GAZPROM NEFT

GREASES

THE COMPANY

Gazpromneft-Lubricants Ltd is a subsidiary company of Gazprom Neft JSC specializing in production and sales of a wide range of engine, transmission, hydraulic and industrial oils, greases and technical fluids.

The company has 5 production sites in Russia, Italy and Serbia. Overall production is 500K tons of high-quality oils, greases and technical fluids per year. The company's management system is certified in compliance with ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007. The company supplies its products to the Russian conveyors of AC DERWAYS, AVTOTOR (for General Motors and Hyundai car range), Mercedes Benz Trucks Vostok, SC ROSTSELMASH, KAMAZ, GAZ. The consumers of Gazpromneft-Lubricants industrial products are Severstal, Sibur, Gazprom, Evraz, MMK and other largest industrial companies. The product range includes 500 lubricants and grease types for all market segments (more than 1000 items). Gazpromneft-Lubricants is an intensively developing company with the unique resource base. The company's goal is to become a leader in technology, marketing and service in the production and sales of high-tech lubricants, greases and fluids on the Russian and international markets.

Gazpromneft-Lubricants represents a wide range of modern import-substituting greases produced at the Omsk Lubricants Plant — one of the most modern production facilities in Europe and Russia, as confirmed by the relevant standards — ISO 9001, ISO 14001, OHSAS 18001, ISO/TS 16949

An advanced modular plant of the world's leading manufacturer intended for the production of all types of greases was entered to service at the Omsk Lubricants Plant to expand the product range and to comply with the highest standards. The rich vast experience of Gazpromneft-Lubricants factory in Bari (Gazpromneft Lubricants Italia S.p.A.) and the most advanced available technologies are used in Gazpromneft greases production.

This brochure represents an import-substituting range of Gazpromneft greases enable to increase the service life of the equipment and significantly optimize the cost of lubricants.

CLASSIFICATION AND STANDARDS

Grease is a highly structured thixotropic system typically consisting of the base oil and thickener with various fillers (additives and additions).

BASE OIL 65–96%

- Mineral
- Synthetic

ADDITIVES AND ADDITIONS 3–15%

- Antiscoring
- Antiwear
- Antifriction
- Antioxidant
- Anticorrosive
- Graphite
- Molybdenum disulfide and others

4–35% THICKENER

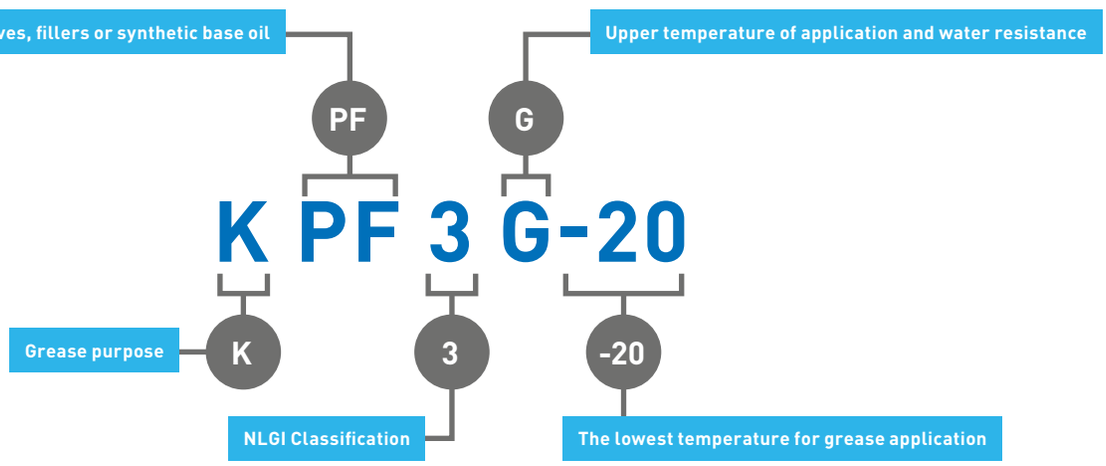
- Ordinary: Li, Ca, Na, Al, Ba
- Combined: Ca + Li, Na + Ca, Na + Li + Ca
- Complex: Li, Ca, Na
- Bentonite clays
- Polyurea
- Soots, pigments
- Silicagel

