



SINOPEC

PREMIUM LUBRICANTS

>> Greases

SINOPEC



Introducing Sinopec

The Sinopec Group is the world's second largest oil refiner. Its products have been keeping the Chinese economic machine operating smoothly and efficiently for years. The Group is also a major investor in energy projects around the world.

For anything from fully synthetic engine oils to steam turbine lubricants, there can be no doubting Sinopec's technical expertise and credentials in every arena of lubricant manufacture.

The Sinopec Lubricant Company, the world's fourth largest blender, is reaching new mobile and fixed installation markets with its premium lubrication products, including its range of greases specifically designed to meet the needs of modern, hard-working vehicles and plant.



Sinopec Lubricants



Sinopec – a world player in general purpose and speciality greases

To spearhead the company's export drive to reach users around the world, Sinopec is providing a huge 'state of the art' blending facility in Singapore. Sinopec uses the highest quality base stocks, or fully synthetic fluids where appropriate, to create the premium lubricants now available to you. Along with Sinopec's grease products, its complete range of lubricants fully meet the needs of fixed plant and mobile operators.

Sinopec – technical excellence in grease technology

Sinopec is a leading international petrochemical group that recognises it operates in a very sophisticated mechanical equipment market, and has the R&D facilities to match. With rigorous testing in the labs and practical real-world field trials, Sinopec grease products are engineered to provide the best protection and the best value. With general purpose and speciality greases suitable for enclosed and exposed bearing surfaces in every industry sector, these greases are ideal for severe operating conditions as well as environments which place less stress on components. And, of course, many of Sinopec's grease and lubrication products meet or exceed the relevant industry NLGI and ASTM standards, and the specifications of the leading OEMs.



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GENERAL PURPOSE GREASE

Multipurpose Lithium Base Grease

Grade: NLGI grades 1, 2, 3

Type: Lithium Soap

Features and benefits

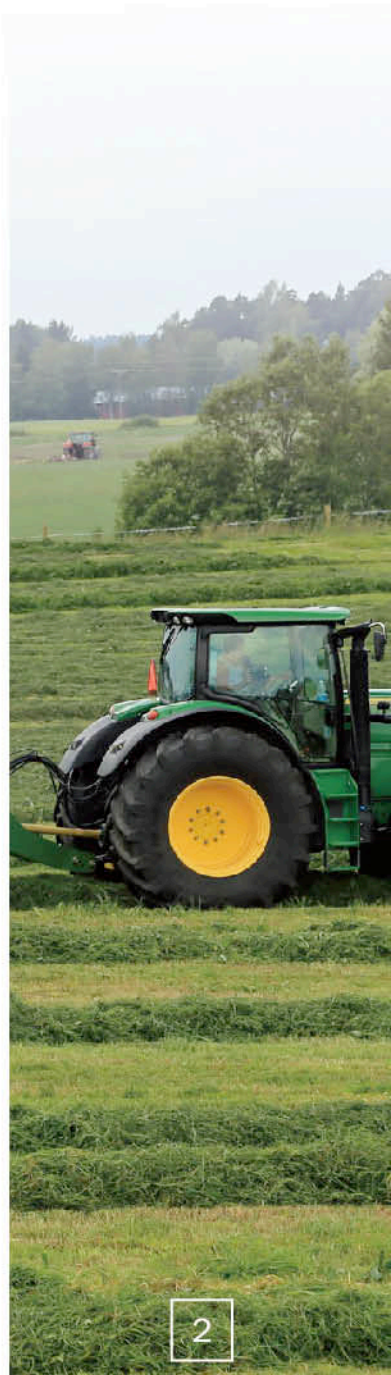
- ✔ Lithium soap thickener ensures good mechanical stability, so grease structure does not soften or break down in service.
- ✔ Excellent water resistance ensures grease is not washed or sprayed off in wet conditions, reducing frequency of re-application.
- ✔ Protection against rust and corrosion ensures long component life, and extends maintenance intervals.
- ✔ Good oxidation stability ensures longer grease life, optimum lubrication, extended equipment life and reduced maintenance.
- ✔ Adheres strongly to metal surfaces, sealing out dirt and abrasive materials.
- ✔ Available in NLGI grades 1, 2 and 3 to meet the requirements of specific applications.

