



PRODUCT CATALOGUE

Lubricants for oil and gas industry

WE CREATE CONDITIONS OF GROWTH



Group of Companies Titan

It is the largest company in Siberia, one of the key investors of Omsk region. It was founded in 1989 by Mikhail Sutyaginsky.

It includes about 20 enterprises of the petrochemical and agro-industrial complex, as well as infrastructure enterprises.

The main production site of the company is located on the territory of Omsk region; subsidiaries and affiliates are represented in the regions of Russia (Moscow, St. Petersburg, Novocherkassk, Pskov, Ufa etc) and the CIS countries. The number of employees of the Group's enterprises is about 4500 people.

Titan-SM, Limited company

The production facilities of Titan-SM, Limited company are based on process units producing greases and lubricating-cooling fluids for different industries: oil and gas, mechanical engineering, metallurgy and metalworking, instrument making, automotive and railway transport industries, as well as for the defense complex. The enterprise facilities allow to produce more than 12 000 tons of products per year.

The plant operates using a unique technology based on dry boiling-off due to which energy costs are significantly reduced and end product quality is maintained. The production process is practically waste-free due to the closed processing cycle.

The **product quality** is a determinant factor of the activity of Titan-SM Limited company. The quality control of each production stage is conducted by the Quality Control Division of the production testing laboratory possessing all the necessary modern equipment.

The center of research works is represented by an **experimental industrial laboratory** which activity is aimed at creating new products and effective production technologies.

Titan-SM[®]

The **range of products** includes products based on petroleum and synthetic oils - engine, transmission, hydraulic oils; greases; lubricants; metalworking fluids; release fluids; friction modifiers and drilling fluid components. The products of Titan-SM, Limited company are certified and approved by ROSNITI (Russian Research Institute of Pipe Industry) and VNIINP JSC (All-Russian Research Institute of Oil Refining).

