

LUBCHEM KOREA

Specialty Lubricants for Machine Elements

A selection of specialty lubricants for rolling bearings, sliding bearings, linear guides, gears, chains, screws, compressors and nano applications

ROLLING BEARINGS

SLIDING BEARINGS

LINEAR GUIDES

GEARS

CHAINS

SCREWS & COMPRESSORS

NANO APPLICATIONS

COMPILED FOR INDIAN INDUSTRY BY

Project Sales Corp

LUBCHEM Korea Authorised Partner · Visakhapatnam · India

CONTENTS

Specialty Lubricants for Machine Elements

Rolling Bearings — Greases	4–5
Sliding Bearings — Greases and Oils	6–7
Linear Guides — Oils and Fluid Greases	8–9
Linear Guides — Special Greases	10–11
Gears — Oils and Greases	12–13
Chains — Oils	14–15
Screws and Compressors	16–17
Nano Special Lubricants and Additives	18–19

HOW TO USE THIS CATALOGUE

Each section maps application requirements — speed, temperature, load, operating condition and component type — to the relevant LUBCHEM Korea grade or grade family. The tables are selection guides, not direct substitution charts.

Before changing any lubricant, confirm the specific grade, current technical data sheet, OEM specification and any compatibility or changeover requirements with PSC.

Product data derived from LUBCHEM Korea machine-elements application catalogue. Verify current grade availability and TDS before quoting.

Start with
the component.
Not just
the lubricant.

Speed, temperature, load and operating condition all influence lubricant selection — even within the same machine element family.

PSC APPLICATION REVIEW

- Component type
- OEM / machine
- Speed / load / temperature
- Existing lubricant
- Lubrication method

CONTACT PSC

info@projectsalescorp.com
+91-96031-66448
pscspecialtylubricants.com

LUBCHEM KOREA

The Right Lubricant for Machine Components

Today, lubricants are a design factor in machine and equipment engineering — not simply a maintenance consumable. When the correct lubricant is selected at the design stage, facility maintenance costs fall and production losses from mechanical failures are reduced.

LUBCHEM Korea's machine-elements catalogue introduces specialty lubricants for the most common lubrication points in industrial and automotive components: bearings, linear guides, gears, chains, screws and compressors. Most can be applied generally to each machine component, and the selection tables serve as a reference when replacing the existing product.

The products in this catalogue are a selection from the full range. Where a specific application or machine requires a product not listed here, LUBCHEM Korea and PSC can develop lubricants to meet those requirements.

LUBCHEM KOREA — PROVEN ACROSS INDUSTRIES

Automotive Passenger vehicles · CV · Components · OEM assembly	Steel / Heavy Industry Bearings · Gears · Open drives · High-load rotating equipment	Electronics / Precision Linear guides · Spindles · Clean room · HDD / LCD production
Machine Tools High-speed spindles · Guideways · Ball screws · Chucks	Textile Chains · Bearings · Stenter rails · High-temperature drives	Compressors Rotary screw · Reciprocating · Assembly lubricants

SELECTION PRINCIPLE

Temperature is the starting point.
Speed and load determine the grade.

Every table in this catalogue selects by operating condition first — then identifies the product. A product name alone is never a sufficient selection criterion.

OEM SUPPLY HISTORY

LUBCHEM Korea has supplied specialty lubricants to automotive manufacturers, bearing makers, electronics companies and industrial OEMs as long-term and lifetime lubricants. The same product technology is available to Indian industry through Project Sales Corp.

DON'T KNOW THE PRODUCT CODE?

Send PSC the component,
OEM and operating conditions.
We identify the grade.