Depending on the amount of thickener greases are classified by NLGI Classification:

Penetration at 25 °C, mm/10	NLGI Classification	Consistency	Application
445–475	000	Very soft	Enclosed gear drives/servolubrication
400–430	00	Very soft	Enclosed gear drives/servolubrication
355–385	0	Soft semi-liquid	Enclosed gear drives/servolubrication
310–340	1	Soft	Enclosed geardrives/slider bearings/rolling bearings/ servolubrication
265–295	2	Soft (vaseline-alike)	Enclosed gear drives/slider bearings/linear sliding bearing/ servolubrication
220–250	3	Semi-solid	Slider bearings/rolling bearings
175–205	4	Solid	Rolling bearing/water pumps packing
130–160	5	Very solid	Exposed gear drives/water pumps packing
85–115	6	Very solid	Exposed gear drives/water pumps packing

Gazpromneft-Lubricants LTD greases meet DIN standard 51502

DIN standard consists of the set of letters and numbers, e.g.



Purpose	Sign
Rolling and sliding bearings, slip planes by DIN 51825	K
Enclosed drives by DIN 51826	G
Exposed drives	OG
Two bearings/tighten	M

Additives, fillers and synthetic base oil	Sign
EP-additives	P
Solid filler	F
Polyether oil	E
Perfluorinated liquid	FK
Synthetic hydrocarbons	HC
Based on phosphate ester	PH
Polyglycolic oil	PG
Silicone oil	SI
Other oils	X

Washing-out resistance at temperature °C by DIN 51807*	Upper limit of operating temperature, °C	Sign
0 at 40 °C or 1 at 40 °C	+60	C
2 at 40 °C or 3 at 40 °C	+60	D
0 at 40 °C or 1 at 40 °C	+80	E
2 at 40 °C or 3 at 40 °C	+80	F
0 at 40 °C or 1 at 40 °C	+100	G
2 at 40 °C or 3 at 40 °C	+100	H
0 at 40 °C or 1 at 40 °C	+120	K
2 at 40 °C or 3 at 40 °C	+120	M
No requirements	+140	N
No requirements	+160	P
No requirements	+180	R
No requirements	+200	S
No requirements	+220	T
No requirements	>+220	U

GAZPROMNEFT GREASE L 2

MULTIPURPOSE LITHIUM GREASE

APPLICATION

Multifunctional lithium base multipurpose grease is used for the lubrication in industrial machinery and vehicles operating in moderate conditions. It does not contain corrosive additives and toxic contaminants. Ideally for use in machinery and manufactures where strict adherence to environmental standards is required.

PROPERTIES AND ADVANTAGE

- High performance in friction units that does not require the use of special greases in the wide temperature range from -30 °C to +120 °C with brief peaks up to +150 °C
- Versatility of grease allows its use in various friction units that makes possible to significantly reduce the range of application and storage of lubricants.
- High oxidation stability provides the long service life of the grease and longer life of lubricated friction unit.
- Resistant to the corrosive effects of water.
- Excellent flow properties even at low temperatures.

Typical Properties	Method	Gazpromneft Grease L 2
Compliance with standard	DIN 51502	K 2 K-30
NLGI Classification	ASTM D 217	2
Temperature Range, °C		from -30 to +120
Color	Visual	Light Brown
Thickener Type		Lithium Soap
Dropping Point, °C	ASTM D 566	>190
Base oil		Mineral
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	1 600
Four-Ball Wear, Scar, mm	ASTM D 2266 DIN 51350 5	0,5
Copper Corrosion, 24h/120°C	DIN 51811	1B

GAZPROMNEFT GREASE L EP 00, 0, 1, 2, 3

LITHIUM GREASE FOR EXTREMELY HIGH LOADS

APPLICATION

Multifunctional lithium base grease containing extreme pressure additives (EP-additives) is used in friction units of industrial machinery and vehicles when reliable protection of equipment operating under heavy loads is required. It is used as the inset grease (NLGI 3), universal grease (NLGI 2) and for centralized lubrication systems (NLGI 00, 0, 1).

