	●		●	●	●	●										416
●	●		●			●										418
●	●		●		●	●						●				420
●	●		●	●	●	●					●					422
●	●		●		●	●						●				424
●	●		●	●	●	●					●					425
●	●				●						●	●				427
●	●		●									●				428
●	●		●													432
●	●		●	●							●					433
●	●															464
	●				●				●							467
	●				●				●							468
	●		●						●							469
●	●		●	●		●										472
●	●	●	●									●				473
●	●	●	●									●				474
●	●		●	●		●										475
	●		●			●			●							477
●	●		●			●										479
											●	●				490
		●			●						●	●		●		495
									●							1112
●	●		●	●										●		1133
●	●															1140

SELECTION TABLE

Greases

OKS No.														
1144	●					●	●			●				
1148	●								●	●				
1155	●	●				●	●			●				
4100				●										
4200	●					●	●							
4220	●			●				●		●	●			
4230	●			●				●		●	●			
4240	●			●				●	●					



Dry Lubricants

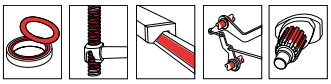
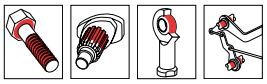
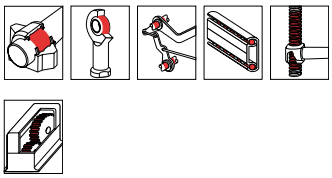
100	●	●		●										
110	●	●		●										
500				●					●					
510	●	●		●					●					
530	●			●										
536	●					●					●			
570	●	●						●						
575	●	●						●						
589	●	●		●					●					
1300/1301		●				●	●			●				
1710												●		
1750												●		
1765												●		

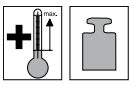
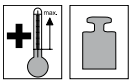
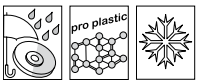
To provide a better overview only the main applications are listed.

																OKS No.
Greases																
●	●		●	●												1144
●	●		●			●										1148
			●	●	●	●			●		●					1155
●	●		●		●	●										4100
●	●		●													4200
●	●		●	●												4220
●	●		●	●												4230
●	●		●	●												4240
Dry Lubricants																
				●					●							100
			●	●	●	●					●					110
			●	●	●	●					●		●			500
	●		●	●	●	●										510
	●	●	●	●	●	●					●	●				530
		●		●	●											536
			●	●	●	●										570
	●		●	●	●	●	●								●	575
	●		●	●	●	●					●				●	589
				●	●	●	●		●				●		●	1300/1301
							●		●							1710
							●		●							1750
							●		●							1765

PASTES FOR EASY ASSEMBLY AND DISMANTLING

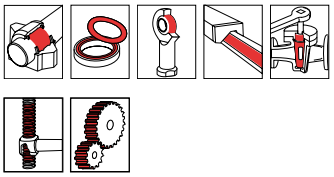
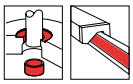
Pastes

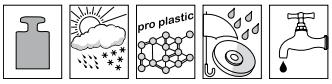
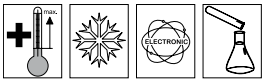
Product	Designation	Fields of Application	Purpose
OKS 217	**High-Temperature Paste, high purity**		• Assembly lubrication of screw threaded connection made of high-strength steel, at high temperatures in aggressive environment • Optimum ratio of screw tightening torque to achievable pre-tension • No burning together and rusting on • No reaction with metals • For use in the chemical industry
OKS 230	**MoS_2 High-Temperature Paste**		• For high-temperature applications up to 450°C (dry lubrication from approx. 200°C) • Prevents wearing, stick-slip, seizing, run-in damage, pitting • Carrier oil evaporates residue-free from 200°C upwards • Bearings of pouring ladles, converters, kiln cars, or similar • Relubrication in operation with OKS 310
OKS 235 **OKS 2351***	**Aluminium Paste, Anti-Seize Paste**		• For assembling screw and bolt threaded connections that are subjected to high temperatures and corrosive influences • Optimum ratio of screw tightening torque to achievable pre-tension • Prevents burning together or rusting on • Lubricating and separating paste
OKS 252	**White High-Temperature Paste for Food Processing Technology**		• Lubrication of screws, bolts and sliding surfaces that are subjected to high pressures, high temperatures at low speeds or oscillating movements • Prevents burning together and rusting on • Metal-free • Highly adhesive • Universal high-temperature assembly paste
OKS 273	**Grease Paste for Plastic Gears**		• Lubrication of plastic gears at low and high temperatures as well as low to medium speeds • Long-term lubrication of heavily loaded small gears • Good corrosion protection • Good compatibility to plastics • Plastic gears in roller-shutter and awning drives

Properties / Approvals	Main Components	Technical Data	Packaging
	black-grey semi-synthetic oil	Operating temperature: -40°C → +1,400°C Press-fit: μ = 0.11, chatter from 4,000 N on Four-ball test rig (welding load): 4,400 N Thread friction (M10/8.8): μ = 0.10	250 g brush tin 1 kg tin 5 kg hobbock 25 kg hobbock
	black MoS_2 other solid lubricants polyglycol lithium soap	Operating temperature: -35°C → +180°C/+450°C (lubrication/separation) Press-fit: μ = 0.11 Four-ball test rig (welding load): 3,200 N Thread friction (M10/8.8): μ = 0.10	250 g tin 1 kg tin 5 kg hobbock 25 kg hobbock
	metallic silver aluminium powder other solid lubricants synthetic oil inorganic thickener	Operating temperature: -40°C → +1,100°C Press-fit: not applicable Four-ball test rig (welding load): not applicable Thread friction (M10/8.8): μ = 0.12	250 g brush tin 1 kg tin 5 kg hobbock 400 ml aerosol*
 NSF H1 Reg. No. 135748	light grey white solid lubricants polyglycol silicate	Operating temperature: -30°C → +160°C/+1,200°C (lubrication/separation) Press-fit: μ = 0.12, no chatter Thread friction (M10/8.8): μ = 0.15	200 g dispenser 250 g brush tin 1 kg tin 5 kg hobbock
	light-coloured white solid lubricants polyalphaolefin (PAO) lithium soap	Operating temperature: -40°C → +140°C Press-fit: not applicable Four-ball test rig (welding load): not applicable Thread friction: not applicable	1 kg tin 25 kg hobbock

PASTES FOR EASY ASSEMBLY AND DISMANTLING

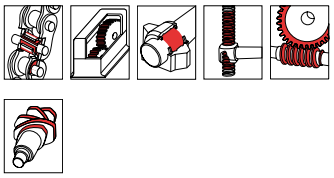
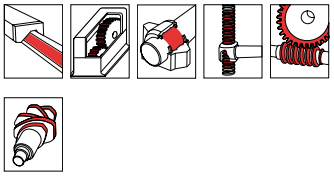
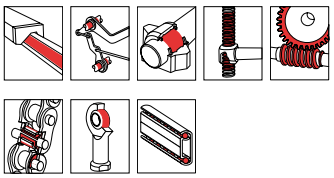
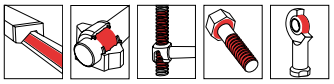
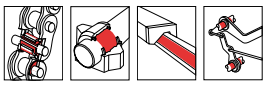
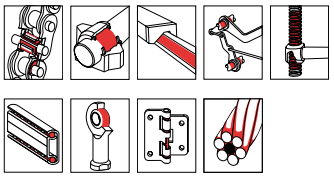
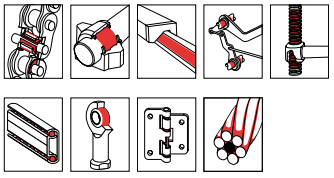
Pastes

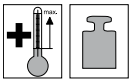
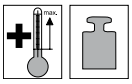
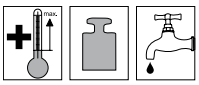
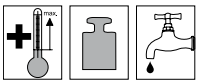
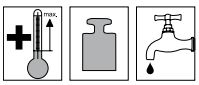
Product	Designation	Fields of Application	Purpose
OKS 277 **OKS 2771***	**High-Pressure Lubrication Paste with PTFE**		• Lubrication of heavily loaded press and guide plates • Lubrication and sealing of fittings made of metal, plastic and ceramic • Long regreasing intervals • Good plastic and elastomer compatibility • Highly adhesive • Lubrication paste, e.g. for telescope booms of mobile cranes
OKS 280	**White High-Temperature Paste**		• Separating paste for thermoforming processes • Lubricating paste for temperature-stressed sliding surfaces • Good separating effect through optimal solid lubricant combinations • Prevents carburising of tools and workpieces • Extends tool lives
OKS 1103	**Heat Sink Paste**		• Protection of sensitive electronic components against overheating • High thermal conductivity, 20 times better than at air • Electrically insulating • No drying out, hardening or bleeding • Coupling of electronic components such as sensors, probes, diodes, transistors, etc. to cooling plates

Properties / Approvals	Main Components	Technical Data	Packaging
	white PTFE ester	Operating temperature: -20°C → +150°C Four-ball test rig (welding load): 2,200 N	1 kg tin 5 kg hobbock 25 kg hobbock 400 ml aerosol*
	white white solid lubricants mineral oil lithium soap	Operating temperature: -15°C → +1,150°C Press-fit: not applicable Four-ball test rig (welding load): 2,400 N Thread friction (M10/8.8): μ = 0.09	1 kg tin 5 kg hobbock 25 kg hobbock
	white metal oxides silicone oil inorganic thickener	Operating temperature: -40°C → +180°C Thermal conductivity: approx. 0.7 W/mK Dielectric strength (20°C): approx. 19 kV/mm Thermal capacity (21°C): approx. 1.03 J/cm³K	100 g tube 500 g tin 5 kg hobbock