Specialty Lubricants for Rolling Bearings

SELECTION BY APPLICATION

APPLICATIONS	SERVICE TEMP. (°C)		SPEED FACTOR N·DM [MIN ⁻¹ ·MM]	BASE OIL VISCOSITY DIN 51562 [MM²/S]		BASE OIL	THICKENER	PRODUCT
	HIGH	LOW		40°C	100°C			
HIGH-TEMPERATURE								
High-temp.	260	−40	300,000	420	40	P.F.P.E	P.T.F.E	PF 8092
	200	−40	1,000,000	130	20	ester	P.T.F.E	BH 3022 F
	180	−40	1,000,000	68	9	ester	Polyurea	TP 3022
LOW-TEMPERATURE								
Low-temp.	110	−60	1,000,000	12	3	ester	Li soap	BL 6512
	110	−50	1,000,000	18	4	P.A.O	Li soap	KL 6012
LOW-NOISE								
Low-noise	180	−45	1,000,000	72	9.5	ester	Polyurea	TP 3022
	150	−50	1,000,000	25	5	ester	Polyurea	TP 3612
HIGH-SPEED SPINDLE								
High-speed spindle	120	−40	2,100,000	22	5	P.A.O	Polyurea	HL 3013 U
	120	−50	2,100,000	21	5	P.A.O+ester	Ba-comp	PH 4012
HIGH-LOAD / HEAVY-DUTY INDUSTRY								
High-load industry	150	−40	1,000,000	136	14	ester	Li soap	LP 6012 E
	160	−25	500,000	500	25	mineral	Li soap	BE 2112
	150	−10	500,000	250	19	mineral	Al-comp.	BE 2102
ELECTRIC CONDUCTIVITY / SPECIAL								
Electric conductivity	150	−40	1,000,000	150	19	P.A.O	Li soap + solids	EK 6032 C
	150	−10	500,000	—	—	mineral	Special Ca-soap	BM 1052

These products are also documented for rolling and plain bearings subject to vibration and oscillations, including main bearings in wind turbines (BE 2112) and high-load wet-zone ball bearings (BM 1052). See also: Wind Power Application Guide.

Rolling Bearings — Grade Features

PRODUCT DESCRIPTION

BASE OIL	THICKENER	PRODUCT	KEY FEATURES
P.F.P.E	P.T.F.E	PF 8092	Tried-and-tested long-term grease for bearings subject to high temperatures. Very good long-term stability. Very good corrosion protection. Approved and recommended by many manufacturers.
ester	P.T.F.E	BH 3022 F	Patented hybrid grease for long-term lubrication. For wet, corrosive environments and vibrations.
ester	Polyurea	TP 3022	Excellent corrosion protection. Long bearing life due to special wear protection additives. For motor vehicle applications: pulleys, generators, clutch release bearings, fan bearings, wiper motors.
ester	Li soap	LP 6012 E	Heavy-duty grease for low friction moments.
P.A.O	Li soap	KL 6012	Excellent low-temperature performance. Low friction.
ester	Polyurea	TP 3612	For lifetime and long-term lubrication at high and low temperatures. For double-sealed and shielded rolling bearings. Electric motors, fans, air conditioning systems and hard disc drives.
ester	Li soap	BL 6512	For low temperatures and low friction moments. Lifetime lubrication of double-sealed ball bearings such as miniature and instrument bearings.
P.A.O	Polyurea	HL 3013 U	Especially for spindle bearings with inclined or vertical mounting position; also for horizontal shafts in machine tools.
P.A.O+ester	Ba-comp	PH 4012	Spindle bearings with inclined or vertical mounting; also for horizontal shafts in machine tools.
mineral	Li soap	BE 2112	For rolling and plain bearings subject to high loads. For vibrations and oscillations. Main bearings in wind turbines.
mineral	Al-comp.	BE 2102	For low to medium speeds. High-temperature and high-load application.
mineral	Special Ca-soap	BM 1052	For ball bearings subject to high loads in wet processing zones. For medium rotating speeds.
P.A.O	Li soap + solid lubricants	EK 6032 C	For long-term lubrication of rolling bearings subject to static electricity. Electric motors, paper-making machines, copying machines, film stretchers, guides in belt conveyors and fans.