PROPERTIES AND ADVANTAGE

- High performance in wide implications and wide temperature range from -30 °C to +120 °C with brief peaks up to +150 °C.
- Thanks to the effective EP-additives provides reliable protection for lubricated parts, preventing the progressing of all types of wear and tear even under ultrahigh loads.
- Excellent resistance to oxidation and corrosion, corrosive effects of water.
- Good pumpability in a wide temperature range.

Typical Properties	Method	Gazpromneft Grease L EP 00	Gazpromneft Grease L EP 0	Gazpromneft Grease L EP 1	Gazpromneft Grease L EP 2	Gazpromneft Grease L EP 3
Compliance with standard	DIN 51502	KP 00 K-30	KP 0 K-30	KP 1 K-30	KP 2 K-30	KP 3 K-30
NLGI Classification	ASTM D 217	00	0	1	2	3
Temperature Range, °C		from -30 to +120	from -30 to +120	from -30 to +120	from -30 to +120	from -30 to +120
Color	Visual	Brown	Brown	Brown	Brown	Brown
Thickener Type		Lithium Soap	Lithium Soap	Lithium Soap	Lithium Soap	Lithium Soap
Dropping Point, °C	ASTM D 566	>170	>170	>180	>190	>190
Base oil		Mineral	Mineral	Mineral	Mineral	Mineral
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	2400	2400	2400	2400	2400
Four-Ball Wear, Scar, mm	ASTM D 2266 DIN 51350 5	0,5	0,5	0,5	0,5	0,5
Copper Corrosion, 24h/120°C	DIN 51811	1A	1A	1A	1A	1A

GAZPROMNEFT GREASE L MOLY EP 2

LITHIUM BASE GREASE WITH MOLYBDENUM DISULFIDE FOR ULTRA-HIGH LOADS AND HEAVY DUTY OPERATION

APPLICATION

Multifunctional lithium base grease containing extreme pressure additives (EP-additives) and the solid filler (molybdenum disulfide). It is used to lubricate the friction units of tractors, excavators, bulldozers, forklift and front loaders, crushers, vibrating screens and other industrial equipment and vehicles operating in heavy duty operation at very high loads.

PROPERTIES AND ADVANTAGE

- High performance and ability to withstand high loads in heavy duty operation thanks to the EP-additives and molybdenum disulfide.
- The presence of molybdenum disulfide protects the surfaces even in case of insufficient lubrication or particular contamination of working environment.
- Excellent protection against wear and seizure.
- Increases the service time of the parts in a wide temperature range from -30 °C to +120 °C with brief peaks up to +150 °C.
- Excellent resistance to the corrosive water action, preventing formation of rust and erosion.
- Good pumpability even at low temperatures.

Typical Properties	Method	Gazpromneft Grease L Moly EP 2
Compliance with standard	DIN 51502	KPF 2 K-30
NLGI Classification	ASTM D 217	2
Temperature Range, °C		from -30 to +120
Color	Visual	Dark Grey
Thickener Type		Lithium Soap
Dropping Point, °C	ASTM D 566	>190
Base oil		Mineral
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	2800
Four-Ball Wear, Scar, mm	ASTM D 2266 DIN 51350 5	0,4
Copper Corrosion, 24h/120°C	DIN 51811	1A

GAZPROMNEFT METALGREASE AC

BENTONITE BASE GREASE FOR EXTREMELY HIGH LOADS, HIGH TEMPERATURES AND HEAVY DUTY OPERATION

APPLICATION

Bentonite base grease with solid additions for industrial machinery operating under heavy loads, high temperatures and polluted environment. It is used for lubrication of mechanical jacks, crane joints, swivel bearings, heavy loaded roller mills and presses, carrying rollers for tunnel kilns and dryers, rollers, asphalt-spreader and other industrial machinery.

PROPERTIES AND ADVANTAGE

- High performance and increased ability to withstand high loads in heavy duty operation, due to the content of solid additions (copper, molybdenum disulfide and graphite).
- Extended service life of friction units in a wide temperature range from -30 °C to +200 °C.
- Excellent protection against wear and seizure.
- The content of solid additives provides reliable protection of surfaces even under heavy shock loads, dust and long intervals between the lubrication.
- Excellent resistance to scouring water action, prevents the formation of rust and corrosion.

