



SINOPEC

PERFORMANCE IN MOTION

>> **Transport**

SINOPEC

Website: www.ildirect.com



SINOPEC

Sinopec Lubricants



Introducing Sinopec

The Sinopec Group is the world's second largest oil refiner. Its products have been keeping the wheels of the Chinese economic miracle turning for years. From oil and gas exploration equipment to lubricants for the aerospace industry, there can be no doubting Sinopec's technical expertise and credentials. The Group is a major investor in energy projects around the world.

The Sinopec Lubricant Company, the world's fourth largest manufacturer, is reaching new industry and consumer markets with its premium lubrication products.

Sinopec – a world player in lubrication

To spearhead the company's export drive, a huge 'state of the art' blending facility in Singapore was announced in 2007. Sinopec uses the highest quality base stocks, or fully synthetic fluids where appropriate, to create the best lubricants. The complete range of oils and greases to meet the needs of every major industry sector.





Sinopec Lubricants

Sinopec – technical excellence in lubrication

Sinopec is a leading international petrochemical group that recognises it is operating in a sophisticated market, and has the R&D facilities to match. The lubrication products are not just fit for purpose but engineered to ensure your equipment is getting the very best protection. As you would expect from a global leader in lubrication, Sinopec will meet the most demanding needs of your transportation operation. And, of course, Sinopec's lubrication products meet or exceed the relevant industry API and ACEA standards, and the specifications of the leading OEMs.

The Sinopec Transport range

Every aspect of your lubrication needs are covered by the Sinopec Transport range of products. From engine oil and gear oil to transmission fluid, and hydraulic oil to brake fluid and grease, Sinopec has everything you'll need to keep the wheels of your transport operation turning smoothly. From general purpose oils through to technologically superior products for the harshest operating conditions.

ENGINE OIL

Diesel Engine Oil E6 Euro 10W/40	Page 2
Diesel Engine Oil CJ-4/SM 15W/40	Page 3
Diesel Engine Oil CI-4 GD 15W/40	Page 4
CF-2 Two Stroke Diesel Engine Oil	Page 5

GEAR OIL

GL-5 Fully Synthetic Heavy Duty Automotive Gear Oil	Page 6
GL-5 Heavy Duty Automotive Gear Oil	Page 7
ZLS Limited Slip Gear Oil	Page 8

TRANSMISSION FLUID

TO-450 Heavy Duty Transmission Fluid	Page 9
Automatic Transmission Fluid III-LD	Page 10
Automatic Transmission Fluid III-H	Page 11

ANTIWEAR HYDRAULIC OIL

L-HM Antiwear Hydraulic Oil	Page 12
L-HV Series High VI Anti-wear Hydraulic Oil	Page 13
L-HM High Pressure Ashless Antiwear Hydraulic Oil	Page 14

BRAKE FLUID

DOT 4 Synthetic Brake Fluid	Page 15
-----------------------------	---------

GREASE

HP-XT Grease	Page 16
MoS2 Lithium Complex Grease	Page 17

COOLANT

YF-2A Environmentally Friendly Engine Coolant	Page 18
---	---------

VEHICLE DETERGENT

Truckwash detergent concentrate	Page 19
---------------------------------	---------

ENGINE OIL

Diesel Engine Oil Euro E6 10W-40

Performance Spec: ACEA E7-08, E6-08, E4-08

API CI-4 and CH-4

Viscosity Grade/Type: SAE 10W-40

Features and Benefits

- Formulated with high viscosity index, synthetic technology base oils, which provide improved oxidation control over conventional oils, reducing the formation of sludge and deposits and reducing oil thickening, thereby keeping the product in grade for longer, extending oil life, allowing longer oil drain intervals and reduced maintenance and inventory costs.
- Very low oil evaporation loss leads to reduced oil consumption and reduced exhaust emissions.
- Outstanding soot and deposit control provide protection against piston deposits and valve train wear, and ensure engine cleanliness and smooth running.
- Low ash content provides excellent protection to modern low emission diesel engines, enabling them to meet stringent Euro IV and V and Australian ADR 80/02 and 80/03 emissions requirements.
- Excellent control of aeration and foaming ensures protection of engine parts.
- High acid neutralisation ability, together with TBN retention, provide rust and corrosion protection and prolong engine life.
- Fully compatible with exhaust gas after-treatment components.
- Good elastomer compatibility ensures longer gasket and seal life, and prevents oil leakage.
- Excellent low-temperature properties ensure good fluidity at low temperatures and protect against start-up wear.
- This ACEA E6 quality engine oil can be used in engines running on modern 5% biodiesel (B05) fuel.