All product codes are LUBCHEM Korea designations. Confirm current TDS and availability before quoting. Contact PSC for application review — info@projectsalescorp.com · +91-96031-66448

Specialty Lubricants for Sliding Bearings

GREASES — SELECTION BY OPERATING CONDITION

APPLICATIONS	OPERATING CONDITION	SLIDING SPEED [M/S]	MAX SURFACE PRESSURE [N/MM²]	SERVICE TEMP. (°C)		BASE OIL VISCOSITY [MM²/S]		BASE OIL	THICKENER	PRODUCT
				HIGH	LOW	40°C	100°C			
PLANT AND MACHINE BUILDING / APPLIANCE INDUSTRY — OSCILLATING / ROTATING										
Plant & machine building appliance industry	Oscillating/ Rotating	< 1	≈100	260	−40	430	40	P.F.P.F	P.T.F.E	PF 8091 F2
				180	−30	430	38	ester	Polyurea	HL 3091
				160	−20	430	25	mineral+P.A.O	Bentonite	HM 7090 M
				150	−40	450	25	P.A.O	Li soap	GR 6101
				140	−20	537	32	mineral	Polyurea	RB 3110 C
ROTATING — HIGHER SPEEDS										
Rotating — higher speed	Rotating	≥1	≈10	160	−45	150	16	P.A.O	Ba-comp.	BP 4032
	Rotating	≥2	≈1	130	−55	18	3.5	P.A.O	Li soap	KL 6012

LUBRICATING OILS FOR HYDRODYNAMIC PLAIN BEARINGS

APPLICATION / REQUIREMENTS	PRODUCTS	BASE OIL	FEATURES
Standard	G oil ISO VG 100, 150, 220, 320, 460	mineral	Tried-and-tested gear oil series compatible with conventional plain bearing metals
Long-term and high performance	GM S series ISO VG 32, 46, 68, 100	P.A.O	Long-term, reasonably priced compressor oil series compatible with conventional plain bearing metals
High-temp. and long-term	GH series ISO VG 32, 46, 48, 100 ... 1,000	P.A.G	Tried-and-tested long-term gear oil series compatible with conventional plain bearing metals

Sliding Bearings — Grade Features

GREASE FEATURES

BASE OIL	THICKENER	PRODUCT	KEY FEATURES
P.F.P.F	P.T.F.E	PF 8091 F2	High-temperature long-term grease with largely neutral behaviour towards metals and plastics. Lifetime lubrication enables a significant reduction in lubrication quantities.
ester	Polyurea	HL 3091	Suitable for higher ambient temperatures. Extended relubrication intervals even at high temperatures owing to long-term stability.
mineral+P.A.O	Bentonite	HM 7090 M	The preferred lubricant for plain bearings, offering long service life and relubrication intervals. Suitable for universal standard applications.
P.A.O	Li soap	GR 6101	Especially for plastic plain bearings. Also available in other base oil viscosities. Good compatibility with many plastics.
mineral	Polyurea	RB 3110 C	Excellent lubricating film at high load, good wear protection and water resistance and adhesiveness. Various rolling and sliding bearings for rotating low and middle speed in heavy industry.
P.A.O	Ba-comp.	BP 4032	Synthetic base high-performance grease with good pressure absorption. Wide service temperature.
P.A.O	Li soap	KL 6012	Good low-temperature grease and damping property. Wide service temperature and compatibility with plastic and elastomers. Sliding bearings, sliding parts and small gears. Automotive parts in seat adjustment, window lifters, small plastic gears and rolling bearings.

Contact PSC for sliding bearing application review — especially for oscillating / high-load / plastic bearing applications where material compatibility confirmation is required.