Recommended applications

- ✔ General lubrication of sliding bearings and other friction where there is no requirement for load carrying properties.
- ✔ Applications where the temperature range is from -20 °C to +120 °C.

Certifications and approvals

GB 7324
Ningbo Shenying Bearing Co., Ltd For use in low noise bearings



GENERAL PURPOSE GREASE

Extreme Pressure Lithium Base Grease

Grade: NLGI grades 00, 0, 1, 2
Type: Lithium

Features and benefits

- ▶ Excellent extreme pressure and antiwear properties protect heavily loaded or shock-loaded bearings from wear, extending equipment life.
- ▶ Lithium soap thickener ensures good mechanical stability, so the grease structure does not soften or break down in service.
- ▶ High-quality base oil ensures a good oil film thickness is maintained, even in high-temperature applications, protecting components from wear.
- ▶ Excellent protection against rust and corrosion ensures long component life, and extends maintenance intervals.
- ▶ Good thermal and oxidation stability ensure longer grease life under high-temperature conditions, providing optimum lubrication, extending equipment life and reducing maintenance requirements.
- ▶ Grease adheres strongly to metal surfaces, sealing out dirt and abrasive materials, to ensure longer lubricating intervals.
- ▶ Available in NLGI grades 00, 0, 1 and 2 to meet the requirements of specific applications.

Recommended applications

- ▶ Bearings and gears of medium to heavily loaded mechanical equipment, where an extreme pressure/antiwear grease is required for extra protection.
- ▶ Applications where the temperature range is from -20°C to 120°C.

Meets performance requirements

GB
Pan Steel Mine Company
Xuzhou Heavy-duty Machine Mill Company

7323-94
Approved for use in cranes
Approved for use in cranes

SINOPEC

GENERAL PURPOSE GREASE



Molybdenum Disulfide Lithium Base Grease

Grade: NLGI grades 1, 2, 3

Type: Lithium Soap with Solid molybdenum

Features and benefits

- ✔ Excellent extreme pressure and antiwear properties protect heavy and shock-loaded bearings and gears from wear, extending equipment life.
- ✔ Solid molybdenum disulfide provides additional residual lubrication, protecting metal surfaces in applications where vibrating or oscillating movement tends to squeeze out the grease from between surfaces.
- ✔ Lithium soap thickener ensures good mechanical stability, so the grease structure does not soften or break down in service.
- ✔ Good water resistance properties ensure the grease is not easily washed out of bearings or off gear surfaces, providing optimum protection.
- ✔ Good adhesive properties ensure the grease sticks to metal surfaces sealing out dirt and abrasive materials, allowing longer lubricating intervals.
- ✔ Provides good protection against rust and corrosion, extending component life and relubrication intervals.
- ✔ Available in NLGI grades 1, 2 and 3 to meet the requirements of specific applications.

Recommended applications

- ✔ Bearings and gears of heavily loaded equipment operating under vibrating/oscillating conditions, such as the steel and mining industries, where a robust extreme pressure/antiwear grease is required.
- ✔ Applications where the temperature range is from -20°C to $+120^{\circ}\text{C}$

Meets performance requirements

Sinopec

Q/SH303 357-2004



Extreme Pressure Lithium Complex Grease

Grade: NLGI grades 1, 2, 3

Type: Lithium Complex

Features and benefits

- ✔ Excellent extreme pressure and antiwear properties protect heavily loaded or shock-loaded bearings from wear, extending equipment life.
- ✔ Lithium complex soap thickener ensures a high dropping point for use at higher temperatures in severe service applications (-20 °C to +160 °C), and excellent mechanical stability maintains the grease structure in service.
- ✔ High-quality base oil ensures a good oil film thickness is maintained in high-temperature applications, reducing component wear.
- ✔ Excellent water resistance ensures the grease is not washed or sprayed off in wet conditions, reducing the frequency of re-application.
- ✔ Excellent protection against rusting and corrosion ensures long component life, and extends maintenance intervals.
- ✔ Good thermal and oxidation stability ensure longer grease life under high-temperature conditions, for optimum lubrication, extended equipment life and reduced maintenance.
- ✔ Available in NLGI grades 1, 2 and 3 to meet the requirements of specific applications.