Recommended Applications

- Highly rated diesel engines meeting Euro IV and Euro V and Australian ADR 80/02 and 80/03 emissions requirements and running under very severe conditions, e.g. significantly extended oil drain intervals according to the manufacturer's recommendations.
- Engines fitted with particulate filters, designed for use in combination with low-sulfur diesel fuel.
- EGR engines, with or without particulate filters, and for engines fitted with SCR NOx reduction systems.

Certifications and Approvals

Allison C4	MTU MTU Type 3.1
Caterpillar Cat ECF-1-a	Renault RXD, RLD/RLD-2,
DAF Extended Drain Capability	RGD, RD-2
Deutz DQC III-10-LA (1)	Scania Low Ash
Mack EO-N	Volvo VDS-3, CNG
Man M 3477, M 3271-1	
Mercedes Benz 228.51	

SINOPEC

ENGINE OIL

CJ-4/SM Diesel Engine Oil

Performance Spec: ACEA E7, E9
API CJ-4, CI-4 PLUS, CI-4, SM, SL

Viscosity Grade/Type: SAE 15W-40

Features and Benefits

- Advanced low-ash additive system provides excellent protection for modern low-emission diesel engines equipped with EGR, DPF or other technologies.
- Formulated with high viscosity index, group 2 base oils, which provide improved oxidation control over conventional oils, reducing the formation of sludge and deposits and reducing oil thickening, thereby keeping the product in grade for longer and extending oil and engine life.
- Low oil evaporation loss leads to improved fuel economy and reduces oil consumption, exhaust emissions and engine wear.
- High shear stability ensures that viscosity is maintained, even under severe, high-temperature service conditions, providing greater engine wear protection and extended engine life.
- Excellent soot and deposit control provide protection against piston deposits and valve train wear, and ensure engine cleanliness and smooth running.
- Excellent control of aeration and foaming ensures protection of engine parts.
- High acid neutralisation ability, together with TBN retention, provide rust and corrosion protection and prolong engine life.
- Excellent thermal and oxidation stability protect the engine against rust, corrosion and wear caused by the formation of sludge and deposits.
- Good elastomer compatibility ensures longer gasket and seal life.
- Excellent low-temperature properties ensure start up at low temperature and protect against start-up wear.

Recommended Applications

- Heavy duty diesel engines with EGR, DPF or other new technology low-emission systems, which require a low-ash lubricant in order to meet Euro III/IV/V and Australian ADR 80/00, 80/02 and 80/03 requirements.
- Heavy duty diesel engines using exhaust after-treatment systems.
- Heavy duty diesel engines operating continuously under very heavy or high load-factor conditions.
- On-highway application in heavy-duty vehicles operating under severe conditions, such as long-distance or urban traffic vehicles; also suitable in light-duty on-highway applications.
- Petrol/gasoline engines requiring an API SM quality oil.
- Suitable for mixed fleet use.
- Off-highway applications that use emission control systems.

Certifications and Approvals

API Service Classification CJ-4/SM
Caterpillar Cat ECF-3, Cat ECF-2, Cat ECF-1
Cummins CES 20081
Detroit Diesel 93K218, 93K215, 93K214
Deutz DQC III-10-LA
Mack EO-N, EO-M Plus, EO-M, EO-O Premium

Plus
Man 3275
Mercedes Benz MB 228.31
MTU MTU Type 2.1
Renault RLD-3
Volvo VDS-4, VDS-3, VDS-2



ENGINE OIL

CI-4 GD Diesel Engine Oil

Performance Spec: ACEA E3, E5, E7
API CI-4, CH-4, SL
GB (PRoC) 11122 Global DHD-1

Viscosity Grade/Type: SAE 15W-40

Features and Benefits

- Formulated with group II base oils, which provide improved oxidation control.
- Outstanding soot and deposit control provide protection against piston deposits and valve train wear, and ensure engine cleanliness and smooth running.
- Excellent control of aeration and foaming ensures protection of engine parts.
- High-quality base stocks and an advanced additive system work to reduce the build up of sludge and reduce oil thickening, thereby keeping the product in grade for longer and extending oil life.
- High acid neutralisation ability, together with TBN retention, provides rust and corrosion protection and prolongs engine life.
- Excellent thermal and oxidation stability protect the engine against rust, corrosion and wear caused by the formation of sludge and deposits.
- Good elastomer compatibility ensures longer gasket and seal life.
- Excellent low-temperature properties ensure smooth start up at low temperature and protect against start-up wear.