Linear Guides — Special Oils and Fluid Greases

LUBRICATING OILS

APPLICATION / REQUIREMENTS	LINEAR GUIDE TYPES	BASE OIL	PRODUCTS	KEY FEATURES
General	Rolling motion guides	mineral	G oils ISO VG 46–220	CLP gear oil, excellent anti-corrosion and wear protection. ISO VG 46 suitable for particularly low temperature.
General	Slideways	mineral	GD 68, 220	CGLP slideway oil with good demulsifying behaviour towards cooling lubricants. Suitable for plastic slideways. Viscosity to be selected by operating speed.

FLUID GREASES — CONTINUOUS LUBRICATION OF ALL LINEAR TYPES

INDUSTRY / REQUIREMENTS	NLGI GRADE	BASE OIL	PRODUCTS	FEATURES
General / low-speed (< 15 m/min)	00/000	mineral	GB 70800	With high-pressure and anti-wear additives, without solid lubricants
General / low-speed (15 to 60 m/min)	000	mineral	GLP 60800	Good pressure absorption capacity
General / middle-speed (> 60 m/min)	0/00	ester	NCA 1011	Low base oil viscosity for low friction and smooth running
General / high-temperature	0/00	P.A.O	NCA 1011	Synthetic base oil with good ageing resistance
General / high-load, micro-motion and vibration	0, 00/000	mineral	GB 7080 / 70800	With high-pressure and anti-wear additives, without solid lubricants. Select NLGI grade according to lubrication specification.

PSC Application Review — Linear guides: send guide OEM / machine / operating speed / temperature / lubrication system / existing product. info@projectsalescorp.com

Linear Guides — Special Greases

SELECTION BY OPERATING TYPE AND REQUIREMENT

OPERATING TYPE	REQUIREMENTS	CRITERIA	SERVICE TEMP. (°C)		BASE OIL VISCOSITY [MM²/S]		PRODUCT
			HIGH	LOW	40°C	100°C	
ROLLING MOTION GUIDE							
Rolling motion guide	Universal	Low speed (< 15 m/min)	140	−15	220	19	BE 1052
		Middle speed (15–60 m/min)	120	−20	100	12	GL 6031
		High speed (> 60 m/min)	120	−50	23	4.7	GL 6151 / SM 6021
Small guideways	Universal	—	120	−50	30	5.5	NCA 1011
Roller screw drive	Universal	—	150	−50	127	14	BH 6052 CR
TRAPEZOIDAL THREAD DRIVE							
Trapezoidal thread	Plastic nuts	Low speed (< 15 m/min)	130	−40	170	60	AK 1010 / GL 6031
	Metal nuts	Medium speed (15–60 m/min)	150	−30	125	14	BH 6052 CR
SLIDING MOTION GUIDE / ALL TYPES							
Sliding motion guide	Universal	Medium speed (15–60 m/min)	150	−40	120	14	RB 3110 C
All types	Smooth running	High accelerations and speed	130	−50	31	5.9	BP 4012
	Micromovement / vibration	Normal load	150	−40	123	14	BM 1102 B
	High-load	—	160	−25	537	32	HE 1022
	High-temp.	Not in high vacuum / UV / aggressive media	140	−40	48	7.9	SM 6021
	Clean room / semiconductor / LCD / HDD	Temp. up to 60°C; not in high vacuum / aggressive radiation	120	−50	32	—	NCA 1011
	Clean room / semiconductor / LCD / HDD	High temp.; under high vacuum / UV radiation	260	−50	190	34	KM 8132