Recommended applications

- ✔ Bearings operating under high loads or shock loads and at high temperatures, for example in the metallurgical industry, where an extreme pressure grease is required.
- ✔ Other high-temperature grease applications, for example in the dyeing and printing industries.
- ✔ Oil pump bearings of high capacity cars, running at high temperatures.
- ✔ Applications where the temperature range is from -20 °C to +160 °C.

Certifications and approvals

Sinopec
Neimenggu Huolinhe Weather Coal Co., Ltd

SH/T 0535 93-2003
Approved for use in crusher.

GENERAL PURPOSE GREASE

HPXT Grease

Grade: NLGI grade 2

Type: Extended Service Lithium Complex

Features and benefits

- ✔ Lithium complex soap thickener gives a high dropping point, so the grease can be used at higher temperatures in severe service applications (operating temperature range is from -30°C to $+180^{\circ}\text{C}$), and provides excellent mechanical stability so the grease structure does not break down in service.
- ✔ Excellent adhesion to metal surfaces, even under high temperature, gives optimum oil film thickness which protects moving parts and provides long service life.
- ✔ Excellent extreme pressure and antiwear properties protect heavily loaded or shock-loaded bearings from wear, extending equipment life.
- ✔ Excellent water resistance means that the grease stays in place and is not washed or sprayed off in wet conditions, reducing the need for frequent re-application.
- ✔ Excellent protection against rusting and corrosion ensures long component life and extended maintenance intervals.
- ✔ Good thermal and oxidation stability ensure longer grease life under high-temperature conditions, providing optimum lubrication, extending equipment life and reducing maintenance requirements.
- ✔ Consistency meets the requirements of wheel bearing application, and avoids the grease being flung out of the bearing by centrifugal forces, so ensuring longer relubrication intervals

Recommended applications

- ✔ Automotive wheel bearings, particularly those operating under the high-temperature, high-load conditions caused by braking at high speed.
- ✔ General lubrication of chassis points (e.g. shackles, tie rod ends, steering knuckles, control arms and king pins), electric motors and water pumps of passenger cars, buses and trucks.
- ✔ Wheel bearing and chassis applications requiring an NLGI GC-LB grease with an operating temperature range of -30°C to $+180^{\circ}\text{C}$.

Meets performance requirements

Sinopec

SHRHYxY 5180-2012



General Purpose Automotive Lithium Base Grease

Grade: NLGI grades 2, 3

Type: Lithium/Calcium

Features and benefits

- ✔ Lithium/calcium mixed soap thickener ensures good mechanical stability, so the grease structure does not soften or break down in service.
- ✔ Excellent water resistance means that the grease stays in place and is not washed or sprayed off in wet conditions, reducing the need for frequent re-application.
- ✔ Wide operating temperature range (from -30°C to $+120^{\circ}\text{C}$) ensures good high- and low-temperature performance.
- ✔ Good lubricity properties protect moving parts from wear, and extend component life.
- ✔ Protection against rusting and corrosion ensures long component life, and extends maintenance intervals.
- ✔ Good oxidation stability ensures longer grease life, providing optimum lubrication, extending equipment life and reducing maintenance requirements.
- ✔ NLGI 2 and 3 grades meet the requirements of wheel bearing applications; they adhere strongly to metal surfaces sealing them from dirt and abrasive materials, and so ensure longer relubrication intervals.
- ✔ This general purpose mixed soap grease is specially formulated to satisfy a wide range of automotive grease lubrication requirements with just a single product, so reducing inventory and storage costs.

Recommended applications

- ✔ Automotive wheel bearings, as a long service life grease.
- ✔ General lubrication of chassis points (e.g. shackles, tie rod ends, steering knuckles, control arms and king pins) of passenger cars, buses and trucks, electric motors and water pumps.