Recommended Applications

- Both light-duty and heavy-duty vehicles operating under severe conditions, such as long-distance or urban traffic vehicles.
- Off-highway applications in the mining, quarrying, construction and agricultural industries.
- Industrial power generation engines.
- Heavy duty diesel engines operating continuously under heavy or high load-factor conditions.
- Mixed fleet use.

Certifications and Approvals

API Service Classification CI-4/SL
ACEA E3-96#4, E5-02, E7-04
API Service Classification Diesel: CI-4, CH-4
and earlier HDDEO specifications Petrol/
Gasoline: SL
GB 11122-2006 (CI-4)
Global DHD-1 quality demonstration
Caterpillar Cat ECF-1-a

Cummins CES 20078, 20076/7, 20071/2
Detroit Diesel 93K215
Mack EO-N
Man 3275
Mercedes Benz MB 228.3
MTU MTU Type 2
Volvo VDS-3, VDS-2

ENGINE OIL

CF-2 Two Stroke Diesel Engine Oil

Performance Spec: API CF-2, CD-II

Viscosity Grade/Type: SAE 40, 50

Features and Benefits

- ▶ Excellent deposit control characteristics reduce the build up of combustion chamber and valve-seat deposits, reducing wear and ensuring effective engine operation.
- ▶ Medium-ash formulation reduces the incidence of valve guttering.
- ▶ Good thermal and oxidation stability together with good detergency properties, ensure the oil does not break down at high temperatures keeps the engine clean and extends component life.
- ▶ Excellent lubricity antiwear properties protect against engine wear and extend engine life.
- ▶ Excellent anti-rust performance and acid neutralising properties protect the engine from rust and corrosion.
- ▶ Available as SAE 40 and SAE 50 monogrades, to suit specific application requirements.

Recommended Applications

- ▶ Severe duty two-stroke cycle diesel engines which require a monograde API CF-2 or CD-II oil.



GEAR OIL

GL-5 Fully Synthetic Heavy Duty Auto Gear Oil

Performance Spec: API GL-5, MT-1
MIL-PRF-2105E
SAE J2360

Viscosity Grade/Type: SAE 75W-90

Features and Benefits

- ✔ The very high viscosity index, provided by the fully synthetic formulation, ensures excellent low- and high-temperature performance, and reduces gear wear at low-temperature start up.
- ✔ Advanced sulfur-phosphorus extreme pressure (EP) additive technology provides outstanding load-carrying capacity, and protects axles and gears operating under severe service conditions (e.g. low speed, high torque and high speed, high load).
- ✔ Excellent thermal and oxidation stability protect against the formation of deposits and sludge, prolong oil service life and extend oil drain intervals.
- ✔ The low coefficient of friction and high lubricity, provided by the PAO base oil, reduce resistance at start up and during operation, lowering power consumption and operating costs.
- ✔ Good oil film thickness protects against gear wear, scoring and pitting, and also prevents corrosion or spalling of gear surfaces.
- ✔ Good antifoaming properties ensure a good oil film is maintained during service, and avoid oil overflow and leakage.
- ✔ Fully compatible with the seal and gasket materials used in most conventional vehicles.
- ✔ Good resistance against rust and corrosion extends component life.
- ✔ The 75W-90 multigrade can be used year round, without the need for seasonal change, and so can reduce oil inventory costs.

Recommended Applications

- ✔ Drive axles (front and rear) of heavy duty vehicles.
- ✔ Some transmission gears, especially hypoid gears, in heavy duty vehicles.
- ✔ Axles and transmission systems that require a GL-5 quality oil.

