



SYNTHETIC LUBRICANTS



FOREWORD

The product manual of Sinopec Lubricant Company is reorganized to meet the requirements of our clients for understanding and correct selection of the SINOPEC series lubricants. Comprising such fascicles as automotive lubricants, marine oils, industrial lubricants, greases, synthetic lubricants and so on, the manual provides specific introduction to products in terms of features and benefits, technical specifications, recommended applications and typical properties, etc.

This fascicle is the one about synthetic lubricants, collecting products manufactured by Sinopec Lubricant Company, including aviation lubricating oil, special oil for precision bearing, synthetic compressor oil, refrigeration compressor oil, synthetic gear oil, synthetic hydraulic oil, special oil for high temp chain, special lubricant, high/low temp bearing grease, special instrument grease, special sealing grease, grease for the automotive industry, special gear grease, special grease, fluorine containing lubricant, etc.

Due to limit of space, it is impossible for us to give introduction to all products as well as information. Please dial our service hotline: 400-810-9886 or 800-810-9886 for further information. Or, you are welcome to log on our website at: <http://www.sinolube.com>.

Thanks for your care for the SINOPEC lubricants!

BRIEF INTRODUCTION

Sinopec Lubricant Company was founded on May 29th, 2002 in Beijing. Located in Shangdi Technology Base, Zhongguancun Science and Technology Area, the company is the largest high-tier lubricant manufacturer and marketer in China with a production capacity of 1.3 million tons of packaged lubricants every year. In 2009, the production and sales volume of packaged lubricants reached 1.1 million tons.

To meet the challenge brought by global competition in lubricant market, Sinopec. organized Sinopec Lubricant Company under the principle of “five-unification”—“unification of plan and arrangement”, “unification of resource allocation”, “unification of market exploration”, “unification of brand image” and “unification of product development”. As a specialty lubricant company, it integrates the function of lubricant manufacturing, research, storage, transportation, sales and service. The company has 11 lube oil & grease blending and manufacturing branch companies, located in Beijing, Shanghai, Tianjin, Chongqing, Maoming, Guangdong Province, Wuhan and Jingmen, Hubei Province, Jinan, Shandong Province and Zhengzhou, Henan Province. Besides, there are two independent R&D Centers in Beijing and Shanghai.

Equipped with world-class automatic blending and packaging production line, Sinopec Lubricant Company produces series of products including crankcase oil, industrial gear oil, hydraulic oil, greases, anti-coolant, brake fluid, metal working fluid, marine oil and additives, etc., which are widely used in the fields of aviation, space flight, automobile, machinery, metallurgy, mining, petrochemical engineering, electronics, etc. As one of China Aviation Partners, Sinopec Lubricant Company has provided lubrication service for Shenzhou manned space flight and Chang’e 1 lunar probe satellite, making great contributions to the development of China aviation and space flight causes.

With high-quality raw material and high-tech formulations evaluated by strict engine and bench tests, Sinopec Lubricant Company can supply over 2000 kinds of lube oils and greases in all 21 categories. These products fully meet national standards, as well as other requirements of special specification standards of ISO, API, etc. R&D institutes in Beijing, Shanghai and Chongqing all have “National Laboratory” certificates, and can undertake application research projects of both national and ministerial level, independently formulating various lubricant products to meet special market requirements under the technological support of RIPP (Research Institute of Petroleum processing).



Some products have got technology certificates from world famous automobile manufacturers, such as Daimler-Chrysler, VW, Mercedes-Bens, Volvo, and MAN and became the first lubricant option of some large-scale group Corporations including FAW-VW, Dongfeng Motor Corp., Shanghai GM, Shanghai VW, Chery, Baosteel Group Corp., etc. In 2009, Sinopec Lubricant Company has established strategic cooperation with Sinotruk and Shifeng Group. Besides, Sinopec has established its Automobile Industry Technology Center with Sinopec Lubricant Company as the core to serve as the platform for cooperation with the automobile industry.

In the process of development, Sinopec Lubricant Company has gradually nurtured its unique brand culture and strategy of management and development with an eye to the whole world. The company has made great efforts in overseas market exploration, introducing pioneer lubricant products with the brand "SINOPEC" for international market, building a high-tech, high-quality, international brand image. Faced by the global financial turmoil and other negative factors in 2009, Sinopec Lubricant Company stepped up efforts in forming international network and accomplished overseas market sales volume of 14,000 tons. Sinopec Lubricant Company has also successfully held 1st Global Distributor's Conference, which was attended by distributors from more than 30 countries and regions.

With increasingly promoted brand value, "SINOPEC/Greatwall Lubricant" ranked 54th in China's most valuable brandname list in 2009, with brand value of 12.73 billion RMB and 1st in Chinese lubricant Industry. In 2009, Sinopec Lubricant Company has continued to deepen series of theme activities as Aviation Experience Camp all around China, further strengthening the influence of SINOPEC/Greatwall Brand.

Sinopec Lubricant Company has fostered a concept with customer satisfaction as the core, organizing its production and management in accordance with world's advanced structures and modes. With stable product quality, the company has completed ISO16949 and HSE management system certification and won the title of China Famous Brand.

Devoted to development of Chinese lubricant causes, Sinopec Lubricant Company has actively participated in international competition and made efforts in seeking long-term cooperation relationship with relative industries to achieve mutual development and advancement.

CONTENTS

Aviation Lubricating Oil

4010 Synthetic Aviation Lubricating Oil.....	1
4011 Synthetic Aviation Lubricating Oil.....	2
4106 Synthetic Aviation Lubricating Oil.....	3
4109 Synthetic Aviation Lubricating Oil.....	5
4209 Synthetic Aeroplane Rust-proof Oil.....	6

Special Oil for Precision Bearing

Special Oil 3 [#] , 4 [#] , 5 [#] , 14 [#] and 16 [#] for Precision Instrument.....	7
4112 High/Low Temperature Instrument Oil.....	8
4121 Instrument Oil with Low Viscosity.....	9
4123 Precision Bearing Lubricant for Space Applications.....	10
4124 Non-Spreading Instrument Oil.....	11
4127 Non-spreading Instrument Oil for Jeweled Bearing Working in Low Temperature.....	13
4128 Lubricant for Mechanical Time Fuse.....	14
4129 Lubricant for Oil Retaining Precision Bearing.....	15

Synthetic Compressor Oil, Refrigeration Compressor Oil

4502 Synthetic Compressor Oil.....	16
4506 Synthetic Compressor Oil.....	18
4503 Synthetic Air Compressor Oil.....	20
4511-1 Ethene Compressor Oil.....	21
4511 Synthetic Compressor Oil.....	23
4512 Synthetic Compressor Oil.....	24

CONTENTS

4513-1 Synthetic Compressor Oil.....	25
4513 Synthetic Compressor Oil.....	26
4521-1 Refrigeration Compressor Oil.....	28
4521 Synthetic Refrigeration Compressor Oil.....	29
4522 Synthetic Refrigeration Compressor Oil.....	31
4523 Synthetic Refrigeration Compressor Oil.....	33
4524 Synthetic Refrigeration Compressor Oil.....	35
4529 Compressor Oil for Air Conditioner.....	37

Synthetic Gear Oil

4403 Synthetic Gear Oil.....	38
4404 Synthetic Gear Oil for Heavy Duty Vehicles.....	39
4405 Synthetic Medium Duty Industrial Gear Oil.....	40
4406 Synthetic Heavy Duty Industrial Gear Oil.....	42
4407 Synthetic Heavy Duty Industrial Gear Oil.....	44
4413 Express Pump Gear Oil.....	45
4634 Tank Transmission Fluid.....	47
SH 5000 Series Heavy Duty Industrial Gear Oil.....	48

Synthetic Hydraulic Oil

4607 Synthetic Hydraulic Oil.....	50
4608 Synthetic Hydraulic Transmission Oil.....	51
4631 Water-glycol Fire Resistant Hydraulic Fluid.....	52
4632 Ester Type Fire Resistant Hydraulic Oil.....	54
4637-2 Semi-synthetic Hydraulic Oil.....	56
4639 High Pressure Ashless Anti-wear Hydraulic Oil.....	57

CONTENTS

Special Oil for High Temperature Chain

4402 Series Heat-setting Machine Oil.....	58
SHT-500 Synthetic High Temperature Chain Oil.....	59
SHT-518 Synthetic High Temperature Chain Oil.....	60
SHT-600 Synthetic High Temperature Chain Oil.....	61
SH 618 High Temperature Lubricant for Baking Varnish Chain.....	62

Special Lubricant

4041 High Temperature Lubricant.....	63
4301 Optical Silicon Oil.....	65
4304 Submersible Electric Pump Lubricant.....	66
4410 (OA-2) Oil-air Lubricant.....	67
4410 (OA-3) Oil-air Lubricant.....	68
4501 Turbomolecular Pump Lubricant.....	69
Special Silicon Oil for NBR.....	70
Viscosity Standard Oil.....	71
SH 710 Multifunctional Polymethylphenyl Siloxane Fluid.....	72

High/Low Temperature Bearing Grease

221 Special Grease.....	73
7007, 7008 General Aviation Lubricating Oil.....	74
7011 Low Temperature Extreme Pressure (EP) Grease.....	76
7014-1 High Temperature Lubricating Grease.....	77
7014 Extended Temperature Aviation Lubricating Grease.....	79
7015 High/Low Temperature Lubricating Grease.....	81
7016-1 Lubricating Grease for Precision Bearing.....	82
7016 High/Low Temperature Lubricating Grease.....	83

CONTENTS

7017-1 High/Low Temperature Lubricating Grease.....	84
7018 High Speed Bearing Lubricating Grease.....	86
7019-1 EP High Temperature Lubricating Grease.....	88
7020 Lubricating Grease for Bearing of Kiln Car.....	90
7023 Low Temperature Aviation Lubricating Grease.....	92
7023B Low Temperature Lubricating Grease.....	93
7025 High Temperature Lubricating Grease.....	95
7026 Lubricating Grease for Automobile and Cannon Bearings.....	96
7028 Lubricating Grease for Aviation Wheel.....	97
7029 Uramino Lubricating Grease for Continuous Caster.....	99
7029A Uramino Lubricating Grease.....	101
7029D Lubricating Grease.....	103
7035-1 Lubricating Grease for Rolling Bearing.....	105
7035-1F Lubricating Grease for Rolling Bearing.....	106
7035 Special Sealing Grease for Sintering Machine Slide Way.....	107
7036 High/Low Temperature Lubricating Grease.....	109
7111 Semi-Fluid Lubricating Grease.....	110
7112 Extended Temperature Aviation Lubricating Grease.....	111
7123 Lubricating Grease for Gyro Motor.....	112
7201 Lubricating Grease for Rust Prevention of the Bearing.....	113
7417 EP Uramino Lubricating Grease.....	114

Special Kind Meters Grease

Special 7, 75 Precision Meters Grease.....	115
7101 Instrument Grease.....	116
7102, 7103, 7104 Potential Device Damping Grease.....	117

CONTENTS

7105 Optical Instrument EP Grease.....	119
7106, 7107 Optical Instrument Lubricating Grease.....	120
7108 Optical Instrument Dust-proof Grease.....	121
7109, 7110 Optical Instrument Lubricating Grease.....	122
7161 Special Damping Grease.....	123
7163 Special Damping Grease.....	124

Special Sealing Grease

7013 Special Sealing Lubricating Grease.....	125
7405-1 Sealing Grease for High-temperature and pressure Screw Thread.....	126
7405 Sealing Grease for High-temperature and pressure Screw Thread.....	127
7409 Drill Tool Screw Thread Lubricating Grease.....	128
7501 Fine Vacuum Silicone Grease.....	129
7502, 7503 Silicone Grease.....	131
7602 High-temperature Sealant.....	133
7605, 7605-1 Oil-resistant High Temperature Sealing Grease.....	135
7606 Special Lubrication Sealing Grease.....	136
7903 Oil-resistant Packing Grease.....	137
7903-4 Methanol Resistant Sealing Grease.....	139
7903-5 High/low-temperature Oil-resistant Sealing Grease.....	140

Special Lubricating Grease of Automobile Industry

7607 Sealing Grease for Vehicle Braking System.....	141
7608 Sealing Grease for Hydraulic Braking System.....	143
SHB6 Lubricating Grease for Accessories of the Auto Body.....	144
SHGL-9700 Lubricating Grease for Flexible Shaft.....	146

CONTENTS

SHCVJ Automobile Constant Universal Joint Lubricating Grease.....	147
SHCVJ-WUT Automobile Constant Universal Joint Lubricating Grease.....	149

Special Gear Lubricating Grease

7403 High Temperature Gear Grease.....	151
7407 Gear Lubricating Grease.....	152
7408 Semi-fluid Gear Lubricating Grease.....	153
7412 Gear Lubricating Grease.....	155
7415 Lubricating Grease for Cannon Launching Structure.....	157
7420 Heavy Load Gear Lubricating Grease.....	158

Lubricating Grease for Special Use

7418 Flange Lubricating Grease.....	160
SHDD Series of Electric Conduction Lubricating Grease.....	161
GFR-073 High-temperature Anti-sticking Lubricant.....	162
LW-1000 High-temperature Thread Anti-sticking Sealing Grease.....	163

Fluorine-containing Special Lubricant

4830 Leak Detecting Solution.....	164
4836 Chemical Medium Resistant Instrument Oil.....	165
4838, 4839, 4840 Chemical Medium Resistant Lubricants.....	166
4803, 4807 Chemical Medium Resistant Lubricants.....	167
FM-1, FM-2, FM-3 Chemical Medium Resistant Lubricants.....	168
FLZ-1, FLZ-3 Chemical Medium Resistant Lubricating Grease.....	169
FMZ-1, FMZ-2 Chemical Medium Resistant Lubricating Grease.....	170



Aviation Lubricating Oil

SYNTHETIC LUBRICANTS

(1-6)



4010 Synthetic Aviation Lubricating Oil

SINOPEC 4010 synthetic aviation lubricating oil is engine used II type lubricant with low viscosity, blended with synthetic base oil and highly refined additives. It meets requirements of American military standard MIL-PRF-7808L, MIL-L-7808J.