Meets performance requirements

Dongfeng Automobile Co., Ltd

Approved for use as an automotive wheel bearing grease

Liaoning Shuguang Automotive Co., Ltd

Approved for use as an automotive wheel bearing and chassis grease

SPECIALITY GREASE

MoS₂ Lithium Complex Grease 7413 No. 2



Grade: NLGI grade 2

Type: Semi-synthetic Lithium Complex with Molybdenum Disulfide

Features and benefits

- ✔ Lithium complex soap thickener together with semi-synthetic base oil and antioxidant additives, provide outstanding performance in high-temperature applications.
- ✔ Extreme pressure properties protect metal surfaces under conditions of heavy or shock loading.
- ✔ Solid molybdenum disulfide provides an additional measure of residual lubrication, which protects metal surfaces against wear in applications where vibrating or oscillating movement tends to squeeze out the grease from between the surfaces.
- ✔ The semi-synthetic base oil ensures the formation of a stable oil film that protects against bearing wear and corrosion.
- ✔ Excellent thermal and oxidation stability, together with low oil evaporation loss, extend the life of the grease, ensuring protection of metal surfaces and prolonging bearing and component life.
- ✔ Provides good protection against rust and corrosion, extending component life and relubrication intervals.
- ✔ Excellent mechanical stability ensures the grease structure does not break down in service, thus extending grease life.

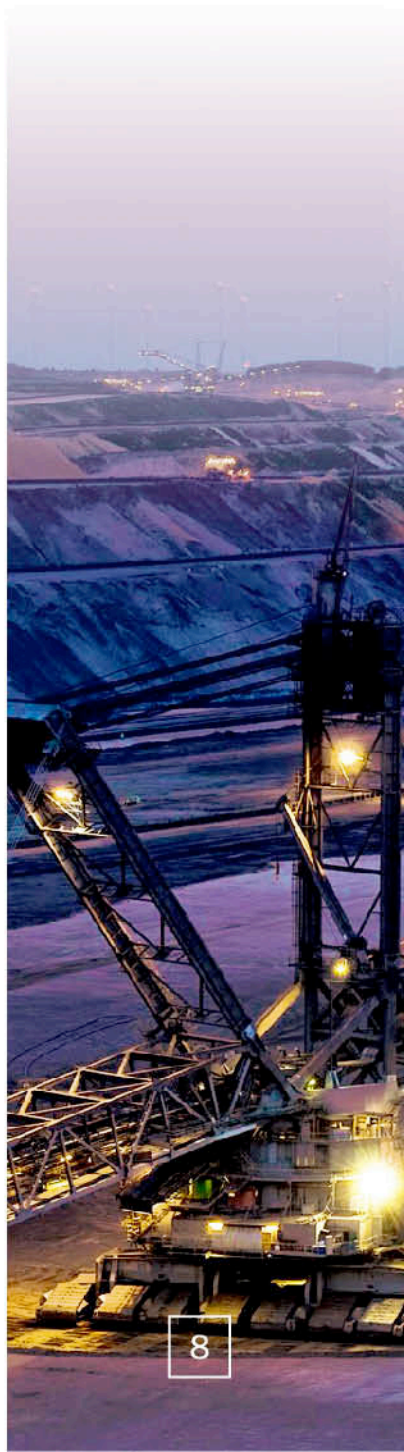
Recommended applications

- ✔ Bearings exposed to high temperatures, extreme pressure or oscillating conditions, such as slow-moving plain and roller bearings.
- ✔ Chassis components, farm equipment, king pins, U-joints and fifth wheels.
- ✔ Bucket pins, plain bearings and other heavy duty applications, such as those found in the mining, construction, agricultural and sugar milling industries.