SINOPEC

GEAR OIL

GL-5 Heavy Duty Automotive Gear Oil

Performance Spec: API GL-5
GB (PRoC) 13895
MIL L-2105D

Viscosity Grade/Type: SAE 75W-90, 80W-90, 85W-90, 90, 85W-140

Features and Benefits

- ✔ Excellent extreme pressure and
- ✔ Excellent extreme pressure and antiwear performance protects gears operating at high speeds and tooth pressures from abrasion, wear and welding, even in severe high-load and shock-loading conditions, extending component life.
- ✔ Excellent thermal and oxidation stability minimise the build up of deposits and varnish, reducing wear, extending component life and ensuring longer oil life.
- ✔ Protection against corrosion and rusting extends equipment life, and reduces maintenance costs.
- ✔ Good low-temperature fluidity ensures optimum lubrication, even in cold start-up conditions, and prevents start-up wear.
- ✔ Good antifoaming properties ensure optimum oil film thickness, protecting components against wear, and minimise oil leakage.
- ✔ Available in five viscosity grades to meet the specific needs of the application.
- ✔ Multigrade oils can be used over a wider temperature range, and so can reduce the need for seasonal oil change thus reducing maintenance costs.
- ✔ Fully compatible with common seal materials, to extend seal life and prevent fluid leakage.

Recommended Applications

- ✔ Axles, final drives and power take-off units in trucks, buses and off-highway vehicles used in various industries, including the construction, agricultural, forestry and mining sectors.
- ✔ Differentials, gear boxes and steering gears, where a hypoid oil is required.
- ✔ Some industrial gear sets, where an extreme pressure (EP) gear oil is required.

Certifications and Approvals

ZF TE-ML 05A, TE-ML 19B, TE-ML 21A
API GL-5,
GB 13895-92
MIL L-2105 D
Man 342 Type M1



GEAR OIL

ZLS Limited Slip Gear Oil

Performance Spec: API GL-5

Viscosity Grade/Type: SAE 85W-90, 90, 85W-140



Features and Benefits

- Specific frictional characteristics designed meet the special lubrication requirements of limited slip differentials.
- Excellent extreme pressure and antiwear performance protects gears from abrasion and wear, even in severe high-load and shock-loading conditions, extending component life.
- Excellent thermal and oxidation stability minimise the build up of deposits, reducing wear, extending component life, and ensuring longer oil life.
- Protection against corrosion and rusting extends equipment life, and reduces maintenance costs.
- Good low-temperature fluidity ensures optimum lubrication, even in cold start-up conditions, and prevents start-up wear.
- Good antifoaming properties ensure optimum oil film thickness, protecting components against wear.
- Available in three viscosity grades to meet the specific needs of the application.
- Fully compatible with common seal materials, to extend seal life and prevent fluid leakage.

Recommended Applications

- Heavy-duty limited slip differential bearings, axle shafts and final drives under severe extreme pressure and shock-loading service conditions, where API GL-5 performance is required.
- On-highway application in passenger cars, light- and heavy-duty trucks, buses and vans fitted with limited slip differentials.
- Off-highway application in equipment used in the construction, mining, quarrying and agricultural sectors.

Certifications and Approvals

API GL-5
ZF TE-ML 05C, TE-ML-12C,
TE-ML-21C

TRANSMISSION FLUID

TO-4 Heavy Duty Transmission Fluid

Performance Spec: Sinopec Q/SH303 533-2009

Viscosity Grade/Type: SAE 10W, 30, 50, 60

Features and Benefits

- ▶ Excellent antiwear properties and load carrying ability reduce gear wear and extend the life of heavy-duty transmission systems, gearboxes and final drives, leading to increased productivity and reduced equipment downtime.
- ▶ Outstanding oxidation stability, thermal stability and detergency prevent the build up of deposits and ensure long fluid life.
- ▶ Advanced frictional properties provide the clutch-friction retention and slippage control required in equipment that uses modern paper or elastomer disc materials.
- ▶ Compatible with modern clutch materials and elastomers, to extend component life and prevent oil leakage.
- ▶ Effective control of foaming together with good air-release properties ensure smooth transfer of power and shifting performance, and reduce fluid loss in severe service conditions.
- ▶ Very good low-temperature properties protect against wear under cold start up and running conditions.

Recommended Applications

- ▶ Heavy-duty transmissions, gearboxes, final drives and hydraulic systems used in off-highway applications, where a Caterpillar TO-4 product is recommended.
- ▶ Other heavy-duty applications in the mining, construction, quarrying and agricultural industries.
- ▶ Manual, power-shift and automatic transmissions where Allison C-4 fluids (SAE 10 W and 30 grades) are recommended.
- ▶ Mobile hydraulic equipment applications.
- ▶ Applications where paper and elastomer disc materials are used, and advanced frictional properties are required to extend clutch life and provide slippage control under severe high-load conditions.