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UNIVERSAL GREASES

| ThickenerLithium soapLithium-calcium soapLithium soapNLGI1; 2; 31; 2; 33Welding load, N280019501410Base oil viscosity at 40 °C, mm²/s150-220110110Operating temperature range, °C-30+120-40+120-30+120Basic characteristicsUniversal grease for roller and slide bearings with EP additives, for construction and road construction and road construction and water sepcially in friction couples subject to medium and high loads.Universal grease for roller and slide bearings of vehicles and industrial equipment. Reduce hympability, high adhesion and water resistance.Anti-friction multipurpose water resistant grease. Possesses many advantages of lithium calcium thicker the grease possesses good pumpability, high adhesion and water resistance.Anti-friction multipurpose water resistant to moisture.Conformity to the performance property categoryDIN 51502 KP(NLGI)K-30 ISO 6743DIN 51502 K(NLGI)K-40 SO 6743DIN 51502 KO 743 | Product name | NOVA 150220 EP | NOVA 100 Li-Ca | LITHOL-24 | | | | | |
|--|-----------------------|---|--|--|--|--|--|--|--|
| Welding load, N280019501410Base oil viscosity at 40 °C, mm²/s150-220110110Operating temperature range, °C-30+120-40+120-30+120Basic characteristicsUniversal grease for roller and slide bearings with EP additives, for construction machinery and industrial equipment. Reduces friction couples subject to medium and high loads.Universal grease for roller and slide bearings of vehicles and industrial equipment. Due to the lithium-calcium thickener the grease possesses good pumpability, high adhesion and water resistance.Anti-friction multipurpose water resistant grease. Possesses many advantages of lithium greases, demonstrates exceptional shear stability, excellent sealing properties, resistant to mosture.Conformity to the performance property categoryDIN 51502 ISO 6743DIN 51502 ISO 6743DIN 51502 ISO 6743DIN 51502 ISO 6743 | Thickener | | | | | | | | |
| Base oil viscosity at 40 °C, mm²/s150-220110110Operating temperature range, °C-30+120-40+120-30+120Basic characteristicsUniversal grease for roller and slide bearings with EP additives, for construction and road construction and hear especially in friction and wear especially in friction and wear especially in friction and high loads.Universal grease for roller and slide bearings of vehicles and industrial equipment. Due to the lithium- calcium thickener the grease possesses good pumpability, high adhesion and water resistance.Anti-friction multipurpose water resistant grease. Possesses many advantages of lithium greases, demonstrates exceptional shear stability, excellent sealing properties, resistant to moisture.Conformity to the performance property categoryDIN 51502 KP(NLGI)K-30 ISO 6743DIN 51502 K(NLGI)K-40 ISO 6743DIN 51502 K(NLGI)K-30 | NLGI | 1; 2;3 | 1; 2;3 | 3 | | | | | |
| 40 °C, mm²/sOperating temperature range, °C-30+120-40+120-30+120Basic characteristicsUniversal grease for roller and slide bearings with EP additives, for construction and noad construction machinery and industrial equipment. Reduces friction couples subject to medium and high loads.Universal grease for roller and slide bearings of vehicles and industrial equipment. Due to the lithium-calcium thickener the grease possesses good pumpability, high adhesion and water resistance.Anti-friction multipurpose water resistant grease. Possesses many advantages of lithium greases, demonstrates exceptional shear stability, excellent sealing properties, resistant to moisture.Conformity to the performance property categoryDIN 51502 KP(NLGI)K-30 ISO 6743DIN 51502 K(NLGI)K-40 ISO 6743DIN 51502 K(NLGI)K-30 | Welding load, N | 2800 | 1950 | 1410 | | | | | |
| range, °CBasic characteristicsUniversal grease for roller and slide bearings with EP additives, for construction and road construction machinery and industrial equipment. Reduces friction and wear especially in friction couples subject to medium and high loads.Universal grease for roller and slide bearings of vehicles and industrial equipment. Due to the lithium- calcium thickener the grease possesses good pumpability, high adhesion and water resistance.Anti-friction multipurpose water resistant grease. Possesses many advantages of lithium greases, demonstrates exceptional shear stability, excellent sealing properties, resistant to moisture.Conformity to the performance property categoryDIN 51502DIN 51502DIN 51502KP(NLGI)K-30 ISO 6743K(NLGI)K-40K(NLGI)K-30ISO 6743ISO 6743ISO 6743 | - | 150-220 | 110 | 110 | | | | | |
| Slide bearings with EP additives, for construction and road construction machinery and industrial equipment. Reduces friction and wear especially in friction couples subject to medium and high loads.and slide bearings of vehicles and industrial equipment. Due to the lithium- calcium thickener the grease possesses good pumpability, high adhesion and water resistance.water resistant grease. Possesses many advantages of lithium greases, demonstrates exceptional shear stability, excellent sealing properties, resistant to moisture.Conformity to the performance property categoryDIN 51502 KP(NLGI)K-30 ISO 6743DIN 51502 K(NLGI)K-40DIN 51502 K(NLGI)K-30 ISO 6743DIN 51502 ISO 6743 | | -30+120 | -40+120 | -30+120 | | | | | |
| performance property category bit 31302 bit 31302 bit 31302 KP(NLGI)K-30 K(NLGI)K-40 K(NLGI)K-30 ISO 6743 ISO 6743 ISO 6743 | Basic characteristics | slide bearings with EP additives, for construction and road construction machinery and industrial equipment. Reduces friction and wear especially in friction couples subject to | and slide bearings of vehicles and industrial equipment. Due to the lithium- calcium thickener the grease possesses good pumpability, high adhesion | water resistant grease. Possesses many advantages of lithium greases, demonstrates exceptional shear stability, excellent sealing properties, resistant | | | | | |
| L-XCCEB (NLGI) L-XDCEA(NLGI) ISO-L-XCCEA (NLGI) | performance property | KP(NLGI)K-30 ISO 6743 | K(NLGI)K-40 ISO 6743 | K(NLGI)K-30 ISO 6743 | | | | | |

Drum 180 kg, bucket 18 kg









THREAD GREASES

| Product name | ORION 111 | ORION 112 |
|---|---|---|
| Thickener | Lithium soap (Pl, Zn, Cu) | Lithium soap (Pl, Zn, Cu) |
| NLGI | 0; 1;2 | 1;2 |
| Friction coefficient | 1.2 | 1.3 |
| Brushing at -40 °C, | Applicable by brush | Applicable by brush |
| Operating temperature range, °C | -45+180 | -40+150 |
| Basic charateristics | It is designed for sealing and pressurizing rounded and buttress threads of conductor and tubing pipe connections of any diameter during operation under a high pressure. It is suitable for normal and cold-resistant pipes, as well as for H_2S and CO_2 corrosion-resistant pipes. The grease can be applied manually by a brush or spatula as well as via an individual lubrication system. | It is designed for sealing and pressurizing rounded and buttress threads of conductor and tubing pipe connections of any diameter during operation under a high pressure. It is suitable for normal and cold-resistant pipes, as well as for H_2S and CO_2 corrosion-resistant pipes. The grease can be applied manually by a brush or spatula as well as via an individual lubrication system. |
| Conformity to the performance property category | ISO 13678/API5A3 TP TC 030/2012 | ISO 13678/API5A3 TP TC 030/2012 |
| | | |
| Package | | |