Linear Guides — Grade Features

PRODUCT DESCRIPTION

BASE OIL	THICKENER	PRODUCT	KEY FEATURES
mineral	Ca-comp.	BE 1052	Lubricating grease, good adhesion and sealing effect
mineral	Ca-comp.	BE 1022	Lubricating grease, good adhesion and sealing effect
ester+P.A.O	Ca-comp.	NCA 1011	Lubricating grease, good adhesion and sealing effect; synthetic base oil with good ageing resistance; clean room applications
P.A.O	Al-comp.	AK 1010	Fluid grease, NLGI 0 for easy application
P.A.O	Li-comp.	GL 6031	Good lubricating capacities in linear contact
mineral+P.A.O	Li-comp.	GL 6151	Good compatibility with plastics. Lubricants for higher speeds on request.
mineral	Li-comp.	BH 6052 CR	Good wear protection for long relubrication intervals. Lubricants for high / low speeds on request.
P.A.O	Ba-comp.	BP 4012	Ageing-resistant lubricating grease for long-term lubrication
mineral	Ca-comp.	BM 1102 B	Tried-and-tested grease against tribo-corrosion
mineral	Polyurea	RB 3110 C	Good wear protection, applicable through central lubricating systems
P.A.O	Li soap	SM 6021	Very wide temperature range. Compatible with plastics. Low-cost alternative to PFPE oils. Tried-and-tested for automotive applications (steering system).
P.A.O	Ca-comp.	HE 1022	Special high-pressure, synthetic, smooth-running grease for wide service temperature range. Excellent ageing stability allows extended relubrication intervals or lifetime lubrication.
P.F.P.E	P.T.F.E	KM 8132	Improved component performance due to low starting torques even at low temperatures. Resistance to high speeds with friction values largely independent of temperature. For clean room / semiconductor / HDD / LCD / UV applications.



Specialty Lubricants for Gears — Oils

GEAR OILS — PERFORMANCE COMPARISON

GEAR TYPE		PRODUCTS	SERVICE TEMP. (°C)		ENERGY SAVING	OIL LIFE	OIL STANDARDS	BASE OIL	VISCOSITY (ISO VG)
SPUR/BEVEL/HYPOID	WORM		LOW	HIGH					
★★★★	★	LUBCHEM G	−15	100	★	★	CLP, EP	Mineral	46–680
★★★★	★★	LUBCHEM GM S series	−45	140	★★	★★	CLP HC, EP	P.A.O	32–680
★★	★★★★	LUBCHEM GH series	−45	160	★★★★	★★★★	CLP PG, EP	P.A.G	32–1,000
★★★★	★★	LUBCHEM GE series	−25	110	★★	★★	CLP, EP	ester	220–320

★★★★ Best performance · ★★★ Better performance · ★ Standard performance

GREASES FOR GEARS — SELECTION BY OPERATING CONDITION

OPERATING CONDITION	SERVICE TEMP. (°C)		CONSISTENCY DIN 51 818	BASE OIL VISCOSITY [MM²/S]		BASE OIL	THICKENER	PRODUCT
	HIGH	LOW		40°C	100°C			
ROOM TEMP. / GEAR FLUID — MINERAL								
Room temp. — mineral	150	−10	00/000	700	35	mineral	Silicate	GB 70800
	140	−10	0/00	680	35	mineral	Al-comp.	GE 2130
WIDE TEMP. / GEAR FLUID — SYNTHETIC								
Wide temp. — synthetic	130	−30	00	120	20	P.A.G	Li	GE 60300
	140	−50	1	30	6	P.A.O	Ca-comp.	KL 6012
	150	−30	0	130	15.5	P.A.O	Ca-comp.	NCA 1011
	130	−60	2	17.5	3.8	P.A.O+mineral	Ca-comp.	G 1010
	150	−50	2	30	5.5	P.A.O	Ca-comp.	G 1012
	180	−40	2/3	70	9.4	ester	Polyurea	GL 3023