Typical Properties	Method	Gazpromneft Metalgrease AC
Compliance with standard	DIN 51502	KPF 2S-30
NLGI Classification	ASTM D 217	2
Temperature Range, °C		from -30 to +200
Color	Visual	Copper Glaze
Thickener Type		Bentonite
Dropping Point, °C	ASTM D 566	No
Base oil		Mineral
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	3200
Four-Ball Wear, Scar, mm	ASTM D 2266 DIN 51350 5	0,4
Copper Corrosion, 24h/120°C	DIN 51811	1A

GAZPROMNEFT GREASE LTS 1, 2

MULTIPURPOSE LITHIUM-CALCIUM BASE GREASE FOR ULTRA-HIGH LOADS

APPLICATION

Multifunction grease containing extreme pressure additives (EP-additives) based on lithium-calcium soap. It is used for lubrication of friction units of industrial, construction and agricultural equipment, working under conditions of ultra-high loads.

PROPERTIES AND ADVANTAGE

- Excellent performance in a wide temperature range from -30 °C to +120 °C with brief peaks up to +150 °C.
- Long service life when working at high temperatures due to excellent resistance to thermal oxidation.
- Resistance to the corrosion and the corrosive effects of water.
- Grease versatility allows to use it in the various friction units that makes possible to reduce significantly the range of application and storage of lubricants.

Typical Properties	Method	Gazpromneft Grease LTS 1	Gazpromneft Grease LTS 2
Compliance with standard	DIN 51502	KP 1 K-30	KP 2 K-30
NLGI Classification	ASTM D 217	1	2
Temperature Range, °C		from -30 to +120	from -30 to +120
Color	Visual	Dark Brown	Dark Brown
Thickener Type		Lithium-calcium soap	Lithium-calcium soap
Dropping Point, °C	ASTM D 566	>190	>190
Base oil		Mineral	Mineral
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	2600	2600
Four-Ball Wear, Scar, mm	ASTM D 2266 DIN 51350 5	0,5	0,5
Copper Corrosion, 24h/120°C	DIN 51811	1A	1A

GAZPROMNEFT GREASE LTS MOLY EP 2

LITHIUM-CALCIUM BASE GREASE WITH MOLYBDENUM DISULFIDE FOR EXTREME HIGH LOADS AND HEAVY DUTY OPERATION

APPLICATION

High performance grease based on lithium-calcium soap containing extreme pressure additives (EP-additives) and the solid filler (molybdenum disulfide). It is used to lubricate the friction units of the construction, mining and other equipment exposed to extremely high loads and operated under extremely heavy duty operation including the presence of the water.

PROPERTIES AND ADVANTAGE

- Provides high performance and high load capacity under the heavy duty operation due to the content of EP-additives and molybdenum disulfide.
- The presence of molybdenum disulfide protects the surfaces even in case of insufficient lubrication or particular contamination of operating environment.
- Increases the service life length of the parts in a wide temperature range from -30 °C to +120 °C, with brief peaks up to +150 °C.
- Excellent protection against wear and seizure.
- Excellent resistance to corrosive water impact, prevents the formation of rust and erosion.

Typical Properties	Method	Gazpromneft Grease LTS Moly EP 2
Compliance with standard	DIN 51502	KPF 2 K-30
NLGI Classification	ASTM D 217	2
Temperature Range, °C		from -30 to +120
Color	Visual	Dark Grey
Thickener Type		Lithium-calcium soap
Dropping Point, °C	ASTM D 566	>190
Base oil		Mineral
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	3600
Four-Ball Wear, Scar, mm	ASTM D 2266 DIN 51350 5	0,4
Copper Corrosion, 24h/120°C	DIN 51811	1A

GAZPROMNEFT GREASE LX EP 2

HIGH TEMPERATURE GREASE FOR EXTREMELY HIGH LOADS ON THE LITHIUM COMPLEX THICKENER BASE

APPLICATION

Multipurpose grease with extreme pressure additive package (EP-additives) based on the lithium complex soap for friction units operating under high temperature and ultra-high loads. It is used for extended replacement age of ventilator bearings, electric motors, trolleys and roller kilns, in wet and dry sections of paper machines, automatic car wash and other industrial equipment.