Advantages

- ⊙ Strong resistance to high temperature, suitable for aeroplane engine working under such condition
- ⊙ Good heat oxidation stability, ensuring a longer service life of bearings
- ⊙ Outstanding material adaptability and storage stability, suitable for using under different conditions
- ⊙ Low foam tendency and good lubricity, providing fully lubrication in all kinds of conditions
- ⊙ Outstanding high/low temperature property, adapting usage anytime anywhere
- ⊙ As excellent as the same with foreign equals meeting MIL-L-7808J standards

Performance Specification

The product meets the following specifications:

- ⊙ GJB 135A—98 (type L)

Applications

- ⊙ Suitable for aeroplane turbine engine, applied temperature range: -54°C ~ 200°C

Typical Properties

Items	4010 synthetic aviation lubricating oil
Kinematic viscosity, mm ² /s	
100 °C	3.195
-40 °C	2300
-54 °C	15790
Flash point (open), °C	235
Pour point, °C	<-60
Neutralization value, mgKOH/g	0.26
Evaporation loss (205 °C, 6hrs), % (m/m)	13.84

Similar Foreign Products

- ⊙ As excellent as the same with Mobil Avrex S Turbo Oil 256, BP Turbo 2389, ESSO Turbo 2389, Russian И ПМ-10, French TN-160, and is better than Russian 50-I-4 Φ

Special Attentions

- ⊙ Prevent moisture, dust, or other corrosive mediums from entering during storage and usage
- ⊙ Do not mix with other oils
- ⊙ Keep away from paints, coats, rubbers which are soluble in ester oil
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint
- ⊙ It is normal and shall not affect the use effect case of darkened color after exposed to light or under long term high temperature
- ⊙ Store at clean, cool and dry places

Packing

- ⊙ To be packed with 1L, 4L iron barrels or as required by customer

4011 Synthetic Aviation Lubricating Oil

SINOPEC 4011 synthetic aviation lubricating oil is engine used new lubricant with low viscosity, blended with synthetic base oil and highly refined additives. Main properties meet requirements of MIL-PRF-7808L, MIL-L-7808L on 4 cST oil.

Advantages

- ⊙ Strong resistance to high temperature, suitable for aeroplane engine working under such condition
- ⊙ Good heat oxidation stability, ensuring a longer service life of bearings
- ⊙ Outstanding material adaptability and storage stability, suitable for using under different conditions
- ⊙ Low foam tendency and good lubricity, providing fully lubrication in all kinds of conditions
- ⊙ Outstanding high/low temperature property, adapting usage anytime anywhere
- ⊙ Main properties are as excellent as the same with foreign equals meeting MIL-L-7808L standards

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 417—2007

Applications

- ⊙ Suitable for aeroplane turbine engine, applied temperature range: -51℃ ~ 220℃

Typical Properties

Items	4011 synthetic aviation lubricating oil
Kinematic viscosity, mm ² /s	
100℃	4.11
40℃	18.24
-51℃	21380
Flash point (open), ℃	245
Nuetralization value, mgKOH/g	0.16
Evaporation loss (205℃, 6hrs), % (m/m)	7.04

Similar Foreign Products

- ⊙ Main properties are as excellent as the same with foreign equals meeting requirements of MIL-L-7808L on 4 cST oil

Special Attentions

- ⊙ Prevent moisture, dust, or other corrosive medium from entering into during storage and usage
- ⊙ Do not mix with other oils
- ⊙ Keep away from paints, coats, rubbers which are soluble in ester oil
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint
- ⊙ It is normal and shall not affect application in case of darkened color after exposed to light or under long term high temperature
- ⊙ Store at clean, cool and dry places

Packing

- ⊙ To be packed with 1L, 4L iron barrels or as required by customer

4106 Synthetic Aviation Lubricating Oil

SINOPEC 4106 synthetic aviation lubricating oil is Type II moderate viscosity synthetic aviation lubricating oil blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-corrosion agent, anti-wearing agent and so on. It meets requirements of MIL-L-23699C.

Advantages

- ⊙ Outstanding high/low temperature property, meeting requirements of all day long applicant
- ⊙ Outstanding high temperature anti-oxidation property, reducing coking
- ⊙ Relatively low evaporation loss, reducing consumption of oil
- ⊙ Excellent lubricity, ensuring long term operation of aeroplane engine
- ⊙ Outstanding defoaming ability, sufficiently ensuring lubrication requirement of aeroplane engine

Performance Specification

The product meets the following specifications:

- ⊙ GJB 1263—1991

Applications

- ⊙ Suitable for aeroplane engine of turbo-jet, turbo-fan and turbo-shaft, and further suitable for gas turbine engine of ground industry
- ⊙ Applied temperature range: -40℃ ~ 200℃, and 220℃ for short period of time

Typical Properties

Items	4106 synthetic aviation lubricating oil
Kinematic viscosity, mm ² /s	
100℃	5.02
40℃	24.40
-40℃	8652
Flash point (open), ℃	250
Pour point, ℃	<-54
Evaporation loss (204℃, 6.5hrs), %	4.37

Similar Foreign Products

- ⊙ Good performance as good as Mobil Jet Oil II, ESSO 2380

Application Examples

- ⊙ An oil and gas company purchased SK15 gas turbine power generation unit (11700kW per unit) from R-R (Britain) in 1988. 4106 synthetic aviation lubricating oil was recommended by R-R as substitute of the original ESSO 2380. The unit runs well until now

Special Attentions

- ⦿ Prevent moisture, dust, or other corrosive medium from entering into during storage and usage
- ⦿ Do not mix with other oils
- ⦿ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint
- ⦿ It is normal and shall not affect application in case of darkened color after exposed to light or under long term high temperature
- ⦿ Store at clean, cool and dry places

Packing

- ⦿ To be packed with 4L iron barrel or as required by customers

4109 Synthetic Aviation Lubricating Oil

SINOPEC 4109 synthetic aviation lubricating oil is type I 1/2 low viscosity synthetic aviation lubricating oil blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-corrosion agent, anti-wearing agent and so on. It meets requirements of MIL-L-7808H.

Advantages

- ⊙ Outstanding heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Outstanding high/low temperature and viscosity-temperature properties, meeting requirements of all day long applicant
- ⊙ Outstanding heat stability, oxidation stability, reducing coking in operation
- ⊙ Outstanding rust-proof, ensuring a long service life of engine
- ⊙ Low oil evaporation and consumption

Performance Specification

The product meets the following specifications:

- ⊙ GJB 135A—1998 (type H)

Applications

- ⊙ Suitable for long-term lubrication of gas turbine engine of aeroplane, or ground power station and gas-steam combined cycle unit driven by turbine engine of aeroplane
- ⊙ Applied temperature range: -50℃ ~ 175℃

Typical Properties

Items	4109 synthetic aviation lubricating oil
Kinematic viscosity, mm ² /s	
100℃	3.765
-40℃	2842
Flash point (open), ℃	232
Freezing point, ℃	<-60
Neutralization value, mgKOH/g	0.2
Evaporation loss (205℃, 6.5hrs), % (m/m)	5.76

Application Examples

- ⊙ 4109 synthetic aviation lubricating oil has been used for turbojet of supersonic fighter for long time, and it is also suitable for main lubricating oil system of helicopter and starter of civil aeroplane

Special Attentions

- ⊙ Prevent moisture, dust, or other corrosive medium from entering into during storage and usage
- ⊙ Do not mix with other oils
- ⊙ Store at clean, cool and dry places
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint
- ⊙ It is normal and shall not affect application in case of darkened color after exposed to light or under long term high temperature

Packing

- ⊙ To be packed with 1L, 4L iron barrels or by customers

4209 Synthetic Aeroplane Rust-proof Oil

SINOPEC 4209 synthetic aeroplane rust-proof oil is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anticorrosive agent, anti-rust agent and so on. It meets requirements of MIL-C-8188C.

Advantages

- ⊙ Outstanding rust inhibiting performance, ensuring a long storage period of engine
- ⊙ Outstanding heat oxidation stability, preventing oil from damage in high temperature condition

Performance Specification

The product meets the following specifications:

- ⊙ GJB 2377—1995

Applications

- ⊙ Applying with 4109 synthetic aviation lubricating oil, the rust-proof oil is suitable for long-term storage and short-term lubrication of aeroplane engine
- ⊙ Applied temperature range: -50℃ ~ 175℃

Typical Properties

Items	4209 synthetic aeroplane rust-proof oil
Kinematic viscosity (100℃), mm ² /s	3.88
Flash point (open), ℃	240
Freezing point, ℃	<-60
Neutralization value, mgKOH/g	1.70

Special Attentions

- ⊙ Prevent moisture, dust, or other corrosive medium from entering into during storage and usage
- ⊙ The product can be mixed directly with 4109 synthetic aviation lubricating oil when assembling corresponding engine
- ⊙ Store at clean, cool and dry places
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

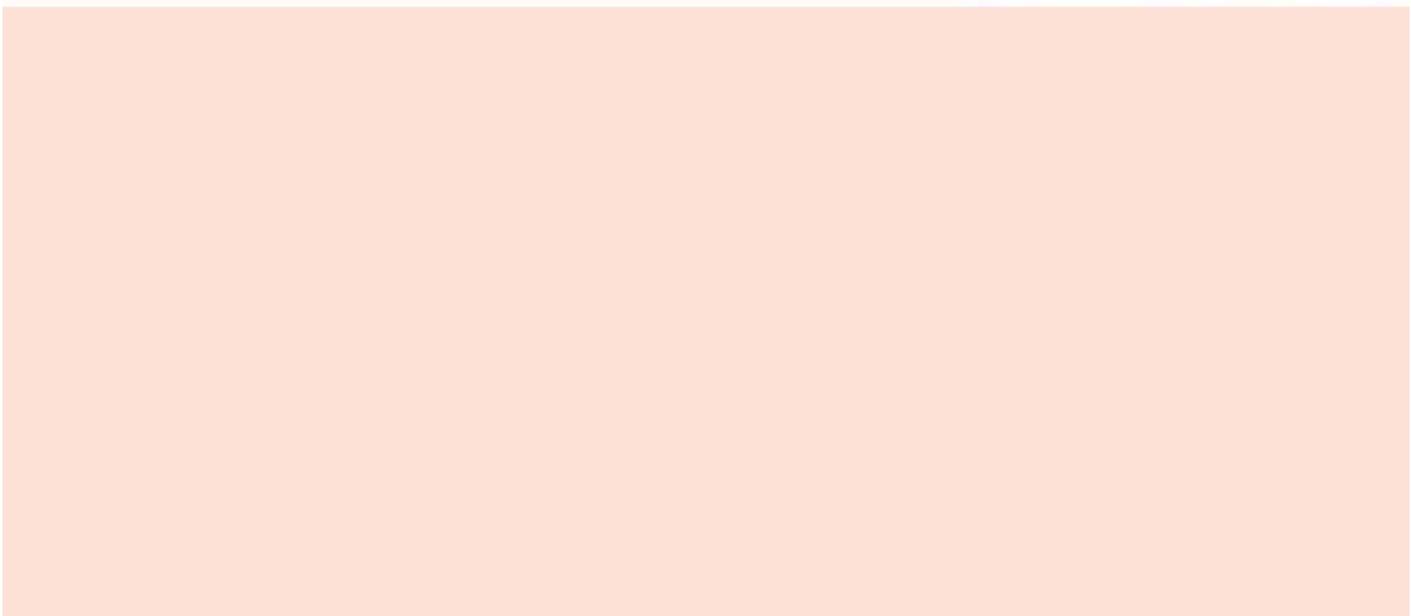
- ⊙ To be packed with 4L iron barrel or by customers



**Special Oil
for Precision Bearing**

SYNTHETIC LUBRICANTS

(7-15)



Special Oil 3[#], 4[#], 5[#], 14[#] and 16[#] for Precision Instrument

SINOPEC special oil 3[#], 4[#], 5[#], 14[#] and 16[#] for precision instrument is finely blended with silicon oil and synthetic oil with low freezing point. They are grouped as #3, #4, #5, #14 and #16 by functions.