OILS WITH HIGH-PERFORMANCE ADDITIVES FOR RELIABLE LUBRICATION

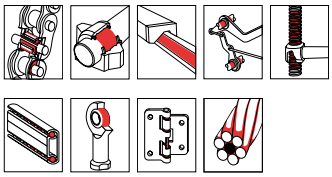
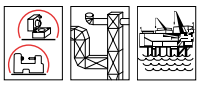
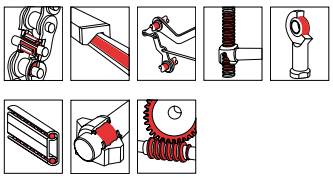
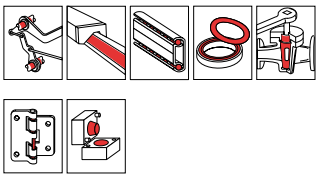
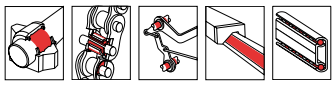
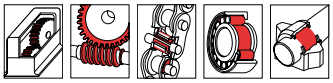
Oils

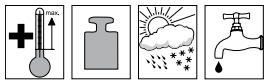
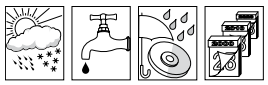
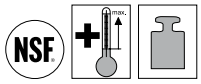
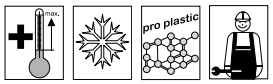
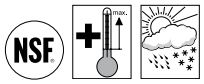
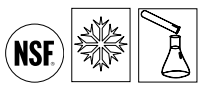
Product	Designation	Fields of Application	Purpose
OKS 30	**Mo_x-Active additive**		• EP additive as additive for industrial oils • Improves the run-in lubrication of new and over-hauled machines • Smoothing of the surfaces results in lower wear and thermal loading of the lubricant • Makes longer lubricating intervals possible
Mo_x-Active			
OKS 300	**MoS_2 Mineral Oil Concentrate**		• Additive on MoS_2 and Mo_x basis • Reduces friction, temperature and wear • Smoothens the surfaces • Creates emergency-running properties • Passes common filters, does not react to magnetic filters • Additive to gear, engine and machine oils
Mo_x-Active	ISO VG 100		
OKS 310	**MoS_2 High-Temperature Lubricating Oil**		• Lubrication of machine elements up to +450°C • Residue-free evaporation of the base oil above +200°C • Dry lubrication from +200°C to +450°C • Lubrication in steelworks, foundries, rolling mills, ceramics industry
	ISO VG 100		
OKS 335	**Metal Fluid**		• Lubrication of heavily loaded sliding surfaces at high temperatures • Highly effective due to formation of press-resistant separating sliding layers • Can be sprayed and brushed • For rotary-oven bearings, at stop faces of axial guides, as well as as screw compound for hot screwed connections
OKS 350	**High-Temperature Chain Oil with MoS_2, synthetic**		• Synthetic oil for machine elements, at high temperatures and humidity • Emergency lubrication when the operating temperature of the oil is exceeded or in case of insufficient lubrication • Excellent wear protection through MoS_2, also under extreme stresses
Mo_x-Active	ISO VG 220		
OKS 352 **OKS 3521***	**High-Temperature Oil, light-coloured, synthetic**		• Synthetic high-temperature oil • Good wear protective through EP additives • Excellent oxidation protection, therefore resistant to ageing • Low tendency to drip at high temperatures • Minimal evaporation losses • Residue-free evaporation • Good water and steam resistance
ChronoLube System	DIN 51502: CLP E 320		
OKS 353	**High-Temperature Oil, light-coloured, synthetic**		• Synthetic high-temperature oil • Good wear protective through EP additives • Excellent oxidation protection, therefore resistant to ageing • Low tendency to drip at high temperatures • Minimal evaporation losses • Residue-free evaporation • Good cleaning action
	DIN 51502: CLP E 100		

Properties / Approvals	Main Components	Technical Data	Packaging
	greenish Mo_x-Active ester	Operating temperature: not applicable Density (20°C): 1.03 g/ml Ester viscosity (40°C): 70 mm²/s Four-ball test rig (welding load): not applicable	1 l tin 5 l canister 200 l drum
	black MoS_2 Mo_x-Active mineral oil	Operating temperature: not applicable Density (20°C): 0.92 g/ml Viscosity (40°C): approx. 90 mm²/s Four-ball test rig (welding load): not applicable	200 ml tin 1 l tin 5 l canister 25 l canister 200 l drum
	black MoS_2 polyglycol	Operating temperature: → +200°C/+450°C Density (20°C): 1.01 g/ml Viscosity (40°C): approx. 108 mm²/s Four-ball test rig (welding load): 2,800 N	1 l tin 5 l canister 25 l canister
	grey-copper copper, graphite, aluminium semi-synthetic oil	Operating temperature: -30°C → +200°C/+650°C Density (20°C): 0.98 g/ml Viscosity (40°C): approx. 2,100 mm²/s Four-ball test rig (welding load): 3,800 N	5 l canister 25 l canister 200 l drum
	black MoS_2 Mo_x-Active ester	Operating temperature: -30°C → +250°C Density (20°C): 0.9 g/ml Viscosity (40°C): 240 mm²/s Four-ball test rig (welding load): 3,500 N	5 l canister 25 l canister 200 l drum
	yellowish ester	Operating temperature: -10°C → +250°C Density (20°C): 0.90 g/ml Viscosity (40°C): 270 mm²/s Four-ball test rig (welding load): 2,400 N	120 cm³ CL-cartridge 1 l tin 5 l canister 25 l canister 200 l drum 500 ml aerosol*
	yellow ester	Operating temperature: -25°C → +250°C Density (20°C): 0.96 g/ml Viscosity (40°C): 100 mm²/s Four-ball test rig (welding load): 2,000 N	1 l tin 5 l canister 25 l canister 200 l drum

OILS WITH HIGH-PERFORMANCE ADDITIVES FOR RELIABLE LUBRICATION

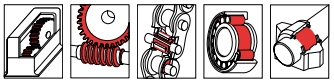
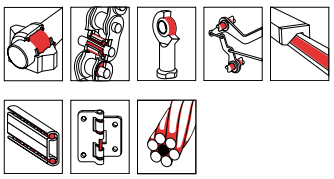
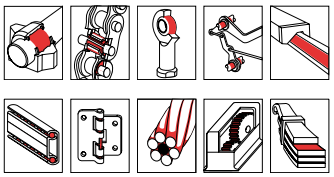
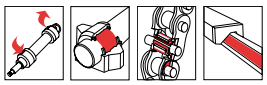
Oils

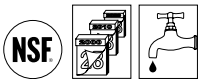
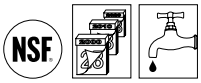
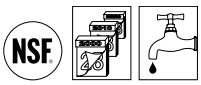
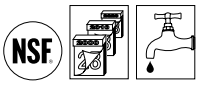
Product	Designation	Fields of Application	Purpose
OKS 354 **OKS 3541*** Mo$_x$ - Active	**High-Temperature Adhesive Lubricant, synthetic** DIN 51 502: CLP E 4.000		• Lubrication of machine elements at high temperatures or strong influence of water • Excellent oxidation protection, therefore resistant to ageing • Excellent resistance against water, steam and aggressive media • Extremely adhesive
OKS 360 **OKS 361***	**High-Performance Corrosion Protection Oil** ISO VG 15		• Storage and lubrication under corrosive conditions • Excellent corrosion protection due to VCI inhibitors • Good creep properties • Highly adhesive • Protection of metallic surfaces at indoor and outdoor storage up to 2 years, under outdoor exposure under a roof or for sea transport
OKS 387	**High-Temperature Chain Lubricant for Food Processing Technology** ISO VG 220		• Synthetic lubricant with graphite for strongly loaded lubrication points at extreme temperatures • Reduces wear, excellent lubricating and emergency running properties • Base oil that evaporates odourlessly and residue-free above +200°C, dry lubrication up to +600°C
OKS 1000	**Silicone Oil**		• Lubricant and parting agents for plastics and elastomers • Also as damping oil • Neutral with respect to plastics, elastomers or paints • Broad temperature application range • Excellent surface wetting • Resin and acid-free • Available in viscosities of 50 to 5000 cSt
OKS 3570 **OKS 3571*** New	**High-Temperature Chain Oil for Food Processing Technology** ISO VG 320 DIN 51 502: CLP E 320		• Lubrication of chains, hinges, joints, clamping and drying frames or slideways at higher temperatures • For conveying systems in painting, stoving and drying systems of the packaging and food processing industry
OKS 3710 New	**Low-Temperature Oil for Food Processing Technology** ISO VG 10 DIN 51 502: CL HC 10		• Fully synthetic oil for permanently low temperatures • Physiologically harmless • For use in cold storage houses, shock freezers, etc. • Excellent low-temperature behaviour • Optimal additives against oxidation and ageing • Long economic operating times
OKS 3720 ChronoLube System	**Gear Oil for Food Processing Technology** ISO VG 220 DIN 51 502: CLP HC 220		• Fully synthetic • Also for the lubrication of rolling, friction bearings, chains and other lubricating points • Long operating times due to high temperature and oxidation stability • Good wear protection • Resistant to steam, alkali and acid disinfectants and cleaning agents