PROPERTIES AND ADVANTAGE

- High performance over the wide temperature range from -30 °C to +160 °C.
- Continuous operation without replacement, excellent corrosion resistance and excellent resistance to oxidation.
- High protection against corrosion, even when operating in particularly aggressive environments, such as humidity, cold or hot water.
- Has excellent densifying properties, which help to protect the friction surfaces against water, dirt, dust.
- Has high mechanical stability thereby it can be used for lubrication of bearings exposed to strong vibration.

Typical Properties	Method	Gazpromneft Grease LX EP 2
Compliance with standard	DIN 51502	KP 2 P-30
NLGI Classification	ASTM D 217	2
Temperature Range, °C		from -30 to +160
Color	Visual	Blue
Thickener Type		Lithium complex soap
Dropping Point, °C	ASTM D 566	>250
Base oil		Mineral
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	2800
Four-Ball Wear, Scar, mm	ASTM D 2266 DIN 51350 5	0,4
Copper Corrosion, 24h/120°C	DIN 51811	1A

GAZPROMNEFT STEELGREASE CS 1, 2

WATER-RESISTANT, HIGH TEMPERATURE GREASE FOR EXTREMELY HIGH LOADS BASED ON CALCIUM SULFONATE

APPLICATION

Specialized waterproof grease based on calcium sulfonate for friction units operating under conditions of high temperatures and extremely high loads. It is primarily intended for the lubrication of continuous caster bearings, hot rolling and other equipment of metallurgical works. It is also used in some other units of the industrial equipment with the frequent grease contact with water. It is used both as the universal lubrication (NLGI 2) and for centralized lubrication systems (NLGI 1).

PROPERTIES AND ADVANTAGE

- Excellent performance in a wide temperature range from -30 °C to +200 °C.
- Due to the exceptional anti-wear and extreme pressure properties perfectly withstands the extremely high loads.
- Excellent protection against oxidation and corrosion due to the unique properties of the thickener — calcium sulfonate.
- High water resistance, the consistency of grease does not change significantly even with the infusion of the large amount of water.

Typical Properties	Method	Gazpromneft Steelgrease CS 1	Gazpromneft Steelgrease CS 2
Compliance with standard	DIN 51502	KP 1 S-30	KP 2 S-30
NLGI Classification	ASTM D 217	1	2
Temperature Range, °C		from -30 to +200	from -30 to +200
Color	Visual	Brown	Brown
Thickener Type		Calcium sulfonate	Calcium sulfonate
Dropping Point, °C	ASTM D 566	>300	>300
Base oil		Mineral	Mineral
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	4000	4000
Four-Ball Wear, Scar, mm	ASTM D 2266 DIN 51350 5	0,5	0,5
Copper Corrosion, 24h/120°C	DIN 51811	1A	1A

GAZPROMNEFT GREASE SYNTH LX EP 2

GREASE BASED ON THE SYNTHETIC BASE OIL AND LITHIUM COMPLEX THICKENER WITH THE WIDE TEMPERATURE RANGE OF APPLICATION

APPLICATION

Multipurpose grease based on the synthetic base oil and lithium complex soap with extreme pressure additive package (EP-additives) for the friction units operating under heavy loads. It is used in the rolling and sliding bearings (including the linerless) mounted in the electrical (traction) motors, drive shafts, etc., in the wide temperatures range, including Far North.

PROPERTIES AND ADVANTAGE

- Excellent performance in a wide temperature range from -50 °C to +150 °C with continuous lubrication process up to +200 °C.
- Provides antiwear properties, both in start and during the operation.
- Prevents premature aging of units and mechanisms, thereby increasing the service life and the performance of the equipment.
- Has exceptional antioxidant properties, excellent resistance to high thermal loads.
- Has the high hydrolytic stability.
- Provides anticorrosion protection, even in conditions of high air humidity, in water and aggressive environment.
- Prevents the water penetration.