Advantages

- ⊙ Excellent high/low temperature property, adaptable to wide temperature range, -60℃ ~ 120℃ is recommended
- ⊙ Good heat stability, with low evaporation loss
- ⊙ Excellent anti-shear stability, adaptable to instruments working under high shearing force
- ⊙ Outstanding rust-proofing performance

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0454—92 (1998)

Applications

- ⊙ Suitable for the lubrication of precision instrument, bearings of instrument of aeroplane, bearings of micromotor, gears of correction mechanism and friction member; and for the soaking of sealing gasket

Typical Properties

Items	special oil 3 [#] , 4 [#] , 5 [#] , 14 [#] and 16 [#] for precision instrument				
	3 [#]	4 [#]	5 [#]	14 [#]	16 [#]
Density (20℃), g/cm ³	0.8974	0.9238	0.9402	0.9198	0.9295
Kinematic viscosity (50℃), mm ² /s	11.92	13.6	19.38	25.31	22.12
Flash point (open), ℃	194	186	187	192	190
Freezing point, ℃	<-65	<-70	<-70	<-70	<-70
Acid number, mgKOH/g	0.01	0.03	0.02	0.02	0.02

Similar Foreign Products

- ⊙ Among the series, 3[#], 4[#], 5[#], 14[#] and 16[#] have the performance corresponding to Russian OKB3[#], Russian OKB4[#], Russian OKB5[#], Russian OKB14[#] and Russian OKB16[#], respectively

Special Attentions

- ⊙ Clean the location to be applied, then blow to dry and inject it with syringe during use
- ⊙ Close the cap tightly after each use to keep dust and debris away, ensuring quality of the product
- ⊙ Store under clean, dry condition, away from light

Packing

- ⊙ To be packed with 250g plastic bottle

4112 High/Low Temperature Instrument Oil

SINOPEC 4112 high/low temperature instrument oil is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-rust agent and so on. It meets the requirements of US Army's MIL-L-6085A and Britain's D.T.D-822 specifications.

Advantages

- ⊙ Low freezing point, good viscosity-temperature property, wide range of working temperature
- ⊙ Low evaporation and consumption, good lubricating property in long-term use
- ⊙ Outstanding anti-oxidation ability and anti-rust property, protecting bearings of instrument from corrosion

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0465—92

Applications

- ⊙ Suitable for the lubrication of aeroplane instrument, timer, bearings of micromotor, turbine cooler of air conditioning system, clock working in low temp, industrial instrument and medical equipment, such as indicator of chemical fertilizer plant, driving gear and motor of recording instrument
- ⊙ Applied temperature range: -60°C ~ 120°C, and 150°C for short period of time

Typical Properties

Items	4112 high/low temperature instrument oil
Kinematic viscosity, mm ² /s	
50°C	9.400
-50°C	6400
Neutralization value, mgKOH/g	0.03
Flash point (open), °C	224
Freezing point, °C	<-60
Water content, % (m/m)	<0.03

Similar Foreign Products

- ⊙ As outstanding as the same with British AEROSHELL FLUID 12, Swiss SYNTALUBE and ARCTIC (MOEBIUS9040)

Special Attentions

- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

- ⊙ To be packed with 250g plastic bottle or as required by customer

Special Oil for Precision Bearing

4121 Instrument Oil with Low Viscosity

SINOPEC 4121 instrument oil with low viscosity is blended with synthetic oil and plural highly refined additives such as anti-oxidizer, anti-wear agent, anti-corrosion agent, anti-rust agent and so on. 4121 and 4116-1 are lubricants with lowest viscosity and smallest starting moment under low temp among the instrument oil products of our company.

Advantages

- ⊙ Outstanding lubricity and rust-proofing property, washing-free after being unsealed
- ⊙ Excellent oxidation stability with low evaporation loss

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 161—2004

Applications

- ⊙ This washing free product is suitable for the lubrication and protection of high-speed bearing of precision instrument. It meets the requirements on lubrication and storage of micro bearing, gear and parts moving in small space of various instruments and weapons working under low temperature
- ⊙ Applied temperature range: -60℃ ~ 100℃

Typical Properties

Items	4121 instrument oil with low viscosity
Kinematic viscosity, mm ² /s	
50℃	4.198
-40℃	400.9
Freezing point, ℃	<-65
Neutralization value, mgKOH/g	0.42
Evaporation loss (100℃, 1hr), % (m/m)	6.1
Ability of rust inhibition (100hrs)	Qualified
Mechanical impurity, % (m/m)	None

Special Attentions

- ⊙ Cleaning of bearing and loading of this product shall be undertaken as regulated before use
- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

- ⊙ To be packed with 250mL plastic bottle or as required by customer

4123 Precision Bearing Lubricant for Space Applications

SINOPEC 4123 precision bearing lubricant for space applications is blended with synthetic base oil and plural highly refined additives. It is grouped into No.4123, 4123-1 and 4123-2 according to the kinematic viscosity at 100°C. It meets the requirements of US Army's MIL-L-83176.

Advantages

- ⊙ Excellent viscosity-temp and low temp properties, ensuring normal operation of bearing in wide temperature range
- ⊙ Low evaporation loss, good lubricity and oxidation stability, ensuring a long service life

Performance Specification

The product meets the following specifications:

- ⊙ GJB 2375—95

Applications

- ⊙ Suitable for the lubrication of oil-retaining bearing of gyro motor with high-precision and long service life used in aerospace and navigation fields; And for the lubrication of precision instruments and bearings with high working speed and long service life
- ⊙ Applied temperature range: -45°C ~ 150°C

Typical Properties

Items	4123 precision bearing lubricant for space applications		
	4123	4123-1	4123-2
Kinematic viscosity (100°C), mm ² /s	19.21	10.33	15.26
Viscosity index	153	145	153
Flash point (open), °C	264	259	263
Freezing point, °C	-49	-55	-47
Neutralization value, mgKOH/g	0.12	0.20	0.16
Evaporation loss (204°C, 6.5hrs), % (m/m)	3.51	3.86	3.94

Similar Foreign Products

- ⊙ It performs as excellent as the American KENDALL KG-80 and NYE 185C, 182, 186

Special Attentions

- ⊙ Cleaning of bearing and loading of this product shall be undertaken as regulated before use
- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Material compatibility test should be carried out when used in lubricated par in contact with non-metallic material such as rubber, plastic and paint

Packing

- ⊙ To be packed with 250g plastic bottle or by customer

Special Oil for Precision Bearing

4124 Non-Spreading Instrument Oil

SINOPEC 4124 non-spreading instrument oil is blended with special structured synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-wearing agent, anti-corrosion agent, and anti-spreading agent and so on. It is grouped into 4124-1, 4124-2 and 4124-3 according to the kinematic viscosity at 40°C.

Advantages

- ⊙ Excellent anti-spreading property, ensuring it always being retained at desired location
- ⊙ Modest viscosity, with outstanding oxidation stability, lubricity and high/low temperature property, ensuring a long service life of instrument

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 163—2004

Applications

- ⊙ It is suitable for lubricating various instruments, such as aeroplane instrument, gyroscope, timer, civil clock and electric meter. Especially for locations at where non-spreading oil is needed and parts work with low oil consumption, such as optical instrument's bearings working in small space, jeweled bearing of timer, different micro-bearings and small gears. 4214-1 is used for bearings working in low temperature, with interval less than 3 μ; 4124-3 is used for bearings working with heavier load with interval larger than 3 μ
- ⊙ Applied temperature range: -40°C ~ 120°C

Typical Properties

Items	4124 non-spreading instrument oil		
	4124-1	4124-2	4124-3
Appearance	Transparent liquid of light yellow		
Kinematic viscosity, mm ² /s			
40°C	29.65	45.50	64.6
0°C	288.8	510	700
Neutralization value, mg/KOH/g	1.14	1.37	1.41
Freezing point, °C	-56	-46	-47
Non-spreading property (45#steel sheet, normal temp, 168hrs), rate of spreading, %	1.1		

Similar Foreign Products

- ⊙ It performs as excellent as Swiss Synt-v-lube9020, synt-f-lube9030 and American M566

Special Attentions

- ⊙ Do not mix with other lubricant resulting in reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

- ⊙ To be packed with 250g plastic bottle or as required by customer

4127 Non-spreading Instrument Oil for Jeweled Bearing Working in Low Temperature

SINOPEC 4127 non-spreading instrument oil for jeweled bearing working in low temperature is blended with synthetic base oil and plural highly refined additives, such as anti-oxidizer, anti-corrosion agent, anti-spreading agent and lubricant. It meets the requirements of U.S Army's MIL-L-3918A.

Advantages

- ⊙ Excellent anti-spreading property, ensuring it always being retained at desired location
- ⊙ Low freezing point, with good viscosity-temp property, ensuring normal operation of instrument under low temp
- ⊙ Outstanding oxidation stability and lubricity, free of metal corrosion
- ⊙ Low evaporation loss, ensuring a long service life

Performance Specification

The product meets the following specifications:

- ⊙ GJB 3422—98

Applications

- ⊙ Suitable for lubricating timers used in aerospace field, timing system for controlling missile fuse as well as other instrument working in low temperature and locations where non-spreading oil is needed, such as jeweled bearing, gear driving member, etc
- ⊙ Applied temperature range: -54℃ ~ 100℃

Typical Properties

Items	4127 non-spreading instrument oil for jeweled bearing working in low temperature
Appearance	Transparent liquid of light yellow
Kinematic viscosity, mm ² /s	
40℃	9.07
-40℃	1312
Freezing point, ℃	<-60
Neutralization value, mgKOH/g	0.6
Corrosion (T ₂ copper sheet, 100℃, 3hrs), level	1b
Evaporation loss (99℃, 6.5hrs), % (m/m)	1.2
Ate of spreading (steel sheet, normal temp, 168hrs), %	2.7

Special Attentions

- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

- ⊙ To be packed with 250ml plastic bottle or as required by customer

4128 Lubricant for Mechanical Time Fuse

SINOPEC 4128 lubricant for mechanical time fuse is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-rust agent, anti-corrosion agent, lubricant and so on. It meets the requirements of U.S. Army's MIL-L-11734C-69.

Advantages

- ⊙ Outstanding high/low temperature property, with low evaporation loss, low freezing point and low viscosity, meeting requirements of all day long applicant
- ⊙ Outstanding oxidation stability, lubricity, rust-proof and storage stability, ensuring a long service life

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 167—2004

Applications

- ⊙ Suitable for the lubricant of mechanical time fuse
- ⊙ Applied temperature range: -54℃ ~ 100℃

Typical Properties

Items	4128 lubricant for mechanical time fuse
Appearance	Transparent liquid of light yellow without any sediments or suspended matter
Kinematic viscosity, mm ² /s	
40℃	11.44
-54℃	8422
Flash point (open), ℃	215
Freezing point, ℃	<-63
Neutralization value, mgKOH/g	0.93
Corrosion (T ₂ copper sheet, 100℃, 3hrs), level	1b
Evaporation loss (100℃, 22hrs), % (m/m)	1.2

Special Attentions

- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

- ⊙ To be packed with 250ml plastic bottle or as required by customer

Special Oil for
Precision Bearing

4129 Lubricant for Oil Retaining Precision Bearing

SINOPEC 4129 lubricant for oil retaining precision bearing is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-corrosion agent, lubricant and so on. It is grouped into SR-27, SR-28 and SR-29 according to the kinematic viscosity at 100°C, meeting the requirements of U.S. Army's MIL-L-53131.