Gears — Grade Features

GEAR GREASE DESCRIPTIONS

BASE OIL	THICKENER	PRODUCT	KEY FEATURES
mineral	Silicate	GB 70800	Fluid grease for splash lubrication of spur and bevel gears subject to high-load. Good wear protection and anti-corrosion properties.
mineral	Al-comp.	GE 2130	Open girth gear lubrication and adhesive lubricant for reducing noise. Good for splash lubrication. Steel-to-steel wheel lubrication at normal service temperature. Excellent load-carrying capacity.
P.A.G	Li	GE 60300	Peripheral 8 m/s gear speed, bevel, spur and worm gear. Fluid grease for splash lubrication under high-load. Not suitable for synthetic material or aluminium alloy metal. Suitable for small gear.
P.A.O	Ca-comp.	NCA 1011	Noise dampening grease, splashing lubrication of gear. Particularly suitable for plastic parts.
P.A.O+mineral	Ca-comp.	G 1010	Special grease for small gear, especially in power electric tools and various electric home appliances. Peripheral 5 m/s speed, wide service temperature. Plastic-to-plastic and plastic-to-steel gear combinations.
P.A.O	Li soap	KL 6012	Good low-temperature grease for plastic-to-plastic and steel-to-plastic gear pairing. Very smooth operation at low temperature. Suitable for gear actuator in automobile parts.
P.A.O	Ca-comp.	G 1012	At increasing load, lifetime lubrication for small gear and wide service temperature. With low base oil viscosity, low starting torque at low temperature. Suitable for plastic-to-plastic and plastic-to-steel small gear.
ester	Polyurea	GL 3023	Wide service temperature gear grease with low starting torque at low temperature.

PAO/PAG gear oils (GM S, GH series) are not interchangeable without a compatibility and flush review. Seal material and paint compatibility must be confirmed. Contact PSC before conversion.



Specialty Lubricants for Chains

SELECTION BY APPLICATION

APPLICATION	SERVICE TEMP. (°C)		BASE OILS	VISCOSITY ASTM D-445 [MM ² /S]		FLASH POINT (°C)	PRODUCT
	LOW	HIGH		40°C	100°C		
Rotary kilns — inner surfaces of tyres and kiln shell; pouring ladles in steel industry	-25	1,000	mineral+P.A.O	150	—	≥370	HM 9059 GM
Transport chains — food processing; drive and control chains in melting furnaces	-30	250	polyglycol	100	20	—	YF 100 PG
Drive, control and transport chains — high temperatures and loads; insulating materials industry	0	250	ester	100	12	≥270	CH 100 E
Dryer conveyor chain — wood industry	0	250	ester+P.A.O	270	30	260	SUPER 270 PE
Roller chains, chain joints, slide chains, rails — film stretching machines, stenters in textile	0	250	P.A.O	320	28	≥220	PLUS 320 P
Chains in film stretching industry	0	280	ester	280	24	≥250	CH 280 E
Dryer chain — drying process after dyeing in textile industry	0	250	ester	260	30	≥220	CH 260 E
Drive, control and conveyor chains — wet and humid areas; high resistance to rain and water	-5	120	mineral	4,750	1	—	GE 5500 MF
Dryer and oven conveyor chain — high temperature circulating	-40	220	P.A.O+ester	100	11.5	—	CM 100 M
High adhesive oil — driving chain and conveyor; good water resistance	0	250	P.A.O+ester	280	24	≥250	PFS 280 PE
Drive, control and transport chains — high temperatures; conveyor; heat relief materials; driers	0	250	ester	95	13	270	OY 95 E
Lubrication points subject to high thermal loads — chains, slideways, gears, wire ropes, guideways, cams	0	250	P.A.O+ester	2,000	126	≥230	HP 2000 PE