Typical Properties	Method	Gazpromneft Grease Synth LX EP 2
Compliance with standard	DIN 51502	KPHC 2 N-50
NLGI Classification	ASTM D 217	2
Temperature Range, °C		from -50 to +150
Color	Visual	Light-beige
Thickener Type		Lithium complex soap
Dropping Point, °C	ASTM D 566	>250
Base oil		Synthetic
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	2600

BASIC TERMS AND PROPERTIES OF GREASES

Base oil — the oil that is a component of grease, providing the lubrication under the operating conditions. As base oil there can be used mineral, synthetic or botanical oil. Normally commercial grease consists of 65-96%wt of base oil.

Thickener — grease component forming subdivided structural frame that like a sponge holds oils with various fillers. Depending on the grease type the thickener concentration varies from 4%wt to 35%wt

Additives and additions are required for the improvement of the certain properties in grease such as antiwear, anticorrosion, anti-friction, extreme pressure and so on and also to prevent the seizure and damage of the friction surfaces.

Consistency — measure of the grease density. The grease consistency is classified according to NLGI (National Lubricating Grease Institute, USA). The consistency is determined by penetration (immersion depth) of the standard cone into the investigated grease at +25 °C for five seconds. This method is specified by ASTM D 217, ISO 2137. Penetration features the grease consistency (density) at the immersion depth of the cone of standard sizes and weight, is measured in tenths of a millimeter.

Dropping Point — minimal temperature at which the first drop of grease heated under certain conditions falls. It is an empirical indicator depending on the conditions of the definition. It figuratively features the pouring point of the grease thickener but does not allow the right to estimate its high temperature properties.

Viscosity of base oil is characterized by the kinematic viscosity that is defined as the time required for the outflow of the certain volume of liquid through the standard hole at the predetermined temperature.

Corrosion on the copper plate — test method in which the copper strip is immersed into the grease and together they are placed to the kiln. Then the strip is cleared and its surface condition is being assessed. The test results are measured in accordance with DIN 51811 points.

Emcor tests for corrosion, distilled water — the testee grease is mixed with distilled water and is placed to the bearing unit. The bearing rotates in accordance with the cycle alternating breaks with the rotation at the frequency of 80rpm. At the end of the test cycle the degree of corrosion is evaluated visually.

Weld load of the 4-ball friction machine characterizes extreme pressure properties of the grease. The core of the method is as follows: three steel balls are placed in a cup and are lubricated with the investigated grease and the fourth is set on top between them; this ball rotates about three balls at the predetermined speed. The load is increased incrementally until the rotating ball is welded to the three static ones.

Wear of the 4-ball friction machine, wear scar diameter — this test is performed on the same equipment as the previous one. The load is applied on the fourth ball within 60 minutes. Then the wear of the bottom balls is visually measured.

Thixotropy — the ability of colloid systems to spontaneously rebuild the original structure damaged by the physical impact. Thixotropic restoration of structure is the reversible isothermal process that can be repeated multiple times.

GREASE KEY FEATURES

Typical Properties	Method	Gazpromneft Grease L 2	Gazpromneft Grease L EP 00	Gazpromneft Grease L EP 0	Gazpromneft Grease L EP 1	Gazpromneft Grease L EP 2	Gazpromneft Grease L EP 3
Compliance with standard	DIN 51502	K 2 K-30	KP 00 K-30	KP 0 K-30	KP 1 K-30	KP 2 K-30	KP 3 K-30
NLGI Classification	ASTM D 217	2	00	0	1	2	3
Temperature Range, °C		from -30 to +120	from -30 to +120	from -30 to +120	from -30 to +120	from -30 to +120	from -30 to +120
Color	Visual	Light Brown	Brown	Brown	Brown	Brown	Brown
Thickener Type		Lithium Soap	Lithium Soap	Lithium Soap	Lithium Soap	Lithium Soap	Lithium Soap
Dropping Point, °C	ASTM D 566	>190	>170	>170	>180	>190	>190
Base oil		Mineral	Mineral	Mineral	Mineral	Mineral	Mineral
Four-Ball Load Test, Weld Point, N	ASTM D 2596 DIN 51350 4	1 600	2400	2400	2400	2400	2400
Four-Ball Wear, Scar, mm	ASTM D 2266 DIN 51350 5	0,5	0,5	0,5	0,5	0,5	0,5
Copper Corrosion, 24h/120°C	DIN 51811	1B	1A	1A	1A	1A	1A