Advantages

- ⊙ Outstanding lubricity and anti-oxidation property
- ⊙ Low evaporation loss and high flash point
- ⊙ Good over-all property, ensuring a long service life

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 509—2007

Applications

- ⊙ Suitable for lubricating oil-retaining precision bearings with high-precision and long service life, such as gyro motor, momentum wheel of inertial navigation system of aeroplane and aerospace craft or oil-retaining precision bearings used in other fields
- ⊙ Applied temperature range: -45°C ~ 150°C

Typical Properties

Items	4129 lubricant for oil retaining precision bearing		
	SR-27	SR-28	SR-29
Appearance	Transparent and clear liquid of light yellow		
Kinematic viscosity, mm ² /s			
40°C	29.68	59.5	160.6
100°C	5.73	9.48	14.72
Flash point (open), °C	235	270	271
Viscosity index	135	136	140
Freezing point, °C	-60	-57	-53
Evaporation loss (204°C, 6.5hrs), %	4.0	2.6	2.8
Neutralization value, mgKOH/g	0.03	0.18	0.18

Similar Foreign Products

- ⊙ Perform as the same with NYE179, NYE181 and NYE186 of NYE (US)

Special Attentions

- ⊙ Cleaning of bearing and loading of this product shall be undertaken as regulated before use
- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

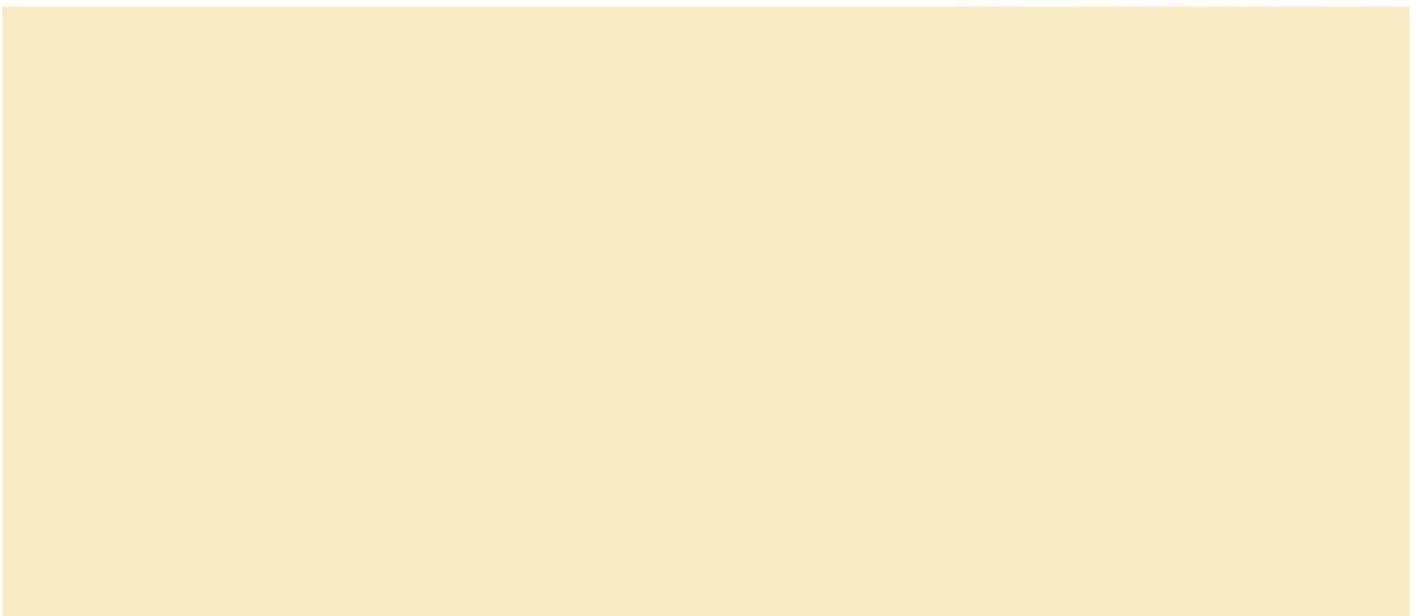
- ⊙ To be packed with 250ml plastic bottle or as required by customer



Synthetic Compressor Oil
Refrigeration Compressor Oil

SYNTHETIC LUBRICANTS

(16-37)



4502 Synthetic Compressor Oil

SINOPEC 4502 synthetic compressor oil is blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-oxidizer, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Good material adaptability, preventing oil from leaking out of system during operating
- ⊙ Excellent heat conductive property, reducing operation temperature of air compressor
- ⊙ Outstanding coking and deposit resistant properties, enhancing safety of air compressor working in high temperature condition
- ⊙ Outstanding high/low temperature property, ensuring normal operation of system in wide temperature range
- ⊙ Good lubricity, protecting compressor from wear
- ⊙ Outstanding over-all property, ensuring a long service life of 4000hrs~8000hrs of compressor system

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD327—2010

Applications

- ⊙ Widely used in iron, cement, chemical, machinery and electronic industries, for the lubrication of small/moderate/large sized single/multi-stage (s) reciprocating or rotary type air compressor wherein No.32~68 for low/moderate pressure rotary compressor as well as small/moderate sized reciprocating compressor and No.100~220 for moderate/high pressure reciprocating compressor and large-sized rotary compressor
- ⊙ Applied temperature range: -40℃ ~ 110℃ for rotary compressor and -35℃ ~ 200℃ for reciprocating compressor, possibly reaching 220℃ for short period of time

Typical Properties

Items	4502 synthetic compressor oil				
	32	46	68	100	150
Kinematic viscosity (40℃), mm ² /s	32.0	46.3	67.5	98.4	149.3
Neutralization value, mgKOH/g	0.16	0.20	0.17	0.19	0.18
Flash point (open), ℃	216	230	242	250	248
Freezing point, ℃	-59	-55	-52	-45	-45
Anti-emulsion property, min	5	4.8	2.1	8	3.5
Corrosion (T ₂ Cu, 100℃, 3hrs), level	1b	1b	1b	1b	1b
Carbon residue, % (m/m)					
Before oxidation	0.05	0.02	0.06	0.05	0.08
After oxidation	0.08	0.06	0.17	0.14	0.28

Technical Certification

- ⊙ It is listed in the Product Manual of Hefei General Machinery Research Institute
- ⊙ Technical recognition for matching material by Nanjing Ingersoll Rand Compressor Ltd and Enric (Bengbu) Compressor Co., Ltd

Similar Foreign Products

- ⊙ As excellent as RARUS 800 series, ANDEROL 400, 500, S series of EXXON-MOBIL; CORENA D, R series of SHELL; Synthetic series of ESSO, COMPAIR special oil, ATLAS special oil, INGERSOLL-RAND special oil, Fusheng special oil

Application Examples

- ⊙ A petrochemical plant located in Tianjin, China, replaced the original special oil with 4502 (46) for its COMPAIR twin screw compressor, extending the oil-change period for more than 2 times longer
- ⊙ A cement plant located in Changchun, China, successfully replaced the original oil INGERSOLL-RAND ULTRA COOLANT with 4502 (46) for its INGERSOLL-RAND twin screw compressor
- ⊙ A petrochemical plant located in Guangdong province, China, replaced the original special oil with 4502 (32) for its INGERSOLL-RAND centrifugal compressor, the result is as good as before
- ⊙ QUINCY twin screw compressor of a textile mill located in Chongqing, China, has operated with lower working temperature since original special oil was replaced by 4502 (46), and the oil-change period was prolonged for 100%

Special Attentions

- ⊙ Do not mix with other lubricant resulting in reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint
- ⊙ It is normal and shall not affect application in case of darkened color after exposed to light or under long term high temperature

Packing

- ⊙ To be packed with 4L, 200L iron barrels or as required by customers

4506 Synthetic Compressor Oil

SINOPEC 4506 synthetic compressor oil is blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-oxidizer, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Good material adaptability, preventing oil from leaking out of system during operating
- ⊙ Excellent heat conductive property, reducing operation temperature of air compressor
- ⊙ Outstanding coking and deposit resistant properties, enhancing safety of air compressor working in high temperature condition
- ⊙ Outstanding high/low temperature property, ensuring normal operation of system in wide temperature range
- ⊙ Good lubricity, protecting compressor from wear
- ⊙ Outstanding over-all property, ensuring a long service life of 6000hrs~8000hrs of compressor system

Applications

- ⊙ Widely used in iron, cement, chemical, machinery and electronic industries, for the lubrication of small/moderate/large sized single/multi-stage(s) reciprocating or rotary type air compressor, especially to centrifugal and screw compressors
- ⊙ Applied temperature range: -50℃ ~ 120℃ for rotary compressor and -40℃ ~ 200℃ for reciprocating compressor, possibly reaching 220℃ for short period of time

Typical Properties

Items	4506 synthetic compressor oil			
	32	46	68	100
Kinematic viscosity, mm ² /s	31.1	46.5	64.7	97.7
Viscosity index	130	127	138	138
Neutralization value, mgKOH/g	0.16	0.20	0.17	0.19
Flash point (open), ℃	252	260	270	272
Freezing point, ℃	<-60	-58	-56	-48
Anti-emulsion property, min	2	4.8	2.1	5
Corrosion (T ₂ Cu, 100℃, 3hrs), level	1b	1b	1b	1b
Carbon residue, % (m/m)	0.02	0.02	0.02	0.02

Technical Certification

- ⊙ Initial loading oil for compressor made in Shanghai CompAir Compressor Co., Ltd

Similar Foreign Products

- ⊙ As excellent as RARUS 1000 series of EXXON-MOBIL; MADRELA AS series of SHELL; HITEC 5000 series of ETHYL, COMPAIR special oil, ATLAS special oil, INGERSOLL-RAND special oil, Fusheng special oil

Application Examples

- ⊙ Imported oil is replaced by the product which is applied on INGERSOLL-RAND three-stage centrifugal compressor imported by an ethene company, extending the oil-change period to 8000hrs, reducing operation cost

Special Attentions

- ⊙ Do not mix with other lubricant resulting in reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material such as rubber, plastic and paint
- ⊙ It is normal and shall not affect application in case of darkened color after exposed to light or under long term high temperature

Packing

- ⊙ To be packed with 4L, 200L iron barrels or as required by customers

4503 Synthetic Air Compressor Oil

SINOPEC 4503 synthetic air compressor oil is blended with semi-synthetic base oil of special structure and quality additive of high efficiency.

Advantages

- ⊙ Outstanding oxidation stability and low tendency of carbon accumulation, with long service life
- ⊙ Small evaporation loss and low oil consumption
- ⊙ Excellent viscosity-temperature and low temperature properties, ensuring easy startup in low temperature condition and good lubrication of compressor in high temperature condition
- ⊙ Good oil-water separation ability and defoaming property, rapidly separating water from oil condensed in air
- ⊙ Good anti-rust and anti-corrosion properties, preventing parts of compressor from corrosion
- ⊙ Good anti-corrosion property, preventing part surface of compressor from abnormal wear

Applications

- ⊙ Suitable for lubrication of low/moderate duty rotary air compressor in conditions of discharge temperature not higher than 130℃ and discharge pressure lower than 1500kPa

Typical Properties

Items	4503 synthetic air compressor oil				
	32	46	68	100	150
Kinematic viscosity (40℃), mm ² /s	30.64	44.09	67.10	95.62	151.2
Viscosity index	121	110	105	93	92
Pour point, ℃	-38	-36	-30	-27	-21
Flash point (open), ℃	232	236	246	254	258
Anti-emulsion property (40-37-3), min	5	5	7	8	10
Liquid phase rust test	Rustless	Rustless	Rustless	Rustless	Rustless
Corrosion (copper sheet, 100℃, 3hrs), level	1b	1b	1b	1b	1b
Four-ball machine test (75℃, 1200rpm) Diameter of wear spot (392N, 60min), mm	0.47	0.45	0.45	0.43	0.43

Application Examples

- ⊙ Oil problems such as short service life and severe coking have been resolved when an aluminum group located in Henan Province, China, replaced the ordinary DAB 150 mineral compressor oil with this product for the domestic centrifugal compressor
- ⊙ A compressor company located in Shanghai, China, finally chose this product after strict tests

Special Attentions

- ⊙ Do not mix with other lubricant, which resulting in the reduction of product performance
- ⊙ Close the cap in time after each use, keeping moisture, dust away

Packing

- ⊙ To be packed with 4L, 16L, 200L iron barrels or as required by customer

4511-1 Ethene Compressor Oil

SINOPEC 4511-1 ethene compressor oil is highly refined oil blended with raw materials such as quality polyglycol ether, etc. According to international classification standard, it belongs to ISO-L-DAC type of oil.

Advantages

- ⊙ Outstanding dilution-proof ability of light hydrocarbon, providing sufficient and effective lubrication for compressor in process of compressing light hydrocarbon gas such as ethene
- ⊙ Good low temperature fluidity, ensuring normal startup and operation of compressor in low temperature condition
- ⊙ Excellent anti-oxidation ability, providing long term stability of oil in contact with high temperature and high pressure gas such as ethene
- ⊙ Excellent adaptability to sealing material, ensuring long term operation of compressor seals
- ⊙ Excellent adaptability to metal, ensuring long term operation of compressor metallic parts
- ⊙ Outstanding over-all property, ensuring normal operation of compressor in all kinds of conditions

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 448—2007

Applications

- ⊙ Specially developed lubricant for inside of cylinder of high/ultra high pressure reciprocating compressor of ethene and compressor of other kinds of hydrocarbon gas

Typical Properties

Items	4511-1 ethene compressor oil
Appearance	Transparent liquid of no color to light yellow
Kinematic viscosity, mm ² /s	
100℃	46.93
40℃	267.8
Viscosity index	236
Flash point (open), ℃	257
Freezing point, ℃	-19
Acid number, mgKOH/g	0.02
Mechanical impurity, % (m/m)	None
Ash content, % (m/m)	0.0008
Corrosion (T ₂ Cu, 100℃, 3hrs), level	1b

Similar Foreign Products

- ⊙ In ethane compressor oil application, the product performs as good as similar foreign compressor oil, such as UCON PE-320, UCON PE-320L, BP CL1400 and ORITES D-270

Application Examples

- ⊙ Passed industrial tests for Pignone 6HE/3-2 ethene compressor

Special Attentions

- ⊙ Keep it at clean, dry places with good ventilation, don't store in the open air
- ⊙ The product has certain hygroscopic property requiring intactness of external and internal packages
- ⊙ Dissolution may occur in contact with paint or part made of plastic such as synthetic glass. Try to avoid such contact in application
- ⊙ Be careful when mixing with other compressor oil, consult our technicians for any question

Packing

- ⊙ To be packed with 200L iron barrel or as required by customer

4511 Synthetic Compressor Oil

SINOPEC 4511 synthetic compressor oil is highly refined from synthetic base oil, which belongs to ISO-L-DAC according to international classification standard.