Chains — Grade Features

PRODUCT DESCRIPTION

PRODUCT	KEY FEATURES
HM 9059 GM	Viscous high-temperature release agent and lubricating compound. Base fluid starts to evaporate at approx. 200°C, leaving a solid lubricant film that separates frictional surfaces (dry lubrication). Flash point ≥370°C.
YF 100 PG	Suitable for temperatures up to 500°C, with dry lubrication being gradually reached above 200°C. Good wetting properties, excellent penetration behaviour and high stability.
CH 100 E	Lubricates up to 250°C. Good wear protection and high pressure resistance. Low evaporation loss at high temperatures. Compatible with paints.
SUPER 270 PE	Usable up to 250°C high temperature. Good wear protection and low evaporation at high temperature.
PLUS 320 P	Efficient lubrication even at high operating temperatures. Good regeneration effect on used oil, good adhesion, no throwing off, resistance to wear and pressure. Little residue owing to fully synthetic constituents.
CH 280 E	For service temperatures up to approx. 250°C. Good wear protection. Low evaporation loss at high temperatures.
CH 260 E	Very low oil consumption and good stability of oxidation. Even at high chain speed, good performance and low residues.
GE 5500 MF	Good wear and corrosion protection, inherently adhesive and noise dampening. Contains MoS ₂ for improved emergency lubrication properties.
CM 100 M	Usable up to 220°C. At high temperature, periodical lubricating. Silicone-free — very suitable for automotive paint shop conveyor chain oil.
PFS 280 PE	Applicable up to 250°C. Good wear protection and low evaporation at high temperature.
OY 95 E	Low evaporation losses at high temperatures. High thermal stability reduces oil consumption and smoke development. For use up to approx. 250°C. Low residue formation, free of solid matter — less maintenance and unobstructed lubricating systems.
HP 2000 PE	Thermally stable up to approx. 250°C. Good adhesion to friction points. Long-term lubricating effect and low consumption. Good creeping and penetration — lower consumption and easy application.

For textile stenter chain applications, see also: LUBCHEM Korea Textile Application Guide available from PSC. For kiln-tyre and rotary-kiln chain applications, see: LUBCHEM Korea Cement Plant Application Guide.

Specialty Lubricants for Screws and Compressors

SCREWS — ASSEMBLY LUBRICANTS

SERVICE TEMP. (°C)	APPLICATIONS	MATERIALS	PRODUCTS	KEY FEATURES
–40 to 1,000	Over 200°C; dry lubricants	polyglycol+ester, Li soap, solid lubricants	PT 6080 PE	High-alloy metal black screw pastes. Good anti-corrosion and wear protection. Over 200°C most base oil evaporates — solid lubricants remain as dry lubricants. Assembly paste for vehicle exhaust / turbocharger / compressor.
–40 to 140	Medium-grade surface pressure; easy assemble and disassemble	mineral+P.A.O, Li-comp., solid lubricants	PT 6032 MP	For interference fit and clamping connection. Protection from tribo-corrosion. Low-speed bearings, guides, joints, bushes, eccentric units, seals, bolts and hinge assembling lubricants.
–15 to 150	Multi-purpose assembly paste	mineral, Ba-comp., solid lubricants	PT 4012 M	Assembly lubricant in frictional connections and thin-film lubrication at very high pressure loads, low sliding speed, high wear, stick-slip and tribo-corrosion. Clamping chuck lubrication, scroll, cam and spiral chuck. Prevention of stick-slip and tribo-corrosion.

COMPRESSORS — SYNTHETIC PAO COMPRESSOR OILS (SH SERIES)

SERVICE LIFE	POUR POINT (°C)	FLASH POINT (°C)	VISCOSITY [MM²/S]		BASE OIL	PRODUCT
			40°C	100°C		
Depending on operating environment and compressor performance — oil change intervals up to min. 6,000 / max. 10,000 h	≤ –51	≥ 230	32	5.8	P.A.O	SH 32
	≤ –36	≥ 240	46	7.3	P.A.O	SH 46
	≤ –36	≥ 240	68	9.8	P.A.O	SH 68
	≤ –33	≥ 240	100	13.1	P.A.O	SH 100

SH series: Synthetic P.A.O base compressor oil, miscible with mineral oil. SH 100 is particularly suitable for reciprocating piston compressors; SH 32 is also suitable for centrifugal compressors. Excellent oxidant stability — extended oil life. With low base oil evaporation, oil consumption is reduced and compressor outlet air keeps clean. Oil-change intervals above are maximums — confirm actual interval against OEM requirements and oil analysis.