Certifications and Approvals

ZF TE-ML 03C (SAE 30)
TE-ML 07F (SAE 30)
Sinopec Q/SH303 533-2009
Allison C-4 (SAE 10W and 30)
Caterpillar TO-4
Komatsu KES 07.868.1 (SAE 30)
ZF TE-ML 03C (SAE 30)
TE-ML 07F (SAE 30)



TRANSMISSION FLUID

Automatic Transmission Fluid III-LD

Performance Spec: Allison C-4
Voith H55.6335.3x
ZF TE-ML 14B

Viscosity Grade/Type: Multifunctional fluid

Features and Benefits

- ✔ Outstanding oxidation stability, thermal stability and detergency ensure long fluid life, prevent the build up of deposits, and allow for extended drain intervals.
- ✔ Excellent frictional characteristics improve transmission efficiency and shifting performance, and ensure consistent, reliable, trouble-free operation of transmission systems.
- ✔ Excellent antiwear performance and good oil film strength protect components from wear and ensure long transmission life.
- ✔ Very good low-temperature properties protect against wear under cold start-up and running conditions.
- ✔ Effective control of foaming ensures good transfer of power and shifting performance, and reduces fluid loss in severe service conditions.
- ✔ Fully compatible with common seal materials found in transmission systems, to extend seal life and prevent fluid leakage.

Recommended Applications

- ✔ Automatic transmission systems of commercial vehicles, including bus rapid transit (BRT) fleets, school bus fleets, emergency vehicles, recreation vehicles and commercial utility vehicles, where extended drain intervals are required.

Certifications and Approvals

Allison C-4
Voith H55.6335.3x
ZF TE-ML 14B

TRANSMISSION FLUID

Automatic Transmission Fluid III-H

Performance Spec: GM DEXRON® III-H

Viscosity Grade/Type: Multifunctional fluid

Features and Benefits

- Outstanding oxidation stability, thermal stability and detergency ensure long fluid life and prevent the build up of deposits.
- Excellent frictional characteristics improve transmission efficiency and shifting performance, and ensure consistent, reliable, trouble-free operation of transmission systems.
- Excellent antiwear performance and good oil film strength protect components from wear and ensure long transmission life.
- Very good low-temperature properties protect against wear under cold start-up and running conditions and ensure good low-temperature shift performance.
- Effective control of foaming ensures good transfer of power and shifting performance, and reduces fluid loss in severe service conditions.
- Fully compatible with common seal materials found in transmission systems, to extend seal life and prevent fluid leakage.

Recommended Applications

- All vehicles where GM DEXRON® III, Ford MERCON® or Allison C-4 fluids are required.
- Four-, five-, and some six-speed automatic transmissions used in US, Japanese and some European passenger cars.
- Power steering units of some passenger cars.
- Many automatic transmissions, power steering and hydraulics systems in heavy-duty vehicles used, for example, in the construction industry.
- Hydrostatic drives and hydraulic systems in industrial, agricultural, mining and marine applications where GM DEXRON® III, Ford MERCON® or Allison C-4 is specified.
- Some specific hydraulic systems that require an ISO VG 32, 46 or 68 fluid.
- Not recommended for use in continuously variable transmission (CVT) systems.

Certifications and Approvals

Allison C-4

Ford MERCON®

GM DEXRON® III-H

Nissan 1998–2004: most except as noted
2005–2006: 4-cyl Altima, 4-speed Maxima, 4-speed Quest

Subaru Before 2005: most except as noted

Volvo 1995–1998: 850, 940, 960; 70, 90 Series

1999–2000: V50, V70, V70R and XC70 with AW50-42 or AW42AWD; C70

1999–2005: S80 with 4T65EV, XC90 with 4T65AWD, S70 with AW50-42 or AW42AWD



ANTIWEAR HYDRAULIC OIL

L-HM Antiwear Hydraulic Oil

Performance Spec: DIN 51524 Pt 2
GB (PRoC) 11118.1 (L-HM) Premium
ISO 11158 (L-HM)

Viscosity Grade/Type: ISO VG 32, 46, 68, 100, 150

Features and Benefits

- High-quality base oils combined with multifunctional additive technology provide outstanding antiwear properties, rust protection, low varnish and deposit formation, good demulsibility, oxidation resistance, good antifoam properties and fast air release properties, to protect and extend the life of hydraulic pumps and systems.
- Good hydrolytic stability and filterability, ensure optimum product life and performance, and prevent filter blocking.
- The wide selection of viscosity grades ensures that the optimum viscosity can be used for any hydraulic system operating temperature.
- Fully compatible with common seal materials usually found in hydraulic systems, to extend seal life and prevent fluid leakage.