Advantages

- ⊙ Good viscosity-temperature property
- ⊙ Good heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ With excellent properties of high flash point, low freezing point, low ash content, and no corrosion to metal
- ⊙ Excellent lubricity, reducing wear of equipment
- ⊙ Easy startup in low temperature condition, and with properties of reducible power consumption, no accumulation of carbon in condition of normal temperature operation

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD329—2010

Applications

- ⊙ Suitable for lubrication and sealing of ultra high pressure reciprocating compressor cylinder of high pressure polyethylene unit, as well as lubrication of compressor cylinder of other hydrocarbon type gases

Typical Properties

Items	4511 synthetic compressor oil
Appearance	Transparent liquid of light yellow
Kinematic viscosity, mm ² /s	
100℃	41.67
40℃	223.2
Viscosity index	242
Neutralization value, mgKOH/g	0.11
Flash point (open), ℃	242
Freezing point, ℃	-43
Water content, % (m/m)	0.06
Ash content, % (m/m)	0.03

Similar Foreign Products

- ⊙ Equivalent to German B11/150 in the application of high/ultra high pressure ethane compressor

Special Attentions

- ⊙ It is better to clean the lubricating system in prior to usage of this product
- ⊙ Not good to mix with other kinds of oil
- ⊙ Close the cap tightly after each use to keep dust and debris away

Packing

- ⊙ To be packed with 200L iron barrel or by customer

4512 Synthetic Compressor Oil

SINOPEC 4512 synthetic compressor oil is blended with synthetic base oil and plural highly refined additives such as anti-wearing agent, rust inhibiting agent and so on. According to international classification standard, it belongs to ISO-L-DAC type of oil.

Advantages

- ⊙ With good chemical stability, not likely to be diluted by CO₂ and hydrocarbon gas, keeping good lubricity in operation
- ⊙ Good lubricity, effectively facilitating long term stable operation of compressor
- ⊙ Good anti-wear property, reducing wear of equipment
- ⊙ With excellent properties of high flash point, low pour point and anti-rust

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD330—2010

Applications

- ⊙ Suitable for lubrication and sealing of cylinder of multi-stage high pressure CO₂ compressor in industries such as fertilizer, chemistry, food and beverage production, gas production and so on. Capable of significantly prolonging oil drainage, reducing wear of equipment and protecting it from corrosion Suitable for multi-stage reciprocating high pressure compressor with 20MPa of pressure and 150℃ of vent temperature

Typical Properties

Items	4512 synthetic compressor oil
Appearance	Transparent liquid of light yellow
Kinematic viscosity (40 ℃), mm ² /s	223.5
Viscosity index	212
Flash point (open), ℃	255
Freezing point, ℃	-38
Neutralization value, mgKOH/g	0.10
Water content, % (m/m)	0.05

Application Examples

- ⊙ A compressor manufacturing company located in Wuhan, China, finally chose this product after strict test and it performed well

Special Attentions

- ⊙ It is better to clean the lubricating system in prior to usage of this product
- ⊙ Not good to mix with other kinds of oil
- ⊙ Close the cap tightly after each use to keep moisture and debris away, ensuring quality of the product
- ⊙ Store under clean, dry condition, away from light

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or by customer

4513-1 Synthetic Compressor Oil

SINOPEC 4513-1 synthetic compressor oil is blended with highly refined synthetic base oil and plural quality additives. It is especially suitable for screw type compression and refrigeration system of hydrocarbon gas.

Advantages

- ⊙ Good lubricity and viscosity-temperature property, effectively facilitating long term stable operation of compressor
- ⊙ Excellent heat stability and defoaming ability, preventing oil from damage in high temperature condition
- ⊙ Having peculiar solubility and separation property for alkane
- ⊙ Good adaptability to metallic and non-metallic materials, having functions of increasing volume efficiency, reducing energy consumption and prolonging service life of machine
- ⊙ With excellent properties of high flash point, low freezing point, low ash content, and low carbon residue

Applications

- ⊙ Suitable for lubrication of various kinds of large-sized screw compressors taking light hydrocarbon as media and used in oil/gas field, petrochemical and natural gas processing
- ⊙ Applied temperature range: -35℃ ~ 150℃

Typical Properties

Items	4513-1 synthetic compressor oil	
	100	150
Appearance	Transparent liquid of red brown	
Kinematic viscosity (40℃), mm ² /s	Provided as per requirement	
Viscosity index	100	155
Flash point (open), ℃	192	203
Freezing point, ℃	260	244
Neutralization value, mgKOH/g	-50	-50
Water content, % (m/m)	0.01	0.01

Special Attentions

- ⊙ It is better to clean the lubricating system in prior to usage of this product
- ⊙ Not good to mix with other kinds of oil
- ⊙ Change oil if any debris or sediments are found during operation

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

4513 Synthetic Compressor Oil

SINOPEC 4513 synthetic compressor oil is such that blended with synthetic oil and such additive as anti-oxidizer, etc. It belongs to ISO-L-DAC series according to international classification standard, while being grouped into No.68, No.100, No.150 and No.220 based on kinematic viscosity at 40℃, and is especially suitable for screw type compression system of hydrocarbon gas.

Advantages

- ⊙ Excellent chemical stability and heat oxidation stability, preventing oil from damage
- ⊙ Not likely to form carbon residue and gummy matter
- ⊙ Good anti-corrosion property, ensuring normal operation of equipment
- ⊙ Excellent lubricity, reducing wear of equipment
- ⊙ With water solubility, and low solubility of hydrocarbon gas, preventing from being diluted in operation, keep appropriate operation viscosity, prolonging service life of oil and equipment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD120—2008

Applications

- ⊙ Suitable for lubrication of compressor, especially screw compressor, engaged in pressurizing transportation, bottling, separating and recovering of such hydrocarbon gases as natural gas, gas, liquefied propane, chlorine-fluorine derivatives, ethene, bivinyll and vinyl chloride in refinery, oil/gas field, coking plant and mine

Typical Properties

Items	4513 synthetic compressor oil				
	68	100	150	220	
Kinematic viscosity, mm ² /s	100℃	68.45	19.80	28.87	39.4
	40℃	14.03	101.0	151.2	221.5
Viscosity index	214	220	227	231	
Flash point, ℃	261	264	269	271	
Density (20℃), g/cm ³	1.0125	1.0312	1.0402	1.0424	
Freezing point, ℃	-49	-46	-42	-40	
Corrosion (T ₂ Cu, 100℃, 3hrs)	1b	1b	1b	1b	

Similar Foreign Products

- ⊙ For applications as screw type compression system of hydrocarbon gas, this product performs as good as SUMMIT PGS-100, SHELL MO-DRELA GS, AGIP DICREA S150, CPI CP-1508-100 and CP-1507-100, etc

Application Examples

- ⊙ An ethene plant successfully replaced dedicated oil with this product for its imported large-sized YORK compressor, reducing cost on oil consumption a lot in the meantime.
- ⊙ An ethene plant has applied this product on YORK propane compressor for many years, and the result is satisfactory
- ⊙ A refinery applied this product for imported screw type compressor which taking the low-pressured gas of torch recovery system as media. The oil, with a long service life, met requirements on lubrication of this compressor
- ⊙ Enric compressor of a gas station operated very well when compressing natural gas with the help of this product

Special Attentions

- ⊙ Do not mix with other kind of oil, and do clean the lubricating system before use to avoid contamination
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/220L iron barrel or as required by customer

4521-1 Refrigeration Compressor Oil

SINOPEC 4521-1 refrigeration compressor oil is the lubricant dedicated to ammonia refrigeration system and blended with special structured semi-synthetic base oil and high efficiency additive without acid.

Advantages

- ⊙ Excellent low temperature fluidity, ensuring little oil entered system returning back to compressor
- ⊙ Relatively high viscosity index, ensuring good lubricity and sealing of equipment in wide temperature range
- ⊙ Relatively low acid number, not likely to react with refrigerant to produce harmful matter such as deposit
- ⊙ Good rust-proof and anti-corrosion properties, preventing parts of compressor from corrosion

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 175—2007

Applications

- ⊙ Suitable for lubrication of rotary screw, reciprocating and rotary vane compressors in ammonia refrigeration system in food and chemical engineering industries
- ⊙ Applied temperature range: -35℃ ~ 100℃, and 130℃ for short period of time

Typical Properties

Items	4521-1 refrigeration compressor oil		
	32	46	68
Kinematic viscosity (40℃), mm ² /s	30.29	45.56	63.54
Viscosity index	120	118	115
Flash point (open), ℃	232	236	246
Pour point, ℃	-40	-40	-42
Acid number, mgKOH/g	0.01	0.01	0.01
Corrosion (45#steel, 100℃, 3hrs)	Qualified	Qualified	Qualified

Similar Foreign Products

- ⊙ As good as CP1009 of CPI company

Application Examples

- ⊙ Tests carried out on LG20IIIA screw compressor in a refrigeration plant showed that the product can save more than 5% energy when compared with common mineral oil

Special Attentions

- ⊙ Do not mix with other lubricant, which resulting in the reduction of product performance
- ⊙ Close the cap in time after each use, keeping moisture, dust away

Packing

- ⊙ To be packed with 4L, 16L, 200L iron barrel or as required by customer

4521 Synthetic Refrigeration Compressor Oil

SINOPEC 4521 synthetic refrigeration compressor oil is refrigeration system used lubricant blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-oxidizer, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Good material adaptability, preventing oil from leaking out of system during operating
- ⊙ Excellent low temperature property, extremely low pour point, low flocculation point of Freon, no wax formed but perfect fluidity under low temperature, ensuring application of system under various low temperature conditions
- ⊙ Outstanding high/low temperature property, ensuring normal operation of system in wide temperature range
- ⊙ Good lubricity, protecting refrigeration compressor from wear
- ⊙ Outstanding over-all property, ensuring long term normal operation of refrigeration system

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 175—2007

Applications

- ⊙ Widely used to lubrication of rotary screw, reciprocating and rotary vane compressors in ammonia refrigeration system in food and chemical engineering industries, and also to lubrication of compressor using refrigerant R21 in cases of refrigerator, freezer, air conditioner, central air conditioner, refrigeration van, water chiller and refrigeratory
- ⊙ Applied temperature range: -60℃ ~ 150℃, and 170℃ for short period of time

Typical Properties

Items	4521 synthetic refrigeration compressor oil			
	32	46	68	100
Kinematic viscosity (40℃), mm ² /s	31.8	46.2	67.8	98.5
Neutralization value, mgKOH/g	0.02	0.02	0.03	0.02
Flash point (open), ℃	240	252	258	260
Pour point, ℃	<-60	-56	-53	-50
Water content, ppm	28	28	29	30
Corrosion (T ₂ Cu, 100℃, 3hrs), level	1b	1b	1b	1b
Insulation strength, kV	35	35	35	35

Similar Foreign Products

- ⊙ The same as Mobil Gargoyle Arctic Oil SHC 200 series and any other kind of similar refrigeration compressor oil used in ammonia refrigeration system

Special Attentions

- ⊙ Do not mix with other lubricant resulting in reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint

Packing

- ⊙ To be packed with 4L, 200L iron barrels or as required by customers

4522 Synthetic Refrigeration Compressor Oil

SINOPEC 4522 synthetic refrigeration compressor oil is blended with highly refined synthetic base oil and plural quality additives. It is especially suitable for screw type compression and refrigeration system of hydrocarbon gas.