Meets performance requirements

Sinopec

SHRH YXY 5165-2010



Heavy Duty LC Mining Grease

Grade: NLGI grade 1, 2

Type: Lithium Complex with Molybdenum Disulfide

Features and benefits

- ✔ Excellent extreme pressure and anti-wear properties protect heavily loaded or shock-loaded bearings from wear, extending equipment life.
- ✔ Solid molybdenum disulfide provides an additional measure of residual lubrication, which protects metal surfaces against wear in applications where vibrating or oscillating movement tends to squeeze out the grease from between metal surfaces.
- ✔ Lithium complex soap thickener ensures a high dropping point, so grease can be used at higher temperatures in severe service applications (operating temperature range is from -10°C to $+150^{\circ}\text{C}$), and also confers excellent mechanical stability so the grease structure does not break down in service.
- ✔ High base oil viscosity ensures a good oil film thickness is maintained even under severe high-temperature conditions, protecting components against wear.
- ✔ Excellent water resistance means the grease stays in place and is not washed or sprayed off in wet conditions, reducing the need for frequent re-application.
- ✔ Excellent protection against rusting and corrosion ensures long component life, and extends maintenance intervals.
- ✔ Good thermal and oxidation stability ensure longer grease life under high-temperature conditions, providing optimum lubrication, extending equipment life and reducing maintenance requirements.
- ✔ Available in NLGI 1 and 2 grades; the NLGI grade 1 product may be used in centralised lubrication systems where good pumpability is required.

Recommended applications

- ✔ Off-road equipment used in the mining industry, particularly to lubricate slow-moving plain and roller bearings under severe conditions of very high loads, shock loading and in vibrating or oscillating situations.
- ✔ Heavy duty construction, earthmoving, mobile and stationary equipment, especially operating under very high loads, shock loading and in vibrating or oscillating situations.
- ✔ Heavy duty applications which are difficult to access, and for which long lubrication intervals are required.

Meets performance requirements

Sinopec

SHRH YXY 5165-2010

SPECIALITY GREASE

Premium Mining Grease

Grade: NLGI grade 1, 2

Type: Lithium Complex with Molybdenum Disulfide

Features and benefits

- ▶ Excellent extreme pressure and antiwear properties protect heavily loaded or shock-loaded bearings from wear, extending equipment life.
- ▶ Solid molybdenum disulfide provides an additional measure of residual lubrication, which protects metal surfaces against wear in applications where vibrating or oscillating movement tends to squeeze out the grease from between metal surfaces.
- ▶ Lithium complex soap thickener ensures a high dropping point, which means that the grease can be used at higher temperatures in severe service applications (operating temperature range is from -10°C to $+150^{\circ}\text{C}$), and also confers excellent mechanical stability so that the grease structure does not break down in service.
- ▶ High base oil viscosity ensures a good oil film thickness is maintained even under severe high-temperature conditions, protecting components against wear.
- ▶ Excellent water resistance means that the grease stays in place and is not washed or sprayed off in wet conditions, reducing the need for frequent re-application and ensuring optimum lubrication and protection even in hostile working environments.
- ▶ Excellent protection against rusting and corrosion ensures long component life, and extends maintenance intervals.
- ▶ Good thermal and oxidation stability ensure longer grease life under high-temperature conditions, providing optimum lubrication, extending equipment life and reducing maintenance requirements.
- ▶ Available in two NLGI grades; the NLGI grade 1 product may be used in centralised lubrication systems where good pumpability is required.