Properties / Approvals	Main Components	Technical Data	Packaging
	yellowish Mo_x-Active ester	Operating temperature: -10°C → +250°C Density (20°C): 0.91 g/ml Viscosity (40°C): 4,000 mm²/s Four-ball test rig (welding load): 2,200 N	5 l canister 25 l canister 200 l drum 400 ml aerosol*
	light-coloured VCI corrosion protection mineral oil	Operating temperature: -40°C → +80°C Density (20°C): 0.88 g/ml Viscosity (40°C): 15 mm²/s Four-ball test rig (welding load): not applicable	5 l canister 25 l canister 400 ml aerosol*
 NSF H1 Reg. No. 126583	black graphite polyglycol	Operating temperature: max. +600°C Density (20°C): 1.04 g/ml Viscosity (40°C): 190 mm²/s Four-ball test rig (welding load): 2,800 N	5 l canister 25 l canister
	light-coloured silicone oil	Operating temperature: -55°C → +200°C Density (20°C): 0.96 – 0.97 g/ml Viscosity (25°C): 50 – 5,000 mm²/s Four-ball test rig (welding load): not applicable	1 l tin 5 l canister 25 l canister 200 l drum
 OKS 3570: NSF H1 Reg. No. 145347 OKS 3571: NSF H1 Reg. No. 147769	yellowish-red ester	Operating temperature: -10°C → +250°C Density (20°C): 0.87 g/ml Viscosity (40°C): 300 mm²/s	5 l canister 25 l canister 200 l drum 400 ml aerosol*
 NSF H1 Reg. No. 142477	colourless polyalphaolefin (PAO)	Operating temperature: -60°C → +135°C Density (20°C): 0.80 g/ml Viscosity (40°C): 9 mm²/s	5 l canister 25 l canister 200 l drum
 NSF H1 Reg. No. 135752	colourless-yellowish synthetic oil mixture	Operating temperature: -30°C → +120°C Density (20°C): 0.85 g/ml Viscosity (40°C): 220 mm²/s FZG damage level: power level >12	120 cm³ CL-cartridge 5 l canister 25 l canister 200 l drum

OILS WITH HIGH-PERFORMANCE ADDITIVES FOR RELIABLE LUBRICATION

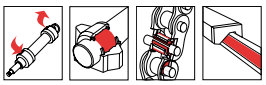
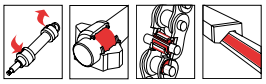
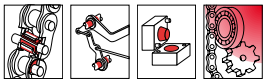
Oils

Product	Designation	Fields of Application	Purpose
OKS 3725 New	**Gear Oil for Food Processing Technology** ISO VG 320 DIN 51 502: CLP HC 320		• Fully synthetic • Also for the lubrication of rolling, friction bearings, chains and other lubricating points • Long operating times due to high temperature and oxidation stability • Good wear protection • Resistant to steam, alkali and acid disinfectants and cleaning agents
OKS 3730	**Gear Oil for Food Processing Technology** ISO VG 460 DIN 51 502: CLP HC 460		• Fully synthetic • Also for the lubrication of rolling, friction bearings, chains and other lubricating points • Long operating times due to high temperature and oxidation stability • Good wear protection • Resistant to steam, alkali and acid disinfectants and cleaning agents
OKS 3740	**Gear Oil for Food Processing Technology** ISO VG 680 DIN 51 502: CLP HC 680		• Fully synthetic • Also for the lubrication of rolling, friction bearings, chains and other lubricating points • Long operating times due to high temperature and oxidation stability • Good wear protection • Resistant to steam, alkali and acid disinfectants and cleaning agents
OKS 3750 **OKS 3751*** ChronoLube System	**Adhesive Lubricant with PTFE** ISO VG 100 DIN 51 502: CLF HC 100		• Lubricating oil with PTFE • Long operating times due to high temperature and oxidation stability • Excellent wear protection • High pressure absorption capacity • Adheres well • Resistant to steam, alkali and acid disinfectants and cleaning agents • Tasteless and odourless
OKS 3760 ChronoLube System	**Multipurpose Oil for Food Processing Technology** ISO VG 100 DIN 51 502: CL HC 100		• Fully synthetic multipurpose oil • Long operating times due to high temperature and oxidation stability • Good wear protection • Resistant to steam, alkali and acid disinfectants and cleaning agents • Tasteless and odourless
OKS 3770	**Hydraulic Oil for Food Processing Technology** ISO VG 46 DIN 51 502: HLP HC 46 DIN 51 502: VDL HC 46		• Fully synthetic oil for hydraulic systems, as well as other machine elements • For screws and multiple vane rotary vacuum pumps • Long operating times due to high temperature and oxidation stability • Good wear protection • Resistant to steam, alkali and acid disinfectants and cleaning agents

Properties / Approvals	Main Components	Technical Data	Packaging
 NSF H1 Reg. No. 143596	colourless polyalphaolefin (PAO) synthetic oil mixture	Operating temperature: -30°C → +120°C Density (20°C): 0.85 g/ml Viscosity (40°C): 320 mm²/s FZG damage level: power level >12	5 l canister 25 l canister 200 l drum
 NSF H1 Reg. No. 135753	colourless-light yellow synthetic oil mixture	Operating temperature: -30°C → +120°C Density (20°C): 0.86 g/ml Viscosity (40°C): 460 mm²/s FZG damage level: power level >12	5 l canister 25 l canister 200 l drum
 NSF H1 Reg. No. 135754	colourless synthetic oil mixture	Operating temperature: -25°C → +120°C Density (20°C): 0.86 g/ml Viscosity (40°C): 680 mm²/s FZG damage level: power level >12	5 l canister 25 l canister
 OKS 3750: NSF H1 Reg. No. 124383 OKS 3751: NSF H1 Reg. No. 124801	whitish PTFE polyalphaolefin (PAO)	Operating temperature: -35°C → +135°C Density (20°C): 0.87 g/ml Viscosity (40°C): 110 mm²/s Four-ball test rig (welding load): 2,600 N	5 l canister 500 ml aerosol*
 NSF H1 Reg. No. 129964	colourless polyalphaolefin (PAO)	Operating temperature: -35°C → +135°C Density (20°C): 0.84 g/ml Viscosity (40°C): 100 mm²/s	120 cm³ CL-cartridge 5 l canister 25 l canister 200 l drum
 NSF H1 Reg. No. 129962	colourless polyalphaolefin (PAO)	Operating temperature: -40°C → +135°C Density (20°C): 0.84 g/ml Viscosity (40°C): 50 mm²/s	5 l canister 25 l canister 200 l drum

OILS WITH HIGH-PERFORMANCE ADDITIVES FOR RELIABLE LUBRICATION

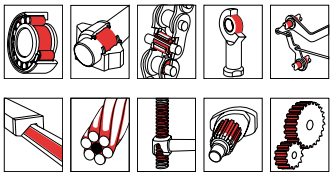
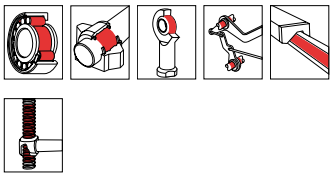
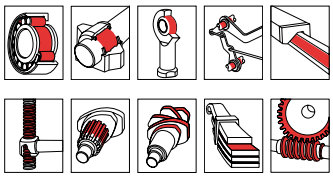
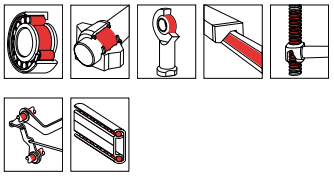
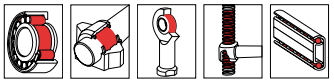
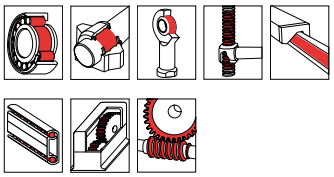
Oils

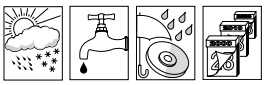
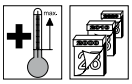
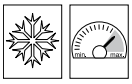
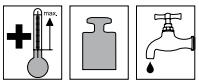
Product	Designation	Fields of Application	Purpose
OKS 3775 New	**Hydraulic Oil for Food Processing Technology** ISO VG 32 DIN 51 502: HLP HC 32 DIN 51 502: VDL HC 32		• Fully synthetic mineral-oil-free hydraulic oil • High temperature and oxidation stability • Good wear protection • Compressor oil for screw and multiple vane rotary vacuum pumps in the food processing and pharmaceutical industries • Resistant to steam, alkali and acid disinfectants and cleaning agents
OKS 3780	**Hydraulic Oil for Food Processing Technology** ISO VG 68 DIN 51 502: HLP HC 68 DIN 51 502: VDL HC 68		• Fully synthetic oil for hydraulic systems, as well as other machine elements • Long operating times due to high temperature and oxidation stability • For screws and multiple vane rotary vacuum pumps • Resistant to steam, alkali and acid disinfectants and cleaning agents
OKS 3790	**Sugar-Dissolving Oil, fully synthetic**		• Dissolving of sugar deposits • Cleaning of machine parts • Lubrication of precision mechanisms • Forming lubricant for packaging • Good cleaning and lubrication effect • Good wear and corrosion protection • Tasteless and odourless emulsion • Specially for the sweets industry

Properties / Approvals	Main Components	Technical Data	Packaging
NSF H1 Reg. No. 143597	colourless polyalphaolefin (PAO)	Operating temperature: -45°C → +135°C Density (20°C): 0.83 g/ml Viscosity (40°C): 32 mm²/s	5 l canister 25 l canister 200 l drum
NSF H1 Reg. No. 136036	colourless polyalphaolefin (PAO)	Operating temperature: -40°C → +135°C Density (20°C): 0.83 g/ml Viscosity (40°C): 66 mm²/s	5 l canister 25 l canister 200 l drum
NSF H1 Reg. No. 128470	colourless water polyglycol	Operating temperature: -5°C → +80°C Density (20°C): 1.06 g/ml Viscosity (40°C): 20 – 24 mm²/s	5 l canister 25 l canister

GREASES FOR LONG-TERM LUBRICATION UNDER CRITICAL OPERATION CONDITIONS

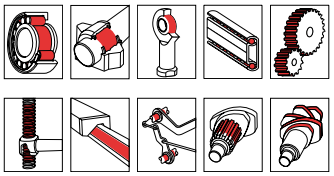
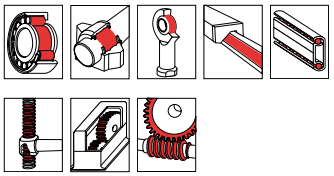
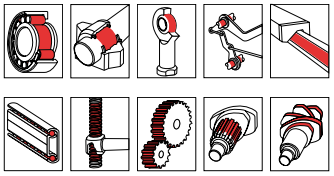
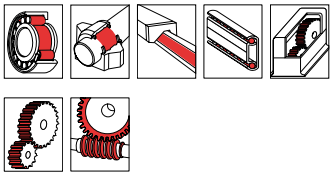
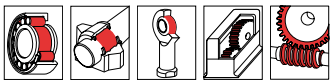
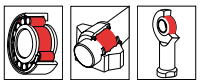
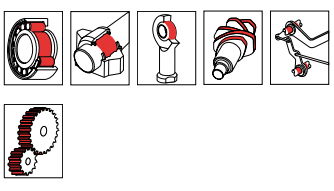
Greases