Advantages

- ⊙ With excellent properties of high flash point, low freezing point and less foam
- ⊙ Good heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Good anti-corrosion property, ensuring normal operation of equipment
- ⊙ Excellent lubricity, reducing wear of equipment
- ⊙ Low ash content and carbon residue, not likely to form carbon residue and gummy matter
- ⊙ Having peculiar solubility and separation property for alkane, meeting application requirement of refrigeration system

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 176—2004

Applications

- ⊙ Suitable for lubrication of large-sized screw compressor taking light hydrocarbon, e.g., propane, as media and used in oil/gas field, petrochemical and natural gas processing
- ⊙ Applied temperature range: -35℃ ~ 150℃

Typical Properties

Items	4522 synthetic refrigeration compressor oil
Appearance	Transparent liquid of red brown
Kinematic viscosity (40℃), mm ² /s	155.0
Viscosity index	195
Flash point (open), ℃	235
Freezing point, ℃	-44
Neutralization value, mgKOH/g	0.10

Similar Foreign Products

- ⊙ For applications as screw type compression system of hydrocarbon gas, this product performs as good as SYNTHLIC ESL-22H, START-EC 2210, etc

Application Examples

- ⊙ This product is applied to lubrication of multiple two-stage screw type compressor of refrigeration system of light hydrocarbon recovery plants in an oil field with capacity of 100,000m³ and 300,000m³, model: C-610 (made in Japan), which takes propane gas as refrigerant, with design temperature of propane evaporator of -20℃ ~ -37℃, pressure of 0.08MPa ~ 0.10MPa

Special Attentions

- ⊙ Do not mix with other kind of oil, and do clean the lubricating system before use to avoid contamination
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

4523 Synthetic Refrigeration Compressor Oil

SINOPEC 4523 synthetic refrigeration compressor oil is refrigeration system used lubricant blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-oxidizer, anti-corrosion agent and so on. Belonging to DRB grade as per ISO 6743/3B classification standard, its index reaches and even exceeds KC refrigeration compressor oil level of DIN 51503-88 specification.

Advantages

- ⊙ Outstanding heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Good material adaptability, preventing oil from leaking out of system during operating
- ⊙ Excellent low temperature property, extremely low pour point, low flocculation point of Freon, no wax formed but perfect fluidity under low temperature, ensuring application of system under various low temperature conditions
- ⊙ Outstanding high/low temperature property, ensuring normal operation of system in wide temperature range
- ⊙ Good lubricity, protecting refrigeration compressor from wear
- ⊙ Outstanding over-all property, ensuring long term normal operation of refrigeration system

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 177—2004

Applications

- ⊙ Widely used in refrigeration system of multiple refrigerants (e.g. R11, R12, R23 and ammonia, etc) major application compressors are of reciprocating and rotary vane types including refrigerator, freezer, air conditioner, automobile air conditioner, central air conditioner, refrigeration van, water chiller, and various refrigeration compressors such as enclosed, semi-enclosed or open types for refrigeratory
- ⊙ Applied temperature range: -50℃ ~ 150℃, possibly reaching 170℃ for short period of time

Typical Properties

Items	4523 synthetic refrigeration compressor oil				
	32	46	56	68	100
Kinematic viscosity (40℃), mm ² /s	31.8	46.2	56.1	67.8	98.5
Neutralization value, mgKOH/g	0.02	0.02	0.03	0.03	0.02
Flash point (open), ℃	210	213	220	230	234
Pour point, ℃	-55	-55	-52	-50	-45
Water content, ppm	28	28	29	29	30
Corrosion (T ₂ Cu, 100℃, 3hrs), level	1b	1b	1b	1b	1b
Insulation strength	35	35	35	35	35

Similar Foreign Products

Manufacturer	Trademark	Manufacturer	Trademark
Agip	TER	Shell	Clavus Oil
BP	Energol LPT	Sun	Suniso
Caltex	Capella oil WF	Total	Lunatic
Castrol	Icematic	Union	Tuvaco
ELF	Friga	Idemitsu Kosan	ゲフニーハメチシクオイル
Esso	Zerice	Showa-shell	昭石R M
Mobil	Gargoyle Arctic Oil	Joint Oil	共石フレール
PetroFINA	Purfrigor	Daikyo Oil	パイオルフロイル

Special Attentions

- ⊙ Do not mix with other lubricant resulting in reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint

Packing

- ⊙ To be packed with 4L, 200L iron barrels or by customers

4524 Synthetic Refrigeration Compressor Oil

SINOPEC 4524 synthetic refrigeration compressor oil is refrigeration system used lubricant blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-oxidizer, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Good material adaptability, preventing oil from leaking out of system during operating
- ⊙ Excellent intersolubility of refrigerants, ensuring good heat efficiency of refrigeration system
- ⊙ Outstanding high/low temperature property, ensuring normal operation of system in wide temperature range
- ⊙ Good lubricity, protecting refrigeration compressor from wear
- ⊙ Excellent biological degradability, reducing environment pollution
- ⊙ Outstanding over-all property, ensuring long term normal operation of refrigeration system

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD328—2010

Applications

- ⊙ Suitable for lubrication of refrigeration system taking R134a, R407c and R410 as refrigerants in various industries, civil refrigeration and refrigeration system of automotive air conditioner
- ⊙ Applied temperature range: -40℃ ~ 150℃, and 170℃ for short period of time

Typical Properties

Items	4524 synthetic refrigeration compressor oil				
	15	32	46	68	100
Kinematic viscosity (40℃), mm ² /s	15.1	32.3	45.8	67.5	98.7
Neutralization value, mgKOH/g	0.05	0.05	0.05	0.05	0.05
Flash point (open), ℃	210	230	240	250	265
Pour point, ℃	-48	-52	-45	-37	-31
Water content, ppm	65	65	65	65	65
Corrosion (T ₂ Cu, 100℃, 3hrs), level	1b	1b	1b	1b	1b
Critical solution temperature with R134a, ℃	-46	-33	-25	-23	-12

Similar Foreign Products

- ⊙ Equivalent to synthetic refrigeration compressor oil such as Emkarate RL of ICI, Icematic SW of CASTROL, Aratic EAL series of EXXON-MOBIL

Application Examples

- ⊙ A company located in Henan, China, has imported a Japanese refrigeration unit using refrigerant R134a, 4524 (68) is used to replace the imported one since 2004
- ⊙ A company located in Daqing, China, has applied 4524 (46) oil instead of original YORK oil for YORK-K industrial refrigeration unit using refrigerant R134a since the beginning of 2006, the result is quite good
- ⊙ A company located in Chongqing, China, has replaced Icematic SW100 synthetic refrigeration compressor oil of CASTROL with our product 4524 (100) since 2003

Special Attentions

- ⊙ Do not mix with other lubricant resulting in reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint
- ⊙ It is normal and shall not affect application in case of darkened color after exposed to light or under long term high temperature

Packing

- ⊙ To be packed with 4L, 200L iron barrels or as required by customers

4529 Compressor Oil for Air Conditioner

SINOPEC 4529 compressor oil for air conditioner is blended with synthetic base oil and additive of high efficiency by plural process steps.

Advantages

- ⊙ Good chemical stability and heat stability, preventing oil from deteriorating under high temperature or in chemical media
- ⊙ Excellent anti-wear property, reducing wear of refrigeration compressor
- ⊙ Low hygroscopicity, preventing capillary from blocking
- ⊙ High electrical insulation property, ensuring application safety
- ⊙ Perfect intersolubility with refrigerant R134a, no hydrolization and corrosion, ensuring normal operation of compressor

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 449—2007

Applications

- ⊙ Suitable for refrigeration compressors taking R134a as refrigerant of reciprocating, inclined disc, rotary vane and scroll types for mobile and automotive air conditioners, as well as for same type of domestic air conditioner, refrigeration compressors of refrigerator and screw and centrifugal type industrial refrigeration machines taking R134a as refrigerant. Products with different viscosity can be provided as required by customer, meeting requirement of different freezer

Typical Properties

Items	4529 compressor oil for air conditioner			
	46	68	100	120
Kinematic viscosity, mm ² /s				
100℃	10.71	14.5	20.83	24.0
40℃	49.50	67.90	102.9	121.5
Viscosity index	219	225	229	233
Neutralization value, mgKOH/g	0.05	0.05	0.05	0.05
Flash point, ℃	237	239	249	253
Pour point, ℃	-43	-43	-45	-42
T ₂ Cu (3hrs × 100℃)	1a	1a	1a	1a
Water content, ppm	45	45	45	65

Technical Certification

- ⊙ Obtaining material test certificate by technical center of FAW

Application Examples

- ⊙ An automobile air-condition compressor company gains compliment from customer by using this product

Special Attentions

- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ With no bad effect on common sealing material and gasket, not dissolving in alkyd resin paint but in epoxy resin paint

Packing

- ⊙ To be packed with 3.5kg/200L iron barrel or as required by customer



Synthetic Gear Oil

SYNTHETIC LUBRICANTS

(38–49)



4403 Synthetic Gear Oil

SINOPEC 4403 synthetic gear oil is blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-oxidizer, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding viscosity-temperature property
- ⊙ Good extreme pressure and anti-wear properties, reducing wear of gearbox
- ⊙ With advantages such as high flash point, low freezing point and long service life, etc
- ⊙ Good anti-oxidation and anti-corrosion properties, ensuring normal operation of equipment
- ⊙ Neither coke nor deposit after durative application in high temperature condition

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0467—94

Applications

- ⊙ Suitable for lubricating close-type gear and worm gear, especially for long-term lubrication of friction spoke made of different material, such as steel and copper
- ⊙ Applied temperature range: -35℃ ~ 150℃

Typical Properties

Items	4403 synthetic gear oil
Appearance	Transparent liquid of red brown
Kinematic viscosity (40℃), mm ² /s	171.5
Viscosity index	201
Flash point (open), ℃	239
Pour point, ℃	-39
Corrosion (T ₂ copper sheet, 100℃, 3hrs), level	1a

Special Attentions

- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Use seals made of NBR within 100℃ and those of FKM or silicon rubber when temperature lasts high
- ⊙ Use EP resin or MPFR coating if industrial paint is not acceptable
- ⊙ Use oil level of glass or PA material

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or by customer

4404 Synthetic Gear Oil for Heavy Duty Vehicles

SINOPEC 4404 synthetic gear oil for heavy duty vehicles is blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-oxidizer and anti-corrosion, etc. it is grouped into 80W/90 and 80W/140 as per viscosity level.

Advantages

- ⊙ Good extreme pressure and anti-wear properties, reducing wear of gearbox
- ⊙ Outstanding high/low temperature property, ensuring normal operation of gearbox in wide temperature range
- ⊙ Good rust-proof, ensuring normal operation of gearbox
- ⊙ Good heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Good lubricity and long service life

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 170—2004

Applications

- ⊙ Suitable for the lubrication of hyperbolic gear and other heavy-loaded gear of all vehicles

Typical Properties

Items	4404 synthetic gear oil for heavy duty vehicles	
	80W/90	80W/140
Appearance	Transparent liquid of yellow to red brown	
Kinematic viscosity (100℃), mm ² /s	15.7	32.3
Viscosity index	210	215
Flash point (open), ℃	235	245
Pour point, ℃	-38	-37
Temperature when apparent viscosity reaching 150Pa·s, ℃	-30	-26
Corrosion (T ₂ copper sheet, 121℃, 3hrs), level	2b	2b

Special Attentions

- ⊙ Clean the lubricating system when first use
- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

Synthetic Gear Oil

4405 Synthetic Medium Duty Industrial Gear Oil

SINOPEC 4405 synthetic medium duty industrial gear oil is blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-wearing agent and so on.

Advantages

- ⊙ Outstanding viscosity-temperature property
- ⊙ Outstanding low temperature fluidity, ensuring normal operation of equipment in low temperature condition
- ⊙ Outstanding heat resistance stability, preventing oil from damage in high temperature condition
- ⊙ Good extreme pressure and anti-wear properties, reducing wear of equipment
- ⊙ Neither coke nor deposit after durative application in high temperature condition

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD235—2008

Applications

- ⊙ Suitable for lubrication of various medium/low speed medium duty close type industrial gears, worm gears, sliding/rolling bearings increasing efficiency, reducing power consumption, lowering wear, prolonging service life and oil drainage compared to mineral type gear oil, reducing repair costs and energy consumption
- ⊙ Applied temperature range: -30℃~150℃ for No.46~No.460; -25℃~150℃ for No.680

Typical Properties

Items	4405 synthetic medium duty industrial gear oil					
	46	68	150	220	460	680
Appearance	Transparent liquid of yellow to red brown					
Kinematic viscosity (40℃), mm ² /s	46.2	68.7	152.6	221.3	467.2	686.5
Viscosity index	174	175	190	204	220	235
Flash point (open), ℃	240	242	248	252	264	269
Pour point, ℃ ≤	-48	-48	-47	-42	-39	-39
Corrosion (100℃, 3hrs), level	1b					

Technical Certification

- ⊙ Technical recognition of Tianjin LG-DAGU Chemical Industry Co., Ltd

Similar Foreign Products

- ⊙ Performs as good as SG-XT, Pont.s, Tivela, Total Carter EP, GR-XP, Kluber syntheso HT series

Application Examples

- ⊙ It is proved reliable by more than 10 years experience in metallurgy, building material, petroleum, petrochemistry, chemical engineering and machining, drastically reducing oil consumption for customers
- ⊙ It has been used to lubricating worm gear of gearbox of an elevator in a large mall located in Chongqing, China, for 2 years when the elevator worked stable and normal
- ⊙ A chemical company located in Tianjin, China, applied this product instead of several other imported oil for reduction box of German Roots blower with speed of 3000rpm and working temperature of 110℃ ~ 120℃. And it is recognized by foreign experts for its outstanding stability and lubricity after 6months continuous monitor, resolving problems like fast deterioration of oil quality and poor lubricity

Special Attentions

- ⊙ Clean the lubricating system when first use. Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Use seals made of NBR with in 100℃ and those of FKM or silicon rubber when temperature lasts high
- ⊙ Use EP resin or MPFR coating if industrial paint is not acceptable. Use oil level of glass or PA material

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

4406 Synthetic Heavy Duty Industrial Gear Oil

SINOPEC 4406 synthetic heavy duty industrial gear oil is blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-wearing agent and so on.