Recommended Applications

- Hydraulic applications in a wide variety of industrial, marine and mobile equipment.
- Vane and gear pumps operating under high loads, as recommended by pump manufacturers.
- Severe service hydraulic systems, employing axial and radial piston pumps, as recommended by pump manufacturers.

Certifications and Approvals

Cincinnati Lamb P-68 (ISO 32), P-69 (ISO 68), P-70 (ISO 46)
Parker Denison HF-0, HF-1, HF-2 (ISO 32, ISO 46, ISO 68)
Eaton Vickers M-2950-S (ISO 46)
DIN 51524 Pt 2
GB 11118.1-94 (L-HM) Premium
ISO 11158 (L-HM)
Cincinnati Lamb (ISO 32), P-69 (ISO 68), P-70 (ISO 46)
Parker Denison HF-0, HF-1, HF-2 (ISO 32, ISO 46, ISO 68)
Eaton Vickers M-2950-S (ISO 46)

ANTIWEAR HYDRAULIC OIL

L-HV Low Temperature Antiwear Hydraulic Oil

Performance Spec: DIN 51524 Pt 3
GB (PRoC) 11118.1-84 (L-HV)
ISO 6743/4 (L-HV)

Viscosity Grade/Type: ISO VG 15, 22, 32, 46, 68, 100

Features and Benefits

- High viscosity index combined with low pour point ensures excellent low-temperature fluidity and provides excellent low-temperature start up, protecting the hydraulic system from wear and extending life.
- Excellent shear stability properties ensure good oil film thickness is maintained in severe service conditions, protecting the components of the hydraulic system.
- High-quality base oils combined with multifunctional additive technology provide outstanding antiwear properties, rust protection, low varnish and deposit formation, excellent demulsibility, oxidation resistance, good antifoam properties and fast air release properties, to protect and extend the life of hydraulic pumps and systems.
- Good hydrolytic stability and filterability, ensure optimum product life and performance, and prevent filter blocking.
- The wide selection of viscosity grades ensures that the optimum viscosity can be used for any hydraulic system operating temperature.
- Fully compatible with common seal materials usually found in hydraulic systems, to extend seal life and prevent fluid leakage.

Recommended Applications

- Moderate- to high-pressure hydraulic systems operating outdoors in severe cold regions or where there is a wide variation in ambient temperature, such as in the marine, construction, mining and oil industries.
- Vane and gear pumps operating under high pressure and low temperatures, as recommended by pump manufacturers.
- Severe service hydraulic systems, employing axial and radial piston pumps, as recommended by pump manufacturers.

Certifications and Approvals

Cincinnati Lamb P-68 (ISO 32), P-69 (ISO 68), P-70 (ISO 46)
DIN 51524 Pt 3
GB 11118.1-84 (L-HV)
ISO ISO 6743/4 (L-HV)
Cincinnati Lamb P-68 (ISO 32), P-69 (ISO 68), P-70 (ISO 46)
Parker Denison HF-0



ANTIWEAR HYDRAULIC OIL



L-HM High Pressure Ashless Antiwear Hydraulic Oil

Performance Spec: DIN 51524 Pt 2
ISO 11158 (L-HM)

Viscosity Grade/Type: ISO VG 32, 46, 68, 100

Features and Benefits

- The non-zinc, ashless antiwear additive system is non-corrosive to silver and yellow metal alloys, and so is fully compatible with hydraulic pumps containing either silver or copper components, thus prolonging pump life.
- High-quality base oils combined with ashless additive technology provide outstanding antiwear properties, rust protection, low deposit formation, good demulsibility, oxidation resistance, good antifoam properties and fast air release properties, to protect and extend the life of hydraulic pumps and systems.
- Good hydrolytic stability and filterability, ensure optimum product life and performance, and prevent filter blocking.
- High viscosity index gives good viscosity characteristics over a wide temperature range; the wide selection of viscosity grades ensures that the optimum viscosity can be used for any hydraulic system operating temperature.
- Fully compatible with common seal materials usually found in hydraulic systems, to extend seal life and prevent fluid leakage.