Drum 180 kg, bucket 20 kg





SPECIAL THREAD SEALING GREASES

| Product name | ORION 131 (ECO) | ORION 114 ZN 50 | ORION 116 |
|---|---|---|---|
| Thickener | Lithium soap | Lithium soap (Zn, Cu) | Lithium soap (Cu –21%) |
| NLGI | 0; 1;2 | 0; 1; 2 | 1;2 |
| Friction coefficient | 1.7 | 1.1 | 1.1 |
| Brushing at -40 °C, | Applicable by brush | Applicable by brush | Applicable by brush |
| Operating temperature range, °C | -50+200 | -50+180 | -50+200 |
| Basic characteristics | The grease is produced without metal particles and used during the assembly of oil-well tubing (normal, cold- resistant and stainless steel). It is produced in three versions including those with improved protection properties. | any diameter during operation under a high pressure. It possesses improved protection | It is designed for sealing and pressurizing rounded and buttress threads of conductor and tubing pipe connections of any diameter during operation under a high pressure, including during the thread connection assembly with coatings for gas- tight and very leak-tight thread connections with metal-to- metal sealing. |
| Conformity to the performance property category | ISO13678/API 5A3 TP TC 030/2012 | ISO13678/API 5A3 TP TC 030/2012 | ISO13678/API 5A3 TP TC 030/2012 |
| Package | | | |
| Drum 180 kg, bucket 18 kg | | | |

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SPECIAL GREASES FOR DELIVERY THROUGH CENTRALIZED SYSTEMS

| Product name | NOVA ARCTIC 35 | NOVA ARCTIC 100 |
|---|--|---|
| Thickener | Lithium soap | Lithium soap |
| NLGI | 0; 1; 2 | 1; 2 |
| Welding load, N | 3150 | 3150 |
| Base oil viscosity at 40 °C, mm²/s | 3540 | 110 |
| Operating temperature range, °C | -50+100 | -50+120 |
| Basic characteristics | Series of specially designed greases for operation in centralized systems at extremely low temperatures. It is produced based on the mixture of high- quality low-viscosity oils, thickened with lithium soap, contains high-performance additives and solid lubricants. | Specially designed grease for the operation in centralized systems as an all-season grease. It is produced based on synthetic oils, thickened with lithium soap, contains additives and solid lubricants. |
| Conformity to the performance property category | DIN 51502 KPF(NLGI)E-50 ISO 6743 L-XEBEA (NLGI) | DIN 51502 KPFHC(NLGI)K-50 |
| Package | | |

Drum 180 kg, bucket 18 kg





PROCESS FLUIDS FOR OIL-BASED DRILLING MUDS

Process fluid TITAN

The complex multicomponent dispersion system of fluids is designed for maximum retention of reservoir properties within the process of well drilling and servicing operations.

| Product name | titan 2VV | titan 2VV(2) | titan 4Vi |
|-------------------------------------|-----------|--------------|-----------|
| Kinematic viscosity at 40°C, mm²/s | 3.8 | 2.7 | 6.7 |
| Density at 20°C, kg/m³ | 828 | 820.4 | 836 |
| Open cup flash point, °C, min | 90 | 90 | 130 |
| pH index | 6.2 | 6 | 7 |
| Operating temperature range, °C | -50+180 | -60+100 | -60+150 |
| Aniline point, °C, min | 80 | 80 | 80 |
| Aromatic hydrocarbon content, % max | 3 | 3 | 3 |

The process fluid of TITAN series can be produced according to the customer's Terms of Reference observing required parameters.

Package

Drum 180 kg, container 830 kg

Lubricating additive TITAN-ECO

This is an oily mineral oil based brownish liquid, consisting of surfactants and additives improving anti-wear and anti-corrosion properties.

Application: It is designed for conditioning fresh drilling and salt drilling muds during drilling of vertical and directed well pads of oil and gas wells.