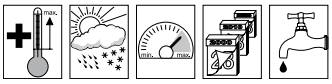
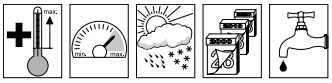
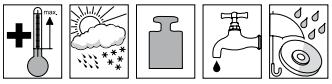
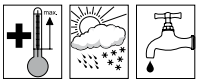
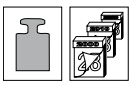
Product	Designation	Fields of Application	Purpose
OKS 403	**Marine Grease** DIN 51 502: KP1-2E-20		• Lubrication of machine elements subjected to water or sea water • Excellent corrosion protection • Adheres well • Has proven itself in wet operating environments and in coastal and marine areas • Water pump grease
OKS 404 ChronoLube System	**High-Performance and High-Temperature Grease** DIN 51 502: KP2P-30		• For lubricating high pressure loaded rolling and friction bearings in a wide temperature range • Reduces wear • Good pressure resistance • Good water resistance • Resistant to ageing and oxidation • Good corrosion protection • Modern grease with a wide range of applications
OKS 410 Mo$_x$ - Active	**MoS$_2$ High-Pressure Long-Life Grease** DIN 51 502: KPF2K-20		• Long-term lubrication of lubrication points subjected to pressure or impacts also under outdoor exposure • Good emergency running properties • Excellent wear protection • Good water resistance • Highly adhesive • For harsh conditions, e.g. in rolling mills, construction and agricultural machines, in mining and port operations
OKS 416	**Low-Temperature and High-Speed Grease** DIN 51 502: KPE2K-50		• Supple consistency, also at low temperatures • Good wear protection • High dynamic load-bearing capacity • Good corrosion protection • Reliable lubrication of conveying equipment, cold storage houses, spindle bearings, machine tools • Instrument grease
OKS 418	**High-Temperature Grease** DIN 51 502: KPF2N-20		• Lubrication of friction and rolling bearings at higher temperatures • Long-term lubrication of lubrication points subjected to high pressure • Good wear protection • Good resistance to oxidation and ageing • Economic hot bearing grease without drop point
OKS 420 ChronoLube System Mo$_x$ - Active	**High-Temperature Multipurpose Grease** DIN 51 502: KP1-2P-10		• Rolling and friction bearings, slow-running gears and chains at high temperatures, impact and pressure loads or water influences • Extremely impact and pressure-resistant • Good wear protection • Highly adhesive • For universal use at increased requirements

Properties / Approvals	Main Components	Technical Data	Packaging
	brown EP additive mineral oil calcium soap	Operating temperature: -25°C → +80°C NLGI grade: 1-2 DN factor (dm x n): 350,000 mm/min Base oil viscosity (40°C): 100 mm²/s Four-ball test rig (welding load): 3,000 N	400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum
	light-coloured EP additive semi-synthetic oil lithium-complex soap	Operating temperature: -30°C → +150°C NLGI grade: 2 DN factor (dm x n): 350,000 mm/min Base oil viscosity (40°C): 100 mm²/s Four-ball test rig (welding load): 2,800 N	120 cm³ CL-cartridge 400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum
	grey MoS_2 Mo_x-Active mineral oil lithium soap	Operating temperature: -20°C → +130°C NLGI grade: 2 DN factor (dm x n): 500,000 mm/min Base oil viscosity (40°C): 185 mm²/s Four-ball test rig (welding load): 3,600 N	400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum
 Biodegradability: CEC-L-33-A93 21 days > 70%	yellow EP additive semi-synthetic oil lithium soap	Operating temperature: -50°C → +120°C NLGI grade: 2 DN factor (dm x n): 1,000,000 mm/min Base oil viscosity (40°C): 15 mm²/s Four-ball test rig (welding load): 2,400 N	400 ml cartridge 1 kg tin 5 kg hobbock
	black MoS_2 mineral oil silicate	Operating temperature: -25°C → +150°C NLGI grade: 2 DN factor (dm x n): 400,000 mm/min Base oil viscosity (40°C): 220 mm²/s	1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum
	beige Mo_x-Active mineral oil polycarbamide	Operating temperature: -10°C → +160°C NLGI grade: 1-2 also available as fluid grease (NLGI 00) DN factor (dm x n): 300,000 mm/min Base oil viscosity (40°C): 490 mm²/s	120 cm³ CL-cartridge 400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum

GREASES FOR LONG-TERM LUBRICATION UNDER CRITICAL OPERATION CONDITIONS

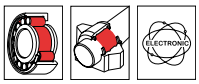
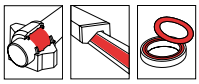
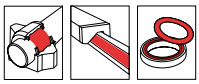
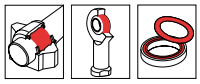
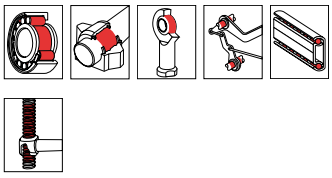
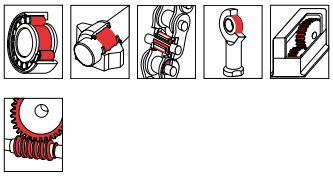
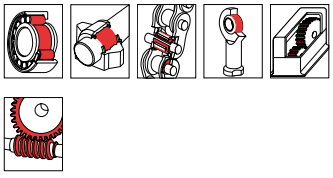
Greases

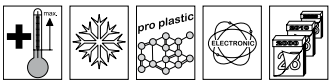
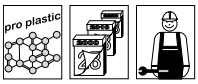
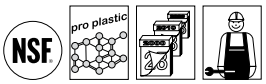
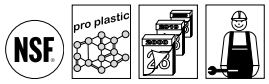
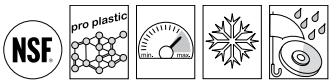
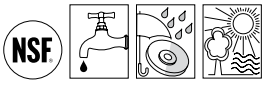
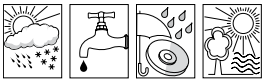
Product	Designation	Fields of Application	Purpose
OKS 422	**Universal Grease for Long-Life Lubrication**		• For rolling and friction bearings and spindles at extreme temperatures or high speeds • Extremely impact and pressure-resistant • Excellent wear protection • Long regreasing intervals • Use outside normal performance areas • Spindle bearing lubrication at machine tools
ChronoLube System	DIN 51 502: KPHC2R-40		
OKS 424	**Synthetic High-Temperature Grease**		• For rolling and friction bearings at high temperatures and high loads • Good temperature resistance • Good plastic and elastomer compatibility • Good resistance against aggressive environmental influences • Lubrication of exhaust-gas fans
	DIN 51 502: KHC1-2S-30		
OKS 425	**Synthetic Long-Life Grease**		• Long-term or for-life lubrication of machine elements that are subjected to high pressures and high temperatures • Excellent wear protection • For high speeds • Good temperature resistance • Spindle-bearing lubrication
	DIN 51 502: KPHC2K-50		
OKS 427	**Gear and Bearing Grease**		• For relatively slow-running gears, alternatively to oil lubrication • Lubrication of drive and transport chains, rolling and friction bearings • For high pressures, also at impact loads • Minimising of the losses for leaks in comparison to oil lubrication • Excellent wear protection
	DIN 51 502: GP0/00P-10		
OKS 428	**Fluid Grease for Gears, synthetic**		• For heavily loaded gearing exposed to weather outdoors and/or low temperatures, as well as angled or vertical shafts, also with gear designs which are not oil-tight • For friction bearings with low clearance or high speeds • For high pressures and impact loads
	DIN 51 502: GPPG00K-40		
OKS 432	**High Melting-Point Grease**		• For rolling and friction bearings and similar components, at high loads and temperatures • Excellent wear protection • Good resistance to oxidation and ageing • Good pressure resistance • Maintenance of lubricating effect even at high temperatures
	DIN 51 502: KP2R-20		
OKS 433	**Long-Acting High-Pressure Grease**		• For friction and roller bearings at high pressures • EP additives • Good wear protection • Good resistance to oxidation and ageing • For heavily loaded rolling and taper roller bearings, e.g. on rolling stands, hot and cold shearing systems, sliding blocks and spindles
ChronoLube System	DIN 51 502: KP2K-20		

Properties / Approvals	Main Components	Technical Data	Packaging
	light-coloured EP additive polyalphaolefin (PAO) barium-complex soap	Operating temperature: -40°C → +180°C NLGI grade: 2 DN factor (dm x n): 800,000 mm/min Base oil viscosity (40°C): 50 mm²/s Four-ball test rig (welding load): 4,000 N	120 cm³ CL-cartridge 400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum
	cream-coloured polyalphaolefin (PAO) polycarbamide	Operating temperature: -30°C → +200°C NLGI grade: 1-2 DN factor (dm x n): 350,000 mm/min Base oil viscosity (40°C): 400 mm²/s Four-ball test rig (welding load): 1,800 N	400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum
	beige EP additive polyalphaolefin (PAO) special calcium soap	Operating temperature: -50°C → +130°C NLGI grade: 2 DN factor (dm x n): 1,000,000 mm/min Base oil viscosity (40°C): 30 mm²/s Four-ball test rig (welding load): 3,400 N	400 ml cartridge 1 kg tin 5 kg hobbock
	brownish semi-synthetic oil polycarbamide	Operating temperature: -15°C → +160°C NLGI grade: 0 – 00 DN factor (dm x n): not applicable Base oil viscosity (40°C): 490 mm²/s Four-ball test rig (welding load): not applicable	1 kg tin 5 kg hobbock 25 kg hobbock
	brown EP additive polyglycol lithium soap	Operating temperature: -30°C → +120°C NLGI grade: 00 DN factor (dm x n): 600,000 mm/min Base oil viscosity (40°C): 120 mm²/s Four-ball test rig (welding load): 3,000 N	1 kg tin 5 kg hobbock 25 kg hobbock
	brown EP additive mineral oil aluminium-complex soap	Operating temperature: -25°C → +190°C NLGI grade: 2 DN factor (dm x n): 200,000 mm/min Base oil viscosity (40°C): 230 mm²/s Four-ball test rig (welding load): 2,800 N	400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum
	red-brown EP additive mineral oil lithium soap	Operating temperature: -20°C → +120°C NLGI grade: 2 DN factor (dm x n): 400,000 mm/min Base oil viscosity (40°C): 185 mm²/s Four-ball test rig (welding load): 2,600 N	120 cm³ CL-cartridge 400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock

GREASES FOR LONG-TERM LUBRICATION UNDER CRITICAL OPERATION CONDITIONS

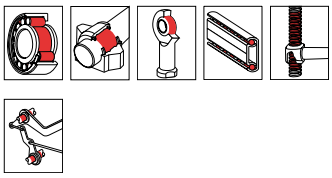
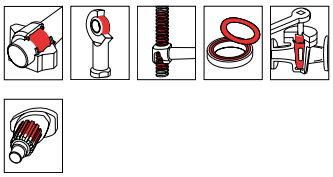
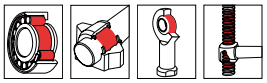
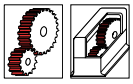
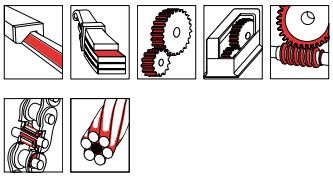
Greases

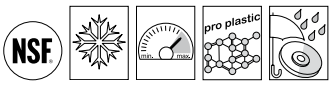
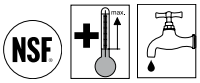
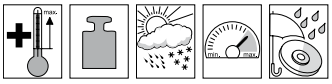
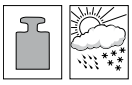
Product	Designation	Fields of Application	Purpose
OKS 464	**Electrically Conductive Rolling Bearing Grease** DIN 51 502: KHC2N-40		• Special grease for long-term lubrication of rolling and friction bearings for avoiding electrostatic charging • Good resistance to oxidation and ageing in rolling bearings • For bearings in motors, sheet drawing systems, sheet printing machines, etc.
OKS 467	**High-Performance Grease for Plastic Lubrication with PTFE**		• Lubricating and sealing grease for plastic/plastic and plastic/metal combinations • Good elastomer and plastic compatibility • EPDM-compatible • Silicone-free • Highly adhesive
OKS 468	**Plastic and Elastomer Grease**		• Lubricating and sealing grease for plastic/plastic and plastic/metal combinations • Good elastomer and plastic compatibility • EPDM-compatible • Silicone-free • Highly adhesive • Does not affect the quality properties of beer foam • Tasteless and odourless
OKS 469	**Plastic and Elastomer Grease**		• Lubricating and sealing grease for plastic/plastic and plastic/metal combinations • Good elastomer and plastic compatibility • Silicone-free • Highly adhesive • Does not affect the quality properties of beer foam • Tasteless and odourless
OKS 472	**Low-Temperature Grease for Food Processing Technology** DIN 51 502: KHC1K-40		• Lubrication of rolling and friction bearings with minimal bearing play and high speeds, at low temperatures as well as low coasting torques • Functionality of the lubricating film up to -70°C • Reduces wear • Good resistance to ageing and oxidation • For bearings in cold storage houses, ice factories, etc.
OKS 473	**Fluid Grease for Food Processing Technology** DIN 51 502: KPHC00K-40		• For closed gears, rolling and friction bearings, joints or chains if grease lubrication is provided for • Also suitable for higher speed, minimal bearing play or slight gear clearance • Reduces wear • Can be conveyed well using central lubricating systems • Waterproof
OKS 474	**Fluid Grease** DIN 51 502: KE0P-40		• For heavily loaded machine elements • Reduces wear • Good corrosion protection • Adheres well • Good resistance to ageing and oxidation • Biodegradable • Fluid grease that can be conveyed well • For bearings in filling and packaging machines

Properties / Approvals	Main Components	Technical Data	Packaging
	black carbon polyalphaolefin (PAO) lithium soap	Operating temperature: -40°C → +150°C NLGI grade: 2 DN factor (dm x n): 1,000,000 mm/min Base oil viscosity (40°C): 150 mm²/s Four-ball test rig (welding load): not applicable Specific resistivity: max. 10,000 Ω*cm	400 ml cartridge 1 kg tin 5 kg hobbock
	light-coloured PTFE synthetic oil inorganic thickener	Operating temperature: -25°C → +150°C NLGI grade: not applicable DN factor (dm x n): not applicable Base oil viscosity (40°C): 1,500 mm²/s Four-ball test rig (welding load): not applicable	5 kg hobbock
 NSF H1 Reg. No. 135591 Tested for beer foam compatibility	light-coloured polyalphaolefin (PAO) inorganic thickener	Operating temperature: -25°C → +150°C NLGI grade: not applicable DN factor (dm x n): not applicable Base oil viscosity (40°C): 1,500 mm²/s Four-ball test rig (welding load): not applicable	1 kg tin 5 kg hobbock
 NSF H1 Reg. No. 131380 Tested for beer foam compatibility	colourless-transparent polyalphaolefin (PAO) inorganic thickener	Operating temperature: -40°C → +150°C NLGI grade: 2 DN factor (dm x n): not applicable Base oil viscosity (40°C): 400 mm²/s Four-ball test rig (welding load): not applicable	1 kg tin 5 kg hobbock
 NSF H1 Reg. No. 135749	white polyalphaolefin (PAO) ester aluminium-complex soap	Operating temperature: -45°C → +120°C NLGI grade: 1 DN factor (dm x n): 800,000 mm/min Base oil viscosity (40°C): 30 mm²/s Four-ball test rig (welding load): not applicable	400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock
 NSF H1 Reg. No. 140485	light yellow polyalphaolefin (PAO) aluminium-complex soap	Operating temperature: -45°C → +120°C NLGI grade: 0 – 00 DN factor (dm x n): 500,000 mm/min Base oil viscosity (40°C): 160 mm²/s	1 kg tin 5 kg hobbock 25 kg hobbock
	beige ester polycarbamide	Operating temperature: -40°C → +160°C NLGI grade: 0 DN factor (dm x n): 500,000 mm/min Base oil viscosity (40°C): 110 mm²/s Four-ball test rig (welding load): not applicable	1 kg tin 5 kg hobbock 25 kg hobbock

GREASES FOR LONG-TERM LUBRICATION UNDER CRITICAL OPERATION CONDITIONS

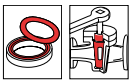
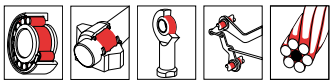
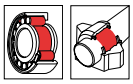
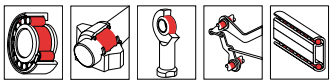
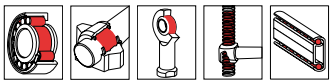
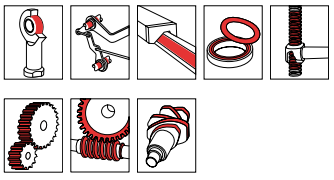
Greases

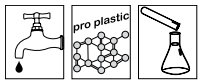
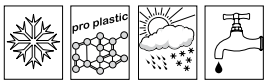
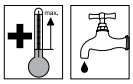
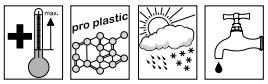
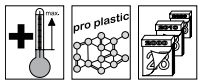
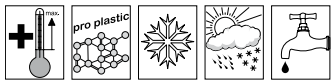
Product	Designation	Fields of Application	Purpose
OKS 475	**High-Performance Grease (also for Food Processing Technology)** DIN 51 502: KFHC2K-60		• For bearings with minimal bearing play and high speeds, at low and high temperatures and for bearings with low coasting torque • Good wear protection through PTFE • For fast-running bearings in the textile industry, in filling and packaging machines • Lubrication of components made of glass fibre reinforced plastic
OKS 477	**Valve Grease for Food Processing Technology** DIN 51 502: MHC3N-10		• Sealing lubrication of adapted sliding surfaces • Lubrication of plastics and elastomers • Lubrication of slow-running bearings • Highly adhesive. Seals well • Resistant to water and steam • Does not affect the quality properties of beer foam • Valve and sealing grease
OKS 479 ChronoLube System	**High-Temperature Grease for Food Processing Technology** DIN 51 502: KPFHC1P-40		• Reduces wear • Excellent pressure resistance • Good resistance to oxidation and ageing • Good plastic and elastomer compatibility • Resistant to water and steam • For all sections of the food processing, beverage and pharmaceutical industries
OKS 490	**Toothed Gearing Grease, sprayable** DIN 51 502: OGPF0S-30		• For gears with highest pressures and high circumferential speeds • Lubrication of guides, slide rails, transport chains and wire cables • Excellent pressure resistance through EP additives and solid lubricants • Protection of the tooth flanks, also at long relubrication intervals
OKS 495	**Adhesive Lubricant** DIN 51 502: OGPF1S-30		• Priming of heavily loaded tooth flanks and sliding surfaces • Run-in lubrication to avoid damage • Excellent pressure resistance • Lubrication of jackscrews in the motor vehicle and train technology • Gear rack lubrication in conveying equipment