Advantages

- ⊙ Outstanding viscosity-temperature property
- ⊙ Outstanding low temperature fluidity, ensuring normal startup and operation of gearbox in low temperature condition
- ⊙ Outstanding heat resistance stability, preventing oil from damage in high temperature condition
- ⊙ Good extreme pressure and anti-wear properties, reducing wear of gearbox
- ⊙ Neither coke nor deposit after durative application in high temperature condition

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 172—2004

Applications

- ⊙ Suitable for lubrication of various medium/low speed heavy duty close type industrial gears, sliding/rolling bearings increasing efficiency, reducing power consumption, lowering wear, prolonging service life and oil drainage compared to mineral type gear oil, reducing repair costs and energy consumption
- ⊙ Applied temperature range: -30℃~150℃ for #100~#460; -25℃~150℃ for #680~#1000

Typical Properties

Items	4406 synthetic heavy duty industrial gear oil				
	100	220	320	680	1000
Appearance	Transparent liquid of yellow to red brown				
Kinematic viscosity (40℃), mm ² /s	101.5	225.3	330.5	696.5	1058.6
Viscosity index	188	210	215	238	250
Flash point (open), ℃	245	251	255	265	277
Pour point, ℃ ≤	-45	-42	-40	-39	-32
Corrosion (100℃, 3hrs), level	2b				

Similar Foreign Products

- ⊙ Performs as good as SG-XT, Pont.s, Tivela, Total Carter EP, GR-XP, Kluber syntheso DEP series

Application Examples

- ⊙ A cement group which owns a dry-method cement production line with capacity of 5000T per day has applied this product since the first operation day to thoroughly resolve starting problem of large reduction box in winter, enabling the box starts with small resistance and less wear in winter by its good adhesiveness to gear face
- ⊙ A power plant in Xinjiang and a power company in Inner Mongolia apply this product for gearbox of coal mill instead of Mobil Glygoyle series successfully
- ⊙ This product has also been used in reduction box of imported filling equipment of a beer company for ten years with excellent performance
- ⊙ Successfully applied on several imported or domestic large sized heavy duty reduction boxes and gear-type couplings

Special Attentions

- ⊙ Clean the lubricating system when first use. Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Use seals made of NBR within 100℃ and those of FKM or silicon rubber when temperature lasts high
- ⊙ Use EP resin or MPFR coating if industrial paint is not acceptable. Use oil level of glass or PA material

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

4407 Synthetic Heavy Duty Industrial Gear Oil

SINOPEC 4407 synthetic heavy duty industrial gear oil is blended with special semi-synthetic base oil and plural multi-functional quality additives.

Advantages

- ⊙ Better viscosity-temperature and low temperature properties, meeting application requirements of wider temperature range, having better fluidity and pumping property in low temperature condition
- ⊙ Good heat stability, strong anti-oxidation, reducing formation of various harmful oxides, prolonging service life of oil
- ⊙ Better oil-water separation ability, meeting application requirements of severer operating mode, reducing oil consumption
- ⊙ Better anti-corrosion, rust-proof and defoaming properties, effectively inhibiting occurrence of corrosion and wear on parts, providing better protection for equipment
- ⊙ Perfect bearing ability, ensuring smooth operation of heavy duty gears, reducing scratch of gear surface, effectively reducing operation noise

Applications

- ⊙ Suitable for gears of various severe operating modes, especially for heavy duty industrial gears requiring higher low temperature fluidity and water separation property in such industries as mining, metallurgy, cement and so on
- ⊙ Applied temperature range: -20℃ ~ 120℃, and 130℃ for short period of time

Typical Properties

Items	4407 synthetic heavy duty industrial gear oil			
	150	220	460	680
Kinematic viscosity (40℃), mm ² /s	147.6	214.5	468.4	675.6
Viscosity index	110	108	119	143
Pour point, ℃	-28	-24	-17	-18
Four-ball machine test				
Sintering load, N	3087	3087	3920	3920
NComprehensive wear index, N	569	563	596	606
Diameter of wear spot, mm	0.31	0.29	0.30	0.33

Similar Foreign Products

- ⊙ Can be replaced with Mobil 600, Shell Omala series in gear driving applications

Application Examples

- ⊙ A steel group in Jiangsu province, China, replaced this product with original Shell Omala and Mobil Gear 600 series successfully for metallurgical equipment
- ⊙ An aluminum group in Henan province, China, applied this product instead of Mobil Gear 600
- ⊙ A textile group has applied the product to lubricate reduction box of gripper loom for years, and it works well

Special Attentions

- ⊙ Do not mix with other oils
- ⊙ Keep moisture and debris away during transportation and storage

Packing

- ⊙ To be packed with 4L, 200L iron barrels or as required by customer

4413 Express Pump Gear Oil

SINOPEC 4413 express pump gear oil is blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-oxidizer, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding viscosity-temperature property
- ⊙ Outstanding high/low temperature property, adaptable to various severe working conditions
- ⊙ Outstanding high temperature oxidation resistance and anti-shear stability, ensuring oil drainage longer than 8000hrs
- ⊙ Outstanding lubricity, protecting equipment by reducing wear, prolonging service life of equipment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD232—2008

Applications

- ⊙ Suitable for lubrication of gear system and bearing of express centrifugal pump (e.g. Sundyne pump) in various rotation speeds
- ⊙ Applied temperature range: -45℃ ~ 150℃

Typical Properties

Items	4413 express pump gear oil
Kinematic viscosity, mm ² /s	
100℃	6.714
40℃	37.66
Viscosity index	136
Flash point (open), ℃	236
Freezing point, ℃	<-60
Neutralization value, mgKOH/g	0.42
Shear stability (ultrasonic shearing method) 40℃ kinematic viscosity variation, %	0.5

Technical Certification

- ⊙ OEM certificate of Beijing aerospace propulsion institute

Synthetic Gear Oil

Similar Foreign Products

- ⊙ Performs as good as American Apollo Oil specially for express pump, ATF-220 of SHELL and MOBIL

Application Examples

- ⊙ It has been used in SUNDYNE express pumps of large petrochemical enterprises such as SINOPEC (Tianjin), CNPC (Liaoyang), CNPC (Lanzhou) and CNPC (Urumqi) and gains customer compliment

Special Attentions

- ⊙ Clean the lubricating system when first use, and do not mix with other lubricant
- ⊙ Close the cap tightly after each use to keep moisture and debris away
- ⊙ Store under clean, dry condition, away from light

Packing

- ⊙ To be packed with 4L plastic drum or as required by customers

4634 Tank Transmission Fluid

SINOPEC 4634 tank transmission fluid is blended with synthetic base oil and refined additives such as anti-oxidizer, anti-wearing agent and friction modifier and so on.

Advantages

- ⊙ Good low temperature fluidity, ensuring easy start of equipment under low temperature
- ⊙ Outstanding viscosity-temperature property, meeting requirements on equipment in high/low temperature
- ⊙ Good extreme pressure and anti-wear properties, reducing wear of equipment
- ⊙ Excellent shear stability, prolonging service life of oil

Performance Specification

The product meets the following specifications:

- ⊙ GJB 4368—2002

Applications

- ⊙ Suitable for lubricating mechanical and hydramatic transmission systems of heavy duty, high-power tanks, as well as for lubricating, cooling and hydraulic transmission of other similar machinery
- ⊙ Applied temperature range: -40℃ ~ 170℃

Typical Properties

Items	4634 tank transmission fluid
Appearance	Transparent liquid of yellow brown
Kinematic viscosity (100℃), mm ² /s	8.7
Viscosity index	206
Low temperature viscosity (-40℃), mPa·s	12000
Flash point (open), ℃	251
Pour point, ℃	-51

Special Attentions

- ⊙ Do not mix with other kind of oil, and do clean the lubricating system before use to avoid contamination
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

SH 5000 Series Heavy Duty Industrial Gear Oil

SINOPEC SH 5000 series heavy duty industrial gear oil is blended with special synthetic oil and plural multi-functional quality additives.

Advantages

- ⊙ Good heat oxidation stability, prolonging service life much more than common mineral oil
- ⊙ Excellent hydrolytic stability and anti-emulsion property, separating moisture inside gearbox effectively so as to protect the equipment better
- ⊙ Excellent viscosity-temperature property, especially suitable for lubricating gears working in wide temperature range
- ⊙ Low friction coefficient, reducing energy consumption of gear face during operation and heat due to friction resulting in high temperature of oil, ensuring normal lubrication of gear
- ⊙ Excellent lubricity, enabling lubrication of gearbox under various conditions, prolonging service life

Applications

- ⊙ Suitable for all close type gear transmission devices, especially those gears working under severe conditions such as low speed, heavy duty and shock load
- ⊙ Applied temperature range: -40℃ ~ 120℃, and 150℃ for short period of time

Typical Properties

Items	SH 5000 series heavy duty industrial gear oil			
	SH 5150	SH 5220	SH 5320	SH 5460
Kinematic viscosity (40℃), mm ² /s	143.4	231.9	326.6	464.6
Viscosity index	148	153	159	162
Pour point, ℃	-48	-47	-43	-35
Flash point (open), ℃	246	246	253	255
Liquid phase rust test	Rustless	Rustless	Rustless	Rustless
Copper corrosion, level	1b	1b	1b	1b
Four-ball machine test				
Sintering load, N	3087	3087	3087	3920
Comprehensive wear index, N	640.2	642.5	645.5	687.8
Diameter of wear spot, mm	0.30	0.30	0.31	0.29

Similar Foreign Products

- ⊙ As good as Mobil SHC 600, Mobilgear SHC, Shell Omala HD, BP Enersyn HTX in gear transmission

Application Examples

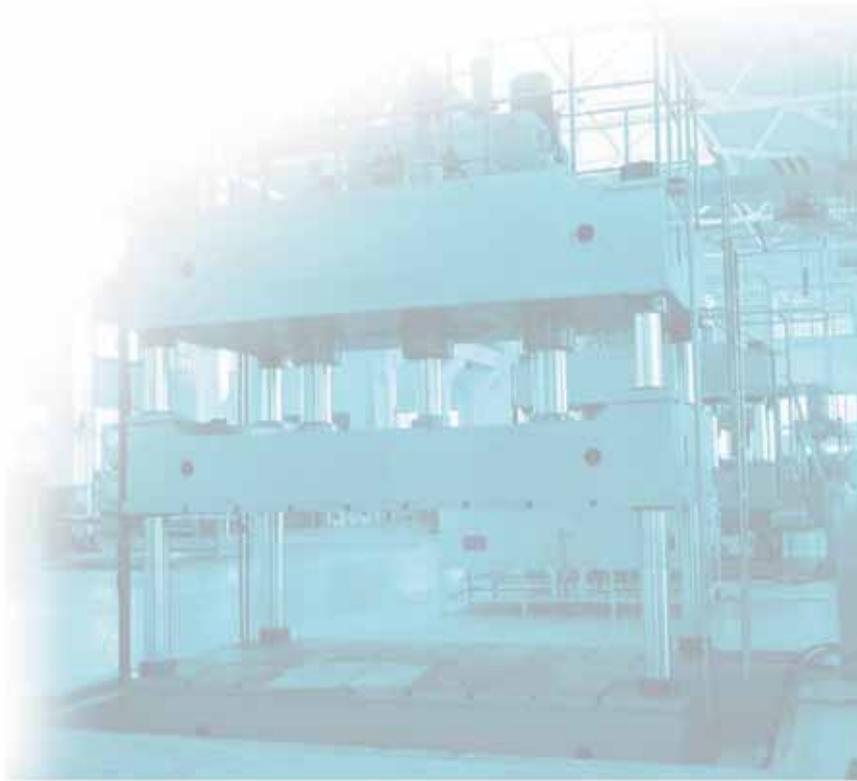
- ⊙ A cement group applied this product for all dry-method cement production lines with capacity of 5000T per day, and the result is quite satisfactory
- ⊙ An aluminum group replaced this product with Mobil SHC600 series synthetic hydrocarbon gear oil successfully for key large retardation equipment
- ⊙ A Waterway Bureau applied this product on large dredging boats instead of Shell Omala HD synthetic hydrocarbon gear oil successfully

Special Attentions

- ⊙ Do not mix with other oils.
- ⊙ Keep moisture and debris away during transportation and storage

Packing

- ⊙ To be packed with 4L plastic drum, 200L iron barrels or as required by customer



Synthetic Hydraulic Oil

SYNTHETIC LUBRICANTS

(50-57)



4607 Synthetic Hydraulic Oil

SINOPEC 4607 synthetic hydraulic oil is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-corrosion agent, anti-wearing agent and so on.