Recommended Applications

- Severe hydraulic applications, such as in vane pumps and/or piston pumps running under high-pressure conditions.
- High-precision hydraulic systems containing copper or silver components.

Caution: avoid mixing L-HM High Pressure Ashless Antiwear Hydraulic Oil grades with non-ashless antiwear hydraulic oils, as this may be detrimental to their performance.

Certifications and Approvals

Cincinnati Lamb P-68 (ISO 32), P-69 (ISO 68), P-70 (ISO 46)
Parker Denison HF-0
DIN 51524 Pt
ISO 11158 (L-HM)
Cincinnati Lamb P-68 (ISO 32), P-69 (ISO 68), P-70 (ISO 46)
Parker Denison HF-0

BRAKE FLUID

DOT 4 Synthetic Brake fluid

Performance Spec: FMVSS No. 116 DOT 4
GB (PRoC) 12981 HZY4
ISO 4925 Class 4
SAE J1704

Features and Benefits

- High wet and dry equilibrium reflux boiling point (ERBP) minimises vapour formation on braking at high-speed or high-load conditions and maintains the fluid's hydraulic properties, thus ensuring good braking performance.
- Borate ester in the formulation acts as a water scavenger and helps to maintain the ERBP during service, so maintaining the quality of braking performance as the fluid ages.
- Good fluidity, even at low temperatures, enables optimum braking performance.
- A buffered alkaline pH protects iron and steel-containing system components from acidic corrosion, ensuring long component life.
- Selected corrosion inhibitors protect aluminium, copper, zinc and tin-containing system components from corrosion, ensuring long life.
- Good compatibility with common seal materials used in braking systems minimises fluid leakage and reduces component wear caused by inadequate lubrication, ensuring good braking performance.
- Excellent thermal and oxidation stability properties prevent fluid breakdown and deposit formation, maximising fluid life and performance.
- Fully compatible with other brake fluids that meet the DOT 3 or DOT 4 specifications also compatible with DOT 5.1.

Recommended Applications

- Hydraulic disc, drum and anti-skid brakes and clutch systems of all passenger cars and commercial vehicles that require a DOT 4 or DOT 3 performance synthetic fluid.
- Caution: do not use where a mineral oil-based fluid or a DOT 5 silicone-based fluid is required.

Certifications and Approvals

FMVSS No. 116 DOT 4
GB 12981-2003 HZY4
ISO 4925 Class 4
SAE J1704



GREASE

HP-XT Grease

Performance Spec: Sinopec PRD131-2008

Type: NLGI grade 2–3



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 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.
- ✔ High-quality base oil ensures a good oil film thickness is maintained, even in high-temperature applications, 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.
- ✔ 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.
- ✔ Suitable 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.

Certifications and Approvals

Foshan Yonglitai Axle Co., Ltd Approved for use as an automotive wheel bearing grease

Liaoning Shuguang

Automotive Co., Ltd Approved for use as an automotive wheel bearing grease

Shandong Huali Motor Co., Ltd Approved for use as an automotive wheel bearing grease

Sinopec Q/SH PRD131-2008

SINOPEC

GREASE

MoS₂ Lithium Complex Grease 7413 No. 2

Performance Spec: Sinopec Q/SH 303.219-2010

Type: NLGI 2

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 rolling element 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.

Certifications and Approvals

Sinopec Q/SH 303.219-2010



COOLANT

YF-2A Environmentally Friendly Engine Coolant

Performance Spec: ASTM D 3306, D 4985

BS 6580:2010

JIS K 2234

SAE J1034

Features and Benefits

- ✔ The advanced anticorrosion system provides excellent protection against crevice corrosion in aluminium and cavitation corrosion-erosion in cast iron, protecting the radiator components and ensuring longer life.
- ✔ The non-silicate formulation protects against the formation of gels and deposits, even in the presence of hard water, ensuring improved coolant stability and longer effective coolant life.
- ✔ Excellent heat transfer properties enable high-temperature engine parts (especially the aluminium heat-transfer surfaces found in some modern engines) to be effectively cooled and protected from damage.
- ✔ Can offer a single coolant/antifreeze for use in a wide range of vehicles, so ideal for mixed fleet use.
- ✔ Fully compatible with rubber tubing and sealing materials, and so prolongs the service life of water pump and seals.
- ✔ Good stability enables the product to be stored year round without problems.
- ✔ This environmentally friendly product contains no harmful, toxic or carcinogenic chemicals, and is not damaging to water or soil ecosystems.