Nano Special Lubricants and Additives

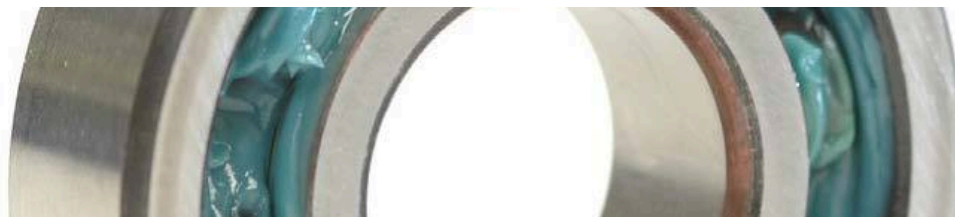
OIL ADDITIVES

PRODUCTS	APPLICATIONS	MAIN MATERIALS	VISCOSITY (40°C)	TREATMENT RATE	PACKAGE
NANO RC-X EG	Automotive engine surface reconditioning and energy saving	Multi-layer WS ₂ nanospheres	95–130 mm ² /s	1–7% in host oil	250 ml, 20 lt, 200 lt
NANO MP-X GR	Transmission and gear surface treatment — reducing wear and offering high efficiency	Multi-layer WS ₂ nanospheres	500–570 mm ² /s	3–5% in host oil	250 ml, 20 lt, 200 lt
NANO MP-X CP	Special treatment for compressor bearing, screws and cylinder surface reconditioning	Multi-layer WS ₂ nanospheres	500–570 mm ² /s	3–5% in host oil	250 ml, 20 lt, 200 lt
NANO MP-X CN	Special treatment for chain surface reconditioning	Multi-layer WS ₂ nanospheres	500–570 mm ² /s	3–5% in host oil	250 ml, 20 lt, 200 lt

GREASE ADDITIVES

PRODUCTS	APPLICATIONS	MAIN MATERIAL	TREATMENT RATE	PACKAGE
NANO GH-X	Surface-reconditioning nano-lubricant grease solid additives	WS ₂ multi-layered fullerene solution thickened with lithium grease	2–5% in production quantity	1 kg, 15 kg, 200 kg
NANO GH-B	Surface-reconditioning nano-lubricant grease solid additives	WS ₂ multi-layered fullerene solution thickened with lithium grease	3–5% in production quantity	1 kg, 15 kg, 200 kg

HOW NANO LUBRICANTS WORK — DUAL-EFFECT ACTIVE MATERIAL



1 · Anti-friction Effect

Multi-layered WS₂ nanospheres lower friction and heat, thereby reducing mechanical wear. Particles act as nano ball bearings between surfaces.

2 · Exfoliation Under Stress

Under stress, nanoparticles exfoliate tribofilm lamellas that attach to surface crevices.

3 · Re-furbishing Effect

Tribofilm lamellas fill and re-smoothen damaged surfaces — extending mechanical efficiency and apparatus life.

Nano lubricant additives create a tenacious tribofilm that remains even after oil change, protecting the engine or component. Particularly formulated for low friction in comparison to traditional lubricants. Simpler to use — no need for two separate additives.

Start with the machine. Not the product code.

Machine / OEM / Model	Component / Lubrication Point
Operating Speed / Temperature	Load / Operating Condition
Existing Lubricant Brand + Grade	Lubrication Method

Rolling Bearings

Sliding Bearings

Linear Guides

Gears

Chains

Screws / Compressors

Nano Additives

Product data derived from LUBCHEM Korea machine-elements application catalogue. Verify current grade availability, TDS and OEM approval before quoting or changing any lubricant. All LUBCHEM Korea product codes are as documented in the original source. Contact PSC for application review before substitution.