Properties / Approvals	Main Components	Technical Data	Packaging
 NSF H2 Reg. No. 137708	beige PTFE polyalphaolefin (PAO) lithium soap	Operating temperature: -60°C → +120°C NLGI grade: 2 DN factor (dm x n): 1,000,000 mm/min Base oil viscosity (40°C): approx. 30 mm²/s Four-ball test rig (welding load): 2,000 N	400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock 170 kg drum
 NSF H1 Reg. No. 135750 Tested for beer foam compatibility	light brown polyalphaolefin (PAO) silicate	Operating temperature: -10°C → +140°C NLGI grade: 3 DN factor (dm x n): not applicable Base oil viscosity (40°C): 1,600 mm²/s Four-ball test rig (welding load): not applicable	100 g tube 1 kg tin 5 kg hobbock 25 kg hobbock
 NSF H1 Reg. No. 135675	cream-coloured EP additive polyalphaolefin (PAO) aluminium-complex soap	Operating temperature: -40°C → +160°C NLGI grade: 1 DN factor (dm x n): 400,000 mm/min Base oil viscosity (40°C): 400 mm²/s	120 cm³ CL-cartridge 400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock
	black graphite (ultra fine) EP additive mineral oil aluminium-complex soap	Operating temperature: -30°C → +220°C NLGI grade: 0 DN factor (dm x n): not applicable Base oil viscosity (40°C): 1,000 mm²/s Four-ball test rig (welding load): approx. 6,500 N FZG damage level: power level >12	1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum
	black graphite EP additive mineral oil synthetic oil aluminium-complex soap	Operating temperature: -40°C → +200°C NLGI grade: 1 DN factor (dm x n): not applicable Base oil viscosity (40°C): 500 mm²/s Four-ball test rig (welding load): 4,200 N FZG damage level: power level >12	1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum

GREASES FOR LONG-TERM LUBRICATION UNDER CRITICAL OPERATION CONDITIONS

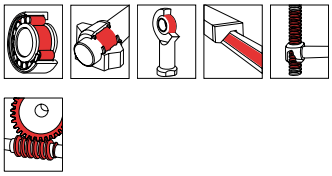
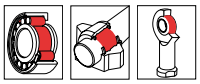
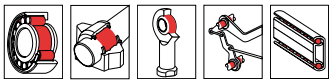
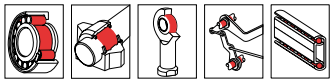
Greases

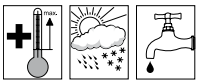
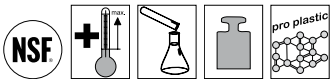
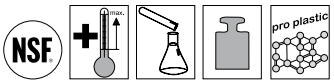
Product	Designation	Fields of Application	Purpose
OKS 1112	**Silicone Grease for Vacuum Valves** DIN 51 502: MSI3S-30		• For slide valves and valves • Excellent media resistance, e.g. to cold and hot water, acetone, ethanol, ethylene glycol, glycerin and methanol • Adheres and seals well • For use in vacuum plants and laboratory equipment
OKS 1133	**Low-Temperature Silicone Grease** DIN 51 502: KSI2S-70		• Lubrication of rolling and friction bearings, bowden cables, fittings, plastics and elastomers • Excellent low-temperature behaviour • Neutral with regard to plastics and elastomers • Lubrication of motors, drives, control systems under arctic conditions
OKS 1140	**Extreme-Temperature Silicone Grease** DIN 51 502: KFSI2U-20		• For slow-running machine elements at extremely high temperatures • Minimal evaporation losses • For bearings at kilns, hardening furnaces, bakery machines, drying tunnels, foundry machines, boiler firing systems, plastics processing machines or welding and soldering machines etc.
OKS 1144 ChronoLube System	**Universal Silicone Grease** DIN 51 502: KSI2S-40		• For bearings at changing temperatures and medium speeds • Good resistance to oxidation and ageing • Neutral with regard to plastics and elastomers • Lubrications of smaller bearings, e.g of turbo-superchargers, blowers, water pumps, washing machines and driers
OKS 1148	**Long-Term Silicone Grease, with PTFE** DIN 51 502: KFSI2S-40		• Long-term lubrication of rolling and friction bearings at changing temperatures • Excellent resistance to oxidation and ageing • Good media resistance • Neutral with regard to plastics and elastomers • Lubrication of bearings in motors
OKS 1155	**Adherent Silicone Grease** DIN 51 502: MSI2R-60		• For sliding points between rubber and metals or plastics at low speeds • Excellent resistance to oxidation and ageing • Neutral with regard to plastics and elastomers • Highly adhesive. Seals well • For O-rings in pneumatic systems of brake systems

Properties / Approvals	Main Components	Technical Data	Packaging
	transparent silicone oil inorganic thickener	Operating temperature: -30°C → +200°C NLGI grade: 3 DN factor (dm x n): not applicable Base oil viscosity (40°C): 100,000 mm²/s Evaporation loss (24h/200°C): <3.0 percent in weight	500 g tin 5 kg hobbock 25 kg hobbock
	beige silicone oil lithium soap	Operating temperature: -73°C → +200°C NLGI grade: 2 DN factor (dm x n): 200,000 mm/min Base oil viscosity (40°C): 100 mm²/s Four-ball test rig (welding load): 1,200 N	100 g tube 500 g tin 5 kg hobbock 25 kg hobbock
	black silicone oil carbon black	Operating temperature: -20°C → +290°C NLGI grade: 2 DN factor (dm x n): 75,000 mm/min Base oil viscosity (40°C): 100 mm²/s Four-ball test rig (welding load): 2,100 N	500 g tin 5 kg hobbock 25 kg hobbock
	beige silicone oil lithium soap	Operating temperature: -40°C → +200°C NLGI grade: 2 DN factor (dm x n): 300,000 mm/min Base oil viscosity (40°C): 125 mm²/s Four-ball test rig (welding load): 1,100 N	120 cm³ CL-cartridge 500 g tin 5 kg hobbock 25 kg hobbock
	light grey PTFE silicone oil lithium-complex soap	Operating temperature: -40°C → +200°C NLGI grade: 2 DN factor (dm x n): 350,000 mm/min Base oil viscosity (40°C): 60 mm²/s Four-ball test rig (welding load): 2,200 N	400 ml cartridge 500 g tin 5 kg hobbock 25 kg hobbock
	beige silicone oil ester lithium soap	Operating temperature: -65°C → +175°C NLGI grade: 2 DN factor (dm x n): not applicable Base oil viscosity (40°C): 100 mm²/s Four-ball test rig (welding load): not applicable	500 g tin 5 kg hobbock 25 kg hobbock

GREASES FOR LONG-TERM LUBRICATION UNDER CRITICAL OPERATION CONDITIONS

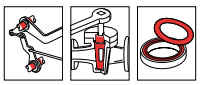
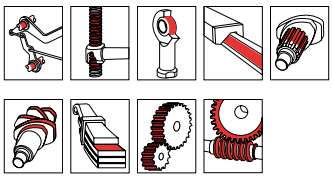
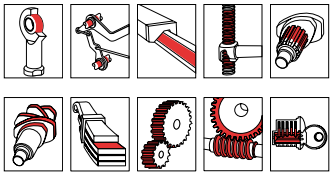
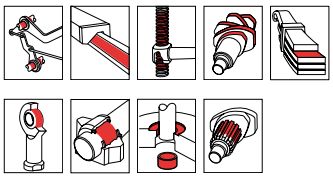
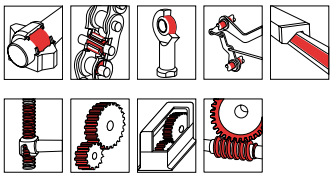
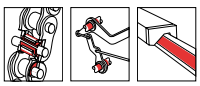
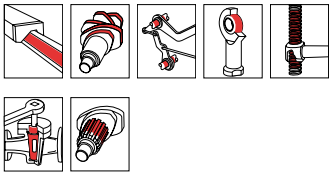
Greases

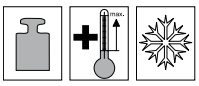
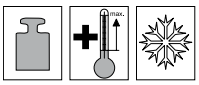
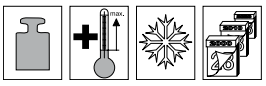
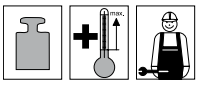
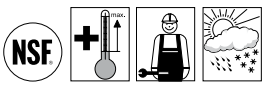
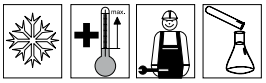
Product	Designation	Fields of Application	Purpose
OKS 4100	**MoS_2 Extreme Pressure Grease**		• For slow-running rolling and friction bearings at very high, also shock-type loads • Good emergency running properties through MoS_2 sliding film • Excellent wear protection • Good water resistance, also during high quantities of water • Highly adhesive • For harsh operating conditions, e.g. in stone crushers
Mo$_x$ - Active	DIN 51 502: KPF2K-20		
OKS 4200	**Synthetic High-Temperature Bearing Grease with MoS_2**		• Long-term lubrication of rolling and friction bearings subjected to high temperatures • Extremely impact and pressure-resistant • Excellent wear protection • Functionally reliable across a wide temperature range • For fans, blowers, autoclaves, drying ovens, systems in metallurgical works and steelworks
Mo$_x$ - Active	DIN 51 502: KHCF2R-10		
OKS 4220	**Extreme-Temperature Bearing Grease**		• Long-term lubrication of rolling and friction bearings • Excellent temperature resistance • Excellent media resistance • Excellent plastic and elastomer compatibility • Excellent water, steam resistance • Excellent wear protection
	DIN 51 502: KFFK2U-20		
OKS 4230	**Extreme Pressure Oxygen Fitting Grease**		• Lubricant for fittings with contact to oxygen at high pressures and temperatures • Lubricant for chemical plants and apparatuses • Excellent media resistance • Excellent plastic and elastomer compatibility • Excellent wear protection • Oxygen fittings grease
	DIN 51 502: MFFK2U-60		
OKS 4240	**Special Grease for Ejector Pins**		• Lubrication of ejector pins in the plastics industry • Long-term lubrication of rolling and friction bearings at extremely high temperatures and aggressive media • Resistant to plastics or elastomers • Excellent temperature resistance
	DIN 51 502: MFFK2U-20		