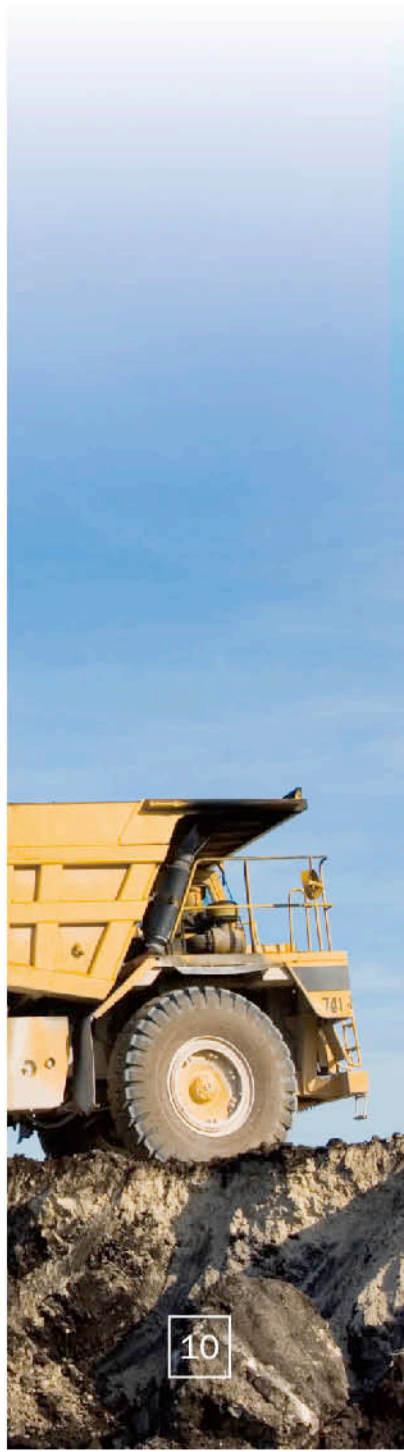
Recommended applications

- ▶ Off-road equipment used in the mining industry, particularly to lubricate slow-moving plain and rolling element bearings under severe conditions of very high loads, shock loading and vibrating or oscillating conditions.
- ▶ Some heavy duty applications that are difficult to access, and for which long lubrication intervals are required.
- ▶ Heavy duty construction, earthmoving, mobile and stationary equipment, especially in those applications operating under very high loads, shock loading and vibrating or oscillating conditions.
- ▶ Bucket pins, pivot pins and heavily loaded chassis components.
- ▶ General purpose chassis lubrication.

Meets performance requirements

Sinopec

SHRH YXY 5165-2010



Roller Bearing Grease

Grade: NLGI grades 1, 2, 3

Type: Metal Complex

Features and benefits

- ✔ Excellent extreme pressure and antiwear properties protect heavily loaded and shock-loaded bearings, extending equipment life.
- ✔ Excellent high-temperature performance (up to +180°C) due to metal complex thickener. Use in severe service applications for continuous protection to bearings and extended service life.
- ✔ Good low-temperature properties (as low as -20°C) ensure excellent protection against wear with cold start-ups
- ✔ Excellent water resistance and anti-rust properties ensures lubrication and protection in wet conditions.
- ✔ Good thermal and oxidation stability ensure longer grease life at high-temperatures, providing optimum lubrication, extended equipment life and reduced maintenance.
- ✔ Good mechanical stability avoids break down of structure, even under high-speed shear conditions.
- ✔ Available in NLGI 1, 2 and 3 grades to meet the exact application requirements.

Recommended applications

- ✔ Lubrication of heavy duty industrial roller bearings in the mining, steel and construction.
- ✔ Roller bearings of roughing and finishing mills in the steel industry.
- ✔ Heavy duty applications operating under high loads, wide temperature ranges and wet conditions.

Meets performance requirements

Sinopec

Q/SH303 287-2004

SPECIALITY GREASE

EMALUBE-L Grease

Grade: NLGI grade 0, 1

Type: Polyurea

Features and benefits

- ▶ Polyurea thickener ensures a high dropping point for use at higher temperatures in severe service applications (-20°C to +200°C), and provides excellent mechanical stability so the structure does not break down in service.
- ▶ Being 'ashless', deposits are not formed by breakdown at very high temperatures.
- ▶ High-viscosity base oil ensures a good oil film thickness is maintained in high-temperature applications, protecting components against wear.
- ▶ Excellent water resistance means grease is not easily washed or sprayed off in wet conditions.
- ▶ Excellent protection against rusting and corrosion ensures long component life.
- ▶ Excellent thermal and oxidation stability (no metal ions in thickener to catalyse base oil oxidation) ensure longer grease life under high-temperature conditions, optimum lubrication, extended equipment life and reduced maintenance.
- ▶ The NLGI grade between 0 and 1 ensures good pumpability and meets the requirements of a centralised lubricating system.

Recommended applications

- ▶ Centralised lubricating systems of continuous casting and rolling machines, and other high-temperature friction points in the steel industry.
- ▶ Machinery operated by Baoshan Iron & Steel Co. and Anshan Iron & Steel Co.
- ▶ Other high-temperature applications where a pumpable long-life grease is required.