Recommended Applications

- ✔ Radiator systems of petrol, diesel, LPG and CNG-fuelled engines in passenger cars, trucks and buses.
- ✔ Radiator systems of modern aluminium alloy engines.
- ✔ Radiator systems of diesel engines fitted with cast iron cylinder liners.

Certifications and Approvals

Anshan Iron and Steel Mining Company
Shanghai Diesel Engine Co., Ltd
Xiamen Bus Company
Xiamen King Long United Automotive Industry Co., Ltd
ASTM D 3306, D 4985
BS 6580:2010
JIS K 2234
SAE J1034

SINOPEC

DETERGENTS

Truckwash Detergent Concentrate



Features and Benefits

- Surfaces are left clean and streak free.
- Safe for use on all vehicle exterior surfaces including paintwork, metal, rubber, plastic and glass.

Recommended Applications

- Truckwash cuts through the tenacious dirt and grime accumulated by road transport equipment, such as truck and bus fleets, as well as contaminants from off-highway operations, such as earthmoving.
- Diluted with water and applied in concentrations ranging from 1 to 5%.
- Performance, use with high-pressure cleaning or foaming equipment.





Focused on Service and Support

Your priorities, not ours

You won't find any complacency in our ordering, dispatch and delivery systems. We've listened to you, our customers, and understand your lubrication needs.

Not only do you demand the best products at realistic and reasonable prices, you also need swift and friendly Sinopec service, which won't leave you stranded with thousands of dollars of equipment standing idle.

With Sinopec's established and proven logistics, your order will be processed the day it arrives, with dispatch within 24 hours for next-day delivery.

Back up in depth

To ensure Sinopec fulfils your orders first time every time, extensive stocks are held for continuity of supply, backed up by the modern blending facility in Singapore.

Pushing the frontiers

As well as pushing back the frontiers of customer service, Sinopec has its sights on the lubricants of the future. With over 25,000 staff working in Research and Development, Sinopec is committed to giving you the best lubrication system both now and in the future.

The Extended Sinopec Lubricants Range

Engine oils

Diesel engine oils Fully synthetic

- ✔ Mineral

Petrol engine oils Fully synthetic

- ✔ Semi-synthetic
- ✔ Mineral

2-stroke diesel engine oil

Super tractor oil universal

Gas engine oil CNG/LPG

Gear oils

Automotive gear oils Fully synthetic

- ✔ Semi-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

Standard hydraulic oil

Low temperature

Antiwear

Water-glycol

Ester-based synthetic

High pressure

Turbine oils

Standard turbine oil

Long service

EP gas turbine oil

Anti-ammonia turbine oil

Motorcycle oils

2-stroke oil

4-stroke oil Fully synthetic

- ✔ Mineral

Marine oils

Trunk piston engine oil

Cross-head engine oil

TC-W3 outboard engine oil

Brake fluids

Synthetic Dot 4

Compressor oils

Standard compressor oil Rotary

- ✔ Reciprocating

Synthetic compressor oil

Specialist products

Thermal conducting oil

Transformer oil

Rock drill oil

Ancillary products

Coolant

Truckwash





Contacting Sinopec

Sinopec Lubricant Company

No.6 West Road,
Anning Zhuang,
Haidian District,
Beijing,
Postal Code: 100085

Fax: 010-62917732

Website: <http://english.sinolube.com>

Service Tel: 400-810-9886

International Business Department:

Tel: 86-10-62941630, 86-10-82417693

Fax: 86-10-82416960

Australia Distributors:

International Lubricant Distributors

Tel: 1300 558 939

Website: www.illdirect.com.au

The information contained in this publication is based on information provided by manufacturers and their agents. To the extent permitted by law, no warranty, express or implied, is provided as to the completeness of the information or its accuracy. To the extent permitted by law, Sinopec Corp, International Lubricant Distributors Pty Ltd and their related companies exclude liability for any loss, damage or injury (including consequential loss) however caused arising out of or in connection with reliance on any information in this publication.

Subject to this disclaimer, Sinopec Corp retains sole property in all trademarks, trade names and all other information in this publication relating to Sinopec Corp's products.





SINOPEC