Properties / Approvals	Main Components	Technical Data	Packaging
	black MoS_2, graphite Mo_x-Active mineral oil lithium-calcium soap	Operating temperature: -20°C → +120°C NLGI grade: 2 DN factor (dm x n): 100,000 mm/min Base oil viscosity (40°C): 1,020 mm²/s Four-ball test rig (welding load): >4,000 N	400 ml cartridge 5 kg hobbock 25 kg hobbock
	black MoS_2 Mo_x-Active semi-synthetic oil bentonite	Operating temperature: -10°C → +180°C NLGI grade: 2 DN factor (dm x n): 400,000 mm/min Base oil viscosity (40°C): 220 mm²/s Four-ball test rig (welding load): 2,600 N	400 ml cartridge 1 kg tin 5 kg hobbock 25 kg hobbock 180 kg drum
 NSF H1 Reg. No. 124380	white PTFE perfluoropolyether (PFPE)	Operating temperature: -20°C → +280°C NLGI grade: 2 DN factor (dm x n): 300,000 mm/min Base oil viscosity (40°C): 510 mm²/s Four-ball test rig (welding load): > 10,000 N	100 g tube 500 g tin 800 g cartridge 1 kg tin 5 kg hobbock
 NSF H1 Reg. No. 135755 DIN EN 1797:2002-02; Test report BAM, Diary No. 6123/97 II-5259 I	white PTFE perfluoropolyether (PFPE)	Operating temperature: -60°C → +260°C NLGI grade: 2 DN factor (dm x n): not applicable Base oil viscosity (40°C): 300 mm²/s Four-ball test rig (welding load): 4,000 N	250 g dispenser 1 kg tin
	white PTFE perfluoropolyether (PFPE) inorganic thickener	Operating temperature: -20°C → +300°C NLGI grade: 2 DN factor (dm x n): 350,000 mm/min Base oil viscosity (40°C): 440 mm²/s Four-ball test rig (welding load): 4,800 N	1 kg tin

DRY LUBRICANTS – THE ALTERNATIVE FOR SPECIAL APPLICATION CASES

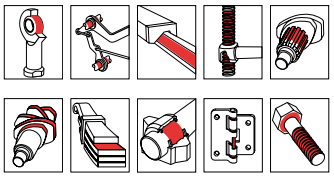
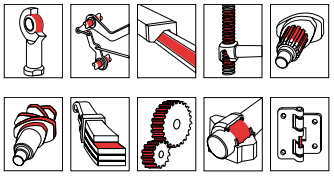
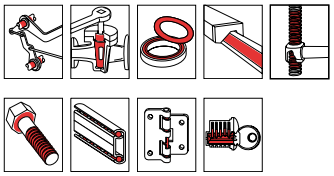
Dry Lubricants

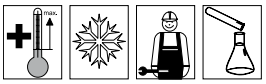
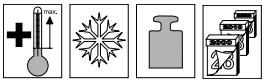
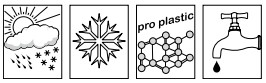
Product	Designation	Fields of Application	Purpose
OKS 100	**MoS_2 Powder, high degree of purity**		• To improve the sliding properties of machine elements • Run-in lubricant in combination with oil or grease lubrication • Prevents friction and wear • Difficult moulding processes in metal working • For integration in plastics, seals and packings
OKS 110	**MoS_2 Powder, microsize**		• Run-in lubricant in combination with oils or greases • Prevents friction and wear, even at high pressures • Good adhesion, even at extremely precision-machined surfaces • For difficult moulding processes • For pressing in bearings
OKS 500	**MoS_2 Bonded Coating, thermosetting**		• Dry lubrication for temporary operation and long downtimes, in dusty environments and at low speeds • Run-in lubricant in combination with oil or grease lubrication • Creates emergency-running properties • Use in a broad temperature range
OKS 510	**MoS_2 Bonded Coating, fast-drying**		• Dry lubrication for temporary operation or long downtimes, industry environments and at low sliding speeds • Run-in lubricant in combination with oils or greases • Creates emergency-running properties • Dries at room temperature
OKS 530	**MoS_2 Bonded Coating, water-based, air-drying**		• Lubrication of heavily loaded chains when oil and grease lubrication is no longer possible • Can be sprayed onto hot surfaces • Use in a broad temperature range • Dries at room temperature • Spent sliding film can be topped up • Can be diluted with water in ratio of up to 1:5
OKS 536	**Graphite Bonded Coating, water-based, air-drying**		• Lubrication of heavily loaded chains when oil and grease lubrication is no longer possible • Can be sprayed onto hot surfaces • Use in a broad temperature range • Dries at room temperature • Spent sliding film can be topped up • Can be diluted with water in ratio of up to 1:5
OKS 570	**PTFE Bonded Coating**		• Dry lubrication of sliding surfaces of different materials at low pressures, low speeds and in dusty environments • No-soiling sliding and parting film • Prevents tribocorrosion • Dries at room temperature

Properties / Approvals	Main Components	Technical Data	Packaging
	grey-black MoS_2	Operating temperature: -185°C → +450°C (up to +1,100°C in vacuum, up to +1,300°C in inert gas) Thread friction: not applicable Particle size: 4.0 – 15.0 µm, max. 48.0 µm	1 kg tin 5 kg hobbock 25 kg hobbock
	grey-black MoS_2	Operating temperature: -185°C → +450°C (up to +1,100°C in vacuum, up to +1,300°C in inert gas) Particle size: 2.5 – 5.0 µm, max. 15 µm	1 kg tin 5 kg hobbock 25 kg hobbock
	black MoS_2 graphite epoxy resin solvent	Operating temperature: -70°C → +250°C Press-fit test: µ = 0.09, no chatter Thread friction: not applicable	500 g tin 5 kg hobbock
	grey-black MoS_2 graphite silicone resin solvent	Operating temperature: -180°C → +450°C Press-fit test: µ = 0.07, no stick-slip	500 g tin 5 kg hobbock 25 kg hobbock
	black MoS_2 graphite organic binder water	Operating temperature: -35°C → +450°C Press-fit test: µ = 0.10, no chatter Thread friction (M10/8.8): µ = 0.05	500 g tin 5 kg canister 25 kg canister
 NSF H2 Reg. No. 130416	black graphite organic binder water	Operating temperature: -35°C → +600°C Press-fit test: µ = 0.12, no chatter Thread friction: not applicable	5 kg canister 25 kg canister
	whitish PTFE silicone resin solvent	Operating temperature: -180°C → +260°C Press-fit test: µ = 0.07 Thread friction (M10/8.8): µ = 0.10	500 ml tin 5 l hobbock 25 l hobbock

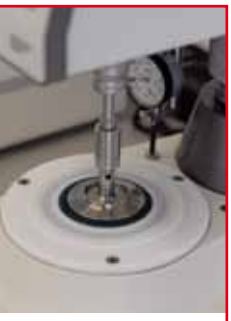
DRY LUBRICANTS – THE ALTERNATIVE FOR SPECIAL APPLICATION CASES

Dry Lubricants

Product	Designation	Fields of Application	Purpose
OKS 575	**PTFE Water Bonded Coating**		• For sliding surfaces made of different materials at low pressures, low speeds and in dusty environments • Avoids squeaking at differently hard materials • Dries at room temperature • Contains UV indicator • Can be diluted with water
OKS 589	**MoS_2 PTFE Bonded Coating, thermosetting**		• Dry lubrication of sliding surfaces under heavy loads, low speeds and corrosive influences • Prevents friction, wear • Protects against corrosion • Use in a broad temperature range • No adhesion of dust and dirt
OKS 1300 **OKS 1301***	**Sliding Film, colourless**		• Thread coating • Sliding film for plastic, wood and metal • Dry sliding film fast to handling with UV indicator • Prevents seizing • For all screw materials • Broad range of uses, in particular for precoating small and mass-produced parts
OKS 1710 New	**Sliding Film for Screws, water-based concentrate**		• Thread coating, also for galvanic surfaces and VA screws, for controlled assembly • Dry sliding film fast to handling, verifiable with UV indicator • Can be diluted with water in a ratio of up to 1:5 • Controlled friction coefficients with narrow spread • Economic precoating
OKS 1750	**Sliding Film for Wood Screws, water-based concentrate**		• Coating of threads with galvanised surfaces • Dry film fast to handling, verifiable with UV indicator • Prevents cold welding • Can be diluted with water in a ratio of up to 1:5 • Controlled friction coefficients with narrow spread • In particular for chipboard screws
OKS 1765	**Sliding Film for Thread-Cutting Screws, water-based concentrate**		• Coating of thread-cutting screws made of aluminium alloys, high-alloy steels, galvanised and austenitic steels • Dry film fast to handling, verifiable with UV indicator • No cold welding • Can be diluted with water in a ratio of up to 1:5 • Controlled friction coefficients with narrow spread

Properties / Approvals	Main Components	Technical Data	Packaging
	whitish PTFE acrylic copolymer UV indicator water	Operating temperature: -180°C → +150°C/+250°C Press-fit test: not applicable Thread friction (M10/8.8): not applicable	5 kg hobbock 25 kg hobbock
	matt black MoS_2 graphite PTFE epoxy resin solvent	Operating temperature: -70°C → +250°C Press-fit test: μ = 0.07, no chatter Thread friction (M10/8.8): μ = 0.08	5 kg hobbock
	colourless UV indicator synthetic wax solvent	Operating temperature: -60°C → +100°C Press-fit test: not applicable Thread friction (M10/8.8): μ = 0.08 - 0.10	5 l canister 25 l canister 200 l drum 400 ml aerosol*
	milky-white UV indicator corrosion protection inhibitor synthetic wax water isopropanol	Operating temperature: > +60°C Press-fit test: not applicable Thread friction (M10/8.8): μ = 0.08 - 0.14 (depending on concentration and surface)	5 l canister 25 l canister 200 l drum
	yellowish UV indicator corrosion protection inhibitor synthetic wax water isopropanol	Operating temperature: > +70°C Press-fit test: not applicable Thread friction (M10/8.8): μ = 0.08 - 0.14 (depending on concentration and surface)	25 l canister
	milky-white UV indicator corrosion protection inhibitor synthetic wax water isopropanol	Operating temperature: > +70°C Press-fit test: not applicable Thread friction (M10/8.8): μ = 0.06 - 0.15 (depending on concentration and surface)	5 l canister 25 l canister 200 l drum

WHAT YOU CAN EXPECT FROM OKS – PERFORMANCE THAT MOVES



Maximum product quality, active occupational health and safety and consistent environmental protection

These three factors form the major factors for the sustainable success of our company and our industrial and commercial customers worldwide.