Meets performance requirements

Sinopec

Sinopec Q/SH303 279-2006



Semi-fluid Gear Grease 7412

Grade: NLGI grade 0, 00, 000, 0000

Type: Synthetic PAG Semi-fluid Polyurea

Features and benefits

- ✔ The polyurea thickener makes the grease very stable and usable over a wide temperature range (-40°C to +150°C).
- ✔ The synthetic base fluid provides excellent lubricity, particularly important in worm gear applications.
- ✔ Protects gear components from wear in heavy and shock-loaded conditions.
- ✔ Provides very long service life, and ideal as a lifelong grease in sealed applications.
- ✔ Available in four NLGI grades to suit the particular application requirements.

Recommended applications

- ✔ Gear boxes operating in medium to low speed, high load conditions.
- ✔ Worm gears.
- ✔ Sealed-for-life gear boxes.
- ✔ Applications where an ISO 6743/9 L-xDDBB-0, -00, -000 or -0000 classification grease is required.

Certifications and approvals

GB
ISO
CISDI Engineering Co., Ltd
HuaFeng Guizhou Aviation Industry

GB/T 7631.8-90
6743/9-1987
Formal industry approval
Formal OEM approval

SPECIALITY GREASE

High Temperature Grease (non-melt) 7014-1

Grade: NLGI grade 2

Type: Synthetic Special p-octadecanamide benzoate

Features and benefits

- ✔ Synthetic fluid and p-octadecanamide benzoate thickener provide resistance to high-temperature degradation.
- ✔ Special p-octadecanamide benzoate thickener provides excellent mechanical stability, resisting breakdown under shear and staying in grade for longer.
- ✔ Very low start-up and running torque values are achieved.
- ✔ Reduces loaded zone temperatures of rolling element bearings.
- ✔ Available in NLGI grade 2.

Recommended applications

- ✔ Rolling element bearings operating at high temperatures.
- ✔ Applications where an ISO 6743/9 L-xDGEA2 classification grease is required.

Certifications and approvals

GB GB/T 7631.8-90
ISO 6743/9-1987



The full Sinopec Lubricants Range

Engine oils

Diesel engine oils	Fully synthetic Mineral
Petrol engine oils	Fully synthetic Synthetic technology Mineral
2-stroke diesel engine oil	
Super tractor oil universal	
Gas engine oil	LNG/CNG/LPG

Gear oils

Automotive gear oils	Fully synthetic Mineral
Industrial gear oils	Heavy duty Open gear Fully synthetic PAG

Transmission oils

Manual transmission oil	
ATF	ATF III Long drain
CVT fluid	
Final drive oil	
Limited slip gear oil	
TO-4 heavy duty fluid	

Hydraulic oils

Ashless High pressure	
Low temperature High performance	
Standard Antiwear	
Slideway	
Water-glycol	
Ester-based synthetic	

Greases

Automotive
High temperature
Lithium
Mining
Semi-fluid

Turbine oils

Standard turbine oil
Long service
EP gas turbine oil
Anti-ammonia turbine oil

Motorcycle oils

4-stroke oil	Fully synthetic Mineral
2-stroke oil	

Marine oils

Trunk piston engine oil
Cross-head engine oil
TC-W3 outboard engine oil

Brake fluids

Synthetic	Dot 4 Dot 5.1
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Compressor oils

Standard compressor oil	Rotary Reciprocating
Synthetic compressor oil	

Specialist products

Thermal conducting oil
Transformer oil
Rock drill oil

Ancillary products

Coolant
Truckwash

NLGI Grade Classification

NLGI Grade Number	Cone Penetration at 25 °C (WORKED x 60), mm-1
000	445 - 475
00	400 - 430
0	355 - 385
1	310 - 340
2	265 - 295
3	220 - 250
4	175 - 205
5	130 - 160
6	85 - 115





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Official Weibo of Sinopec
Lubricant Co.,Ltd.



Official WeChat of Sinopec
Lubricant Co.,Ltd.

ACCURACY OF INFORMATION

Data provided in this brochure is typical and subject to change as a result of continuing product research and development. The information given was correct at the time of printing. The typical values given are subject to variations in the testing procedures and the manufacturing process may also result in slight variations. Sinopec guarantees that its lubricants meet any industry and OEM specifications referred to this data sheet.

Sinopec cannot be held responsible for any deterioration in the product due to incorrect storage or handling. Information on best practice is available from your local distributor.