Gazpromneft Grease L Moly EP 2	Gazpromneft Metalgrease AC	Gazpromneft Grease LTS 1	Gazpromneft Grease LTS 2	Gazpromneft Grease LTS Moly EP 2	Gazpromneft Grease LX EP 2	Gazpromneft Steelgrease CS 1	Gazpromneft Steelgrease CS 2	Gazpromneft Grease Synth LX EP 2
KPF 2 K-30	KPF 2S-30	KP 1 K-30	KP 2 K-30	KPF 2 K-30	KP 2 P-30	KP 1 S-30	KP 2 S-30	KPHC 2 N-50
2	2	1	2	2	2	1	2	2
from -30 to +120	from -30 to +200	from -30 to +120	from -30 to +120	from -30 to +120	from -30 to +160	from -30 to +200	from -30 to +200	from -50 to +150
Dark Grey	Copper Glaze	Dark Brown	Dark Brown	Dark Grey	Blue	Brown	Brown	Light-beige
Lithium Soap	Bentonite	Lithium-calcium soap	Lithium-calcium soap	Lithium-calcium soap	Lithium complex soap	Calcium sulfonate	Calcium sulfonate	Lithium complex soap
>190	No	>190	>190	>190	>250	>300	>300	>250
Mineral	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral	Mineral	Synthetic
2800	3200	2600	2600	3600	2800	4000	4000	2600
0,4	0,4	0,5	0,5	0,4	0,4	0,5	0,5	
1A	1A	1A	1A	1A	1A	1A	1A	

GEAR SELECTION CRITERIA

- Operating conditions (type of the friction unit, operating temperatures, loads, speed, humidity, etc.).
- Thickener relevance to the area of application.
- Feed method.
- Compatibility of different types of greases.

RECOMMENDATIONS

- Do not mix different types of grease.
- To ensure the maximum cleanliness of the friction unit when replacing the grease

EFFECTIVE LUBRICATION

- Insufficient or excessive lubrication can lead to increased friction, further heating and wear, resulting in reduced service life of the friction unit.
- Properly selected lubrication intervals can extend the service life of the friction unit.

GAZPROMNEFT-LUBRICANTS PACKAGE PROPOSAL

HYDRAULIC OILS

GAZPROMNEFT HYDRAULIC HZF
GAZPROMNEFT HYDRAULIC HLP
GAZPROMNEFT HYDRAULIC HLPD
GAZPROMNEFT HYDRAULIC HVLP
GAZPROMNEFT HYDRAULIC HVLPD

Designed for use in industrial equipment operating at normal and hard conditions. Gazpromneft hydraulic oils use enables to reduce the cost of the maintenance and the repair of hydraulic units.

GEAR OILS

GAZPROMNEFT REDUCTOR F
GAZPROMNEFT REDUCTOR WS
GAZPROMNEFT REDUCTOR CLP
GAZPROMNEFT REDUCTOR ITD

Designed for gear transmission of the modern industrial equipment requiring the use of high-quality formulated oils with increased anti-pitting, anti-wear, anti-corrosion properties.

COMPRESSOR OILS

GAZPROMNEFT COMPRESSOR S SYNTH
GAZPROMNEFT COMPRESSOR OIL

Designed for use in the modern vane, piston compressors used in various industries.

OILS FOR PAPERMAKING MACHINES

GAZPROMNEFT PM

Designed for use in the circulating lubrication systems of papermaking machines as well as for the lubrication of heavy-loaded friction units of gear transmissions and rolling bearings.

SLIDEWAY OILS

GAZPROMNEFT SLIDEWAY

Designed for use in the modern machines, injection molding machines and other equipment where oils with increased anti-intermittent and anti-wear properties are required.

Gazpromneft-Lubricants Ltd

117218, Moscow,
14, bld.3, Krzhizhanovskogo Street

Tel.: +7 (495) 642 99 69
Fax: +7 (495) 921-48-63

www.gazpromneft-oil.com
www.g-energy.org