The lubricating additive effectively reduces friction coefficient, considerably reduces the risk of differential sticking, eases the drilling tool motion, extends the drilling bit operating life. The lubricating additive prevents foam formation and beside the friction coefficient reduction it improves parameters of the basic processing properties of drilling muds.

It's recommended for water based drilling mud in the form of 0.3 - 3% additive. It's added directly to a drilling mud.

Package

Drum 180 kg, container 830 kg





SPECIAL LUBRICANTS FOR OPEN GEARS

| Product name | Polar 700 og | Polar 3500 og 0 | Polar | olar ultra 5M | | | | | | | | |
|---|--|--|---|---|---------------------------------|--|--|--|--|--|--|--|
| Thickener | Специальное литиевое мыло | Специальное литиевое мыло | Алюминиевое комплексное мыло | Комплексное сульфонат- кальциевое мыло | | | | | | | | |
| NLGI | 1 | 1 | 0 | 0 | 1 | 2 | | | | | | |
| Welding load, N | 6800 | 6800 | 6800 | 6200 | 6200 | 6200 | | | | | | |
| Base oil viscosity at 40°C, mm2/s | 700 | 1500 | 3500 | 150 | 150 | 150 | | | | | | |
| Operating temperature range, °C | -50+120 | -30+140 | -30+120 | -45 +140 | -35 +140 | - 30 +140 | | | | | | |
| Basic characteristics | Special liquid lubricant for swing bearings of excavators based on special high-viscosity adhesive oil and solid lubricants, meets the requirements of OEM - P&H 520. Recommended for operating temperature range from -55 to +10 °C. | Special lubricant for open gears. Capable for pumping via centralized lubrication systems and for operation within a wide temperature range. | Special lubricant for dragline excavators and shovels, based on a special high- viscosity mineral oil and aluminum complex soap with solid lubricant content. | on calc comple naphth roller a bearing and in Recom- lubrica workin | tion of g under Ind relat | fonate and s for e nicles units. for the units, high | | | | | | |
| Conformity to the performance property category | | DIN 51502 OGF1K-35 | DIN 51502 OGF0N-10 | DIN 51502 KPF(NLGI)P-45 ISO 6743 ISO-L-XCCEA2 | | | | | | | | |

Package

Drum180 kg, bucket18 kg







ENGINE OILS

| Product name | Conformity to standards | Density, g/ml | Viscosity, cSt at 40 °C | Flash point, °C Pour point, °(| | | | | | | |
|--------------------------|---|------------------|----------------------------|--------------------------------|-----|--|--|--|--|--|--|
| NORDSTAR ARCTIC 0W-40 | Cat ECF-3 API CJ-4/CI-4 PLUS/CI-4/CH-4/SM | 0.85 | 89 | 260 | -40 | | | | | | |
| NORDSTAR DEO 10W-30 | Cat ECF-2 API CI-4/CH-4/SL | 0.87 | 76 | 222 | -36 | | | | | | |
| NORDSTAR DEO 15W-40 | Cat ECF-2 API CI-4/CH-4/SL ACEA E5/B3/A2 | 0.88 | 103 | 230 | -30 | | | | | | |

TRANSMISSION OILS

| Product name | Conformity to standards | Density, g/ml | Viscosity, cSt at 40 °C | Flash point, ° | C Pour point, °C |
|----------------|--|------------------|----------------------------|----------------|------------------|
| TRIBOSTAR TM-4 | API GL-4 SAE 75W-80 75W-85 75W-90 80W | 0.88 | 32-68 | 245 | -30 |
| TRIBOSTAR TM-5 | API GL-5 SAE 75W-90 80W-90 80W-140 85W-140 | 0.88 | 32-68 | 245 | -30 |

HYDRAULIC OILS

| Product name | Туре | Density, g/ml | Viscosity, cSt at 40 °C | Flash point, °C | ∶Pour point, °C |
|--|-----------------------------------|------------------|----------------------------|-----------------|-----------------|
| TITAN HFDU | Fire resistant hydraulic fluid | 0.92 | 32-68 | 310 | -30 |
| TITAN HFC | Fire resistant hydraulic fluid | 1.072 | 32-68 | - | -50 |
| TITAN HM TITAN HLP TITAN HZF TITAN HLPD | Hydraulic oil | 0.88 | 32-68 | 245 | -30 |

Package

Drum 180 kg, bucket 18 kg



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