OKS is oriented towards the development, production and sales of lubricants, maintenance and corrosion protection products of the highest possible quality. Our focus lies on customers who are satisfied with our products and our performance.

All employees are committed to the high quality, environmental protection and work protection demands. Continues personnel development results in active participation in implementing the corresponding targets.

Our high quality and environmental standards are already ingrained in our product development. Environmental protection and the user's safety have the greatest priority for us. Not only through our environmentally conscious company management, but in particular through the development of state-of-the-art lubricants do we contribute to a marked reduction of the negative environmental impact caused by technical factors.

We utilise modern production processes in manufacturing our products. In safe and environmentally friendly production processes we keep the effect on man and environment as small as possible.

In cooperation with our local sales partners we place great emphasis on qualification and thus ensure excellent consulting services and competence in solving problems locally.

Our participation in the initiative "We all take care", an initiative of the Freudenberg Group for environmental and work protection and for the reduction of occupational accidents, is further proof that our goals are corporate practice.

The high OKS quality standard is proven by our certification by the TÜV SÜD Management Service GmbH in the fields of quality (ISO 9001:2008), environment (ISO 14001:2004) and work protection (OHSAS 18001:2007).

CONSULTATION SHEET

Please copy this form and fax it to your OKS dealer (or directly to OKS: Fax: +49 (0) 8142 3051-599)

To provide you with a competent answer we require the following information:

Last name, first name: _____ Company stamp

Company: _____

Department, position: _____

Street: _____

Postal code/City/Country: _____

Phone: _____

Fax: _____

E-mail: _____

OKS sales partner (if known): _____

Application description

Type of machine:

_____

_____

Description of lubricating points / machine elements

☐ Roller bearing ☐ Friction bearing ☐ Chain

☐ Cable ☐ Gear ☐ Screw

Designation, size, configuration: _____

_____

Description of the operating conditions

Rotating movement speed _____ rpm

Horizontal load _____ Vertical load _____

Vibrations ☐ high ☐ medium ☐ low

Operating duration _____ h/day _____ Days/week

Measured bearing temperature _____ °C (inside) _____ °C (outside)

Operating temperature from _____ °C to _____ °C max _____ °C

☐ Influence of dust ☐ Influence of water

☐ other influences: _____

Description of the current lubrication

☐ Oil lubrication **or** ☐ Grease lubrication **or** ☐ _____

☐ First filling **or** ☐ Relubrication

☐ Interval ☐ Lifetime lubrication ☐ Central lubricating system

☐ Grease egression possible ☐ Grease nipple ☐ _____

Current lubricant _____

Lubricant recommended by manufacturer _____

Required approvals _____

Desired improvements

☐ Reduction in operating costs ☐ Prolongation of the relubrication intervals

☐ Standardisation of lubricant ☐ Ecological improvement

LUBRICATING DEVICES FOR PRACTICAL USE

Solutions for continuous use in industry

Lever Grease Gun

The practical grease gun for reliable, economical application of greases. Thanks to its well thought-out design and rugged construction, it stands up under even the toughest conditions. Available separately or in the Lubricating Set (20 cartridges of OKS 400 or OKS 470 including a lever grease gun).

Sprayboy

Together with the spray can, the Sprayboy becomes the perfect spraying device. It enables simple, fatigue-free handling and exact, controlled dosing of the spray mist. (Suitable for all OKS standard spray cans with a size of 300 ml or bigger. Do not use together with Airspray can).

Airspray-System

The OKS Airspray-System is the economic and ecological alternative to the spray can, since it reduces costs and prevents waste. The pressure spray system consists of the Airspray can and a unit for filling the can with product and compressed air. The air serves as a harmless propellant gas. OKS products such as oils and cleaning agents can be processed by means of corresponding valves and spray heads for use in workshops or industrial maintenance.

ChronoLube-System

ChronoLube is the ideal combination of OKS speciality lubricants with an electromechanical lubricator. This enables the automatic supply of lubricating points with oils and greases. In the dosage you require and at the right time – without under or over-lubrication. Simply install the ChronoLube Drive together with the suitable ChronoLube Cartridge at the lubricating point and set the dispensing time (1, 3, 6, 12 months) in accordance with your requirements. Whether lubricating point that is difficult to reach, strong vibrations or extremely high ambient temperatures, OKS can provide you with the right accessories for trouble-free use of the ChronoLube System.

INNOVATIVE SOLUTIONS FOR SPECIAL APPLICATIONS

Speciality lubricants for food processing technology

OKS develops speciality lubricants which meet the demanding hygiene requirements in food processing technology. They can be used in all areas in which human beings could come into indirect contact with lubricants. Application of these lubricants is not limited to the food processing industry.

Typical users include:

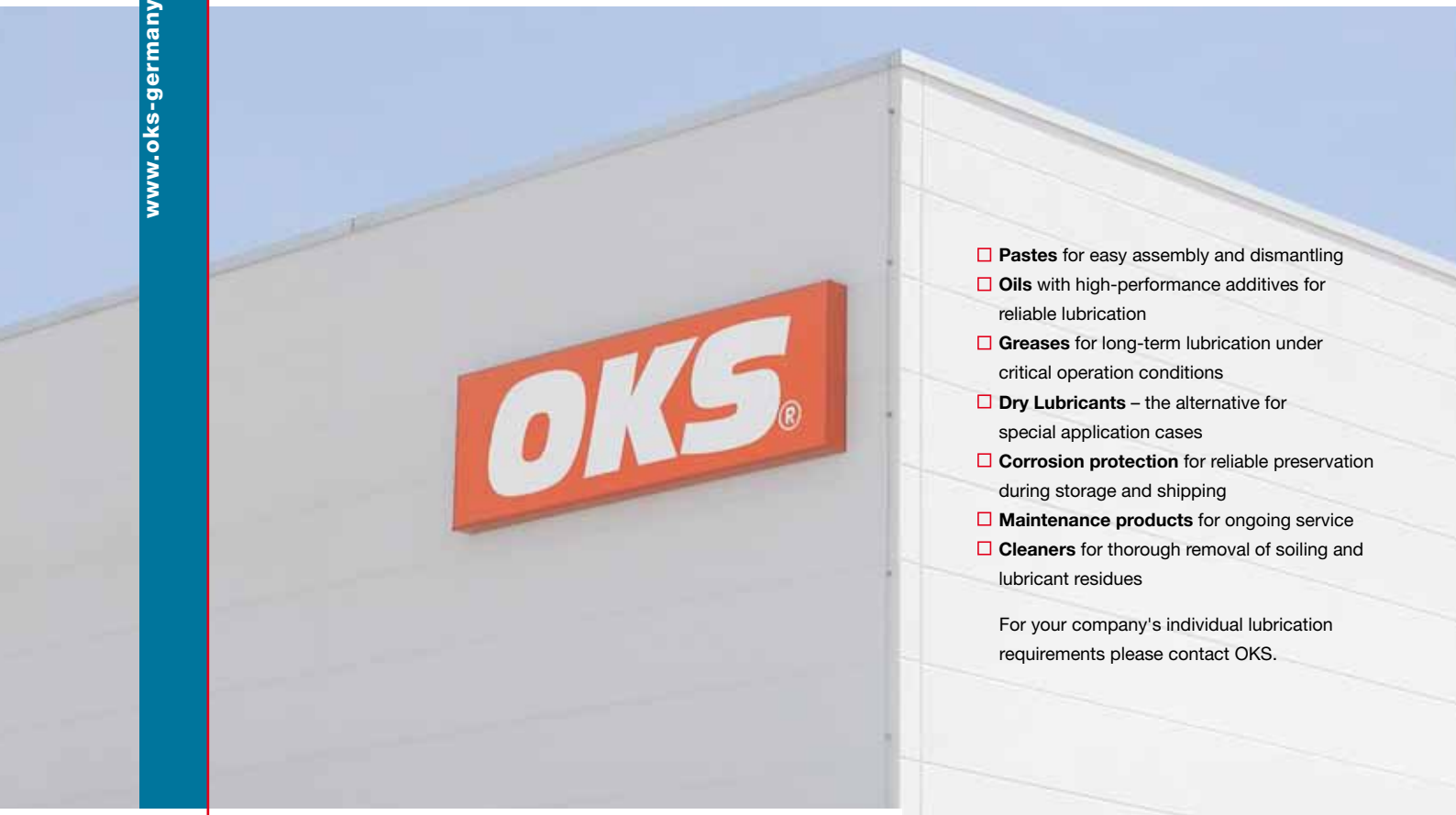
- Manufacturers of food packaging
- Machine and system builders for the food processing industry
- Operators of logistics centres for foodstuffs
- Producers of household appliances like baking ovens, refrigerators etc.
- Manufacturers of household products
- Toy industry
- Pharmaceuticals industry

Chemotechnical products for industrial maintenance

The chemotechnical maintenance products from OKS were developed especially for the complex requirements in maintenance and assembly applications. Whether for critical operating conditions like high-pressure loads and extreme temperatures or aggressive environmental factors like dust and corrosive media, the performance of our maintenance products will always convince you.

Over 150 high-performance products from one supplier

www.oks-germany.com



- **Pastes** for easy assembly and dismantling
- **Oils** with high-performance additives for reliable lubrication
- **Greases** for long-term lubrication under critical operation conditions
- **Dry Lubricants** – the alternative for special application cases
- **Corrosion protection** for reliable preservation during storage and shipping
- **Maintenance products** for ongoing service
- **Cleaners** for thorough removal of soiling and lubricant residues

For your company's individual lubrication requirements please contact OKS.

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Fax +49 (0) 8142 3051-599

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For a world in motion