Advantages

- ⊙ Low freezing point, ensuring easy start of equipment
- ⊙ High flash point, ensuring safe operation in high temperature
- ⊙ Good heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Good anti-corrosion property, ensuring normal operation of equipment
- ⊙ Excellent lubricity, reducing wear of equipment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD331—2010

Applications

- ⊙ Suitable for hydraulic system of formation tester used in petroleum and geological exploration (e. g. Johnston tester, Lynes tester, etc), as well as for other instruments and equipment
- ⊙ Working temperature can reach 180℃

Typical Properties

Items	4607 synthetic hydraulic oil
Appearance	Transparent liquid of brown
Kinematic viscosity, mm ² /s	
100℃	37.8
40℃	228.0
Viscosity index	217
Flash point (open), ℃	256
Freezing point, ℃	-42
Neutralization value, mgKOH/g	0.1

Similar Foreign Products

- ⊙ Performs as good as UCON LB-1200X in hydraulic system of formation testers in petroleum and geological exploration

Special Attentions

- ⊙ Do not mix with other kind of oil, and do clean the lubricating system before use to avoid contamination
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint

Packing

- ⊙ To be packed with 3.5kg plastic drum or as required by customers

4608 Synthetic Hydraulic Transmission Oil

SINOPEC 4608 synthetic hydraulic transmission oil is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-corrosion agent, anti-wearing agent and so on.

Advantages

- ⊙ Low freezing point, ensuring easy start of equipment
- ⊙ High flash point, ensuring safe operation in high temperature
- ⊙ Good heat oxidation stability, preventing oil from damage in high temperature condition
- ⊙ Good anti-corrosion property, ensuring normal operation of equipment
- ⊙ Excellent lubricity, reducing wear of equipment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 180—2004

Applications

- ⊙ Widely be used in the hydraulic transmission of hydraulic servo system of vehicles such as cars, minicars, light/medium/heavy-duty vehicles; also be used as cooling oil and lubricant
- ⊙ Applied temperature range: -40℃ ~ 170℃

Typical Properties

Items	4608 synthetic hydraulic transmission oil
Kinematic viscosity (100℃), mm ² /s	7.5
Viscosity index	182
Flash point (open), ℃	235
Freezing point, ℃	-54

Similar Foreign Products

- ⊙ Equivalent to SHELL TEGULA 27 and Japanese transmission oil 8[#] in the application of hydraulic transmission of vehicle hydraulic servo system

Special Attentions

- ⊙ Do not mix with other kind of oil, and do clean the lubricating system before use to avoid contamination
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

4631 Water-glycol Fire Resistant Hydraulic Fluid

SINOPEC 4631 water-glycol fire resistant hydraulic fluid is highly refined fire resistant hydraulic fluid taking water and glycol as base fluid with plural additives such as anti-wear agent, anti-oxidizer, rust inhibitor, defoamer and so on. According to international classification standard, it belongs to water-glycol fire resistant hydraulic fluid of ISO-L-HFC type. It also meets requirements of MIL-H-22072C.

Advantages

- ⊙ Excellent fire resistance, ensuring application safety in case of high temperature and contact with open flame
- ⊙ Extremely low freezing point, ensuring easy startup in condition of low temperature
- ⊙ Perfect high temperature stability (stable real solvent), no deterioration in long storage period of 2 years
- ⊙ Good gas/liquid phase anti-rust ability, and anti-corrosion property for copper, meeting anti-rust requirement for gas and liquid phases
- ⊙ Outstanding lubricity, ensuring lubrication and service life of hydraulic oil pump
- ⊙ A long service life not less than 10,000hrs under normal operating mode and work conditions

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD122—2008

Applications

- ⊙ Important fire resistant hydraulic medium comprehensively used in hydraulic system in conditions of open flame and high temperature. Suitable for hydraulic systems requiring fire resistance in such industries as steel, coal mine, light industry, chemical engineering, machining, plastic processing, such as gate of coke furnace, coke guide, pressure die casting machine, top bell, extruder, mechanism for lifting gas hood if converter, forging press, electric furnace cover, dump hopper, casting machine, steel ladle slide gate, conticaster, hot-rolling mill, welding robot, plastic extruder, automatic welding fixture, surface plating machine, glass moulding machine, etc
- ⊙ Applied temperature range: -50℃ ~ 60℃ ; applied pressure: 20MPa

Typical Properties

Items	4631 water-glycol fire resistant hydraulic fluid	
	40	50
Appearance	Transparent liquid of red	
Kinematic viscosity, mm ² /s		
40℃	42.96	51.2
-18℃	923	910
Viscosity index	185	230
Density (20℃), g/cm ³	1.082	1.080
Freezing point, ℃	<-50	<-50
pH value	8.9	10.2
Corrosion (T ₂ Cu, 50℃ × 3hrs)	1a	1a
Foam property, ml		
Foam tendency	None	15
Foam stability	None	None

Similar Foreign Products

4631 performs as good as the following products:

- ⊙ Houghton Safe620
- ⊙ Mobil Nyvac FR200D, Nyvac 20, HFC 46
- ⊙ BP Enersyn SF-C
- ⊙ Shell Iruv C46

Application Examples

- ⊙ A steel work of a steel group: hydraulic system of desulfurization, plunger pump, 1500rpm, 160kg/cm²
- ⊙ An engine company: casting equipment, 965rpm, 140kg/cm² ~ 150kg/cm²
- ⊙ A hot rolled plate factory of a steel group: hydraulic system of crimping machine 273L/min, 90kg/cm²
- ⊙ A steel work: hydraulic system of conticaster, plunger pump, 1600rpm, 100kg/cm²
- ⊙ A iron-forging branch of a group: pressure die casting machine, vane pump, 975rpm, 140kg/cm², etc

Special Attentions

- ⊙ Max service temperature: not exceeding 55℃ for open type oil tank and 65℃ for close type oil. In case of high temperature, hydraulic viscosity to be increased by excessive evaporation of water, application effect to be affected
- ⊙ Attention shall be given to compatibility against metal and non-metal material when use this product
- ⊙ This product is compatible with following materials: epoxy resin, Bakelite, bronze (Pb<20%), brass, red copper, plastics, NBR, FKM, silicon rubber, PTFE, nylon, and paper soaked in xylonite and bakelite
- ⊙ This product is incompatible with following materials: industrial paint (alkyd paint), Cd, Mg, Pb, Zn (excluding thin zinc coat), Al (excluding alloyed anodized Al), natural rubber, PUR, leather, cork, common filter paper and asbestos, etc
- ⊙ Do not mix with hydraulic medium in form of mineral oil, emulsion and ester, thus clean the hydraulic system before fill this product
- ⊙ Regularly check (generally 3months) the appearance, viscosity, pH value, foam of product, and resolve any problems found during the operation

Packing

- ⊙ To be packed with 200L plastics sprayed iron barrel or as required by customer

4632 Ester Type Fire Resistant Hydraulic Oil

SINOPEC 4632 ester type fire resistant hydraulic oil is blended with synthetic base oil of special structure and plural additives such as anti-oxidizer, anti-corrosion agent and lubrication and so on. Poisonless and biodegradable, the product is a new generation of environment friendly lubricant.

Advantages

- ⊙ Low pour point, high splash point and high viscosity index
- ⊙ Outstanding lubricity and material adaptability
- ⊙ Good heat stability, and outstanding anti-shear stability
- ⊙ Bio-degradable

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD123—2008

Applications

- ⊙ Suitable for hydraulic system of continuous casting production line in steel industry and other hydraulic system with fire resistance and safety requirements of equipment used in furnace, disintegrator, hot rolling plant, foundry plant, steel ladle valve, power station, coal mine and so on. Capable for substituting phosphate ester type fire resistant hydraulic oil
- ⊙ Applied temperature range: -20℃ ~ 135℃

Typical Properties

Items	4632 ester type fire resistant hydraulic oil	
	N46	N68
Kinematic viscosity (40℃), mm ² /s	47	69
Viscosity index	185	190
Flash point, ℃	280	289
Ignition point, ℃	350	350
Acid number, mgKOH/g	0.7	0.8
Manifold fire test	Pass	Pass

Technical Certification

- ⊙ Technical recognition for matching material by Wuhan Atlantic Metallurgical Engineering & Technology Co., Ltd
- ⊙ Technical recognition for matching material by CISDI Engineering Co., Ltd

Similar Foreign Products

- ⊙ QUAKER Quintolubric 822 series
- ⊙ Houghton HF-120,130
- ⊙ Metalworking HFR-300

Application Examples

- ⊙ Applied in hydraulic system of furnace arch and cast house of a steel Co., Ltd
- ⊙ Applied in hydraulic station of a textile machine company
- ⊙ Applied in hydraulic station of continuous casting shop of a company's steelworks

Special Attentions

- ⊙ When substituted, mineral type oil in system to be kept less than 5%
- ⊙ When water-based fire resistant hydraulic oil substituted, water content in system to be kept less than 0.2%
- ⊙ When phosphate ester and other ester type fire resistant hydraulic oil substituted, pay attention to compatibility and adaptability to seals

Packing

- ⊙ To be packed with 4L plastic drum and 200L iron barrel

4637-2 Semi-synthetic Hydraulic Oil

SINOPEC 4637-2 semi-synthetic hydraulic oil is blended with semi-synthetic base oil of special structure and quality additive of high efficiency.

Advantages

- ⊙ Outstanding low temperature property, ensuring normal operation of equipment under outdoor or cold conditions
- ⊙ Outstanding viscosity-temperature property, shear and oxidation stabilities, small viscosity variation ensuring stabler work of hydraulic system
- ⊙ Outstanding anti-wear, anti-rust and anti-corrosion properties, prolonging service life of equipment
- ⊙ Good defoaming ability, anti-emulsion and air release properties, effectively reducing cavitation and emulsion
- ⊙ Good filterability, minimizing blockage and contamination of hydraulic system

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 232—2007

Applications

- ⊙ Suitable for hydraulic system of engineering, construction, mining and oil field machineries as well as ships and automobiles, especially for moderate/high pressure system working in conditions of outdoor, severe cold regions and large ambient temperature variation or severe operating mode
- ⊙ Applied temperature range: -40℃ ~ 100℃, and 130℃ for short period of time

Typical Properties

Items	4637-2 semi-synthetic hydraulic oil		
	22	32	46
Kinematic viscosity (40℃), mm ² /s	21.27	31.35	45.81
Viscosity index	162	204	213
Pour point, ℃	-50	-48	-42
Flash point (open), ℃	205	214	228
Anti-emulsion property, min	7	10	15
Air release (50℃), min	2.5	4.2	4.5
Corrosion (copper sheet, 100℃, 3hrs), level	1b	1a	1b
Liquid phase rust test	Rustless	Rustless	Rustless
Shear stability (after 250 circulations) variation of kinematic viscosity at 40℃, %	0.21	0.72	1.55
Index of adaptability to seals	7	5	5

Special Attentions

- ⊙ Do not mix with other lubricant, which resulting to the reduction of product performance
- ⊙ Close the cap in time after each use, keeping moisture, dust away

Packing

- ⊙ To be packed with 4L, 200L drums (barrels) or as required by customer

4639 High Pressure Ashless Anti-wear Hydraulic Oil

SINOPEC 4639 high pressure ashless anti-wear hydraulic oil is blended with highly refined base oil and quality ashless additives.

Advantages

- ⊙ Unique non-zinc anti-wear formulation, effectively protecting silver parts, prolonging service life of pump with silver or silver coated parts
- ⊙ Better hydrolytic stability than common HM anti-wear hydraulic oil, providing good protection even when system suffered from little water pollution
- ⊙ Good filterability, minimizing blockage and contamination of hydraulic system
- ⊙ Good environment protecting ability, reducing environment pollution

Applications

- ⊙ Suitable for hydraulic system of engineering, construction, mining and oil field machineries as well as ships and automobiles, especially for precision systems with silver parts, appropriate pressure: max. 40MPa
- ⊙ Applied temperature range: -20℃ ~ 100℃, and 130℃ for short period of time

Typical Properties

Items	4639 high pressure ashless anti-wear hydraulic oil		
	32	46	68
Kinematic viscosity (40℃), mm ² /s	33.04	47.34	68.59
Viscosity index	102	96	97
Flash point (open), ℃	224	235	254
Pour point, ℃	-20	-18	-18
Air release (50℃), min	3.5	4.5	5.5
Index of adaptability to seals	4	3	3
Anti-emulsion property (40-37-3) at 54℃, min	8	10	10
Corrosion (copper sheet, 100℃, 3hrs), level	1b	1b	1b
Liquid phase rust test	Rustless	Rustless	Rustless
Diameter of wear spot, mm	0.47	0.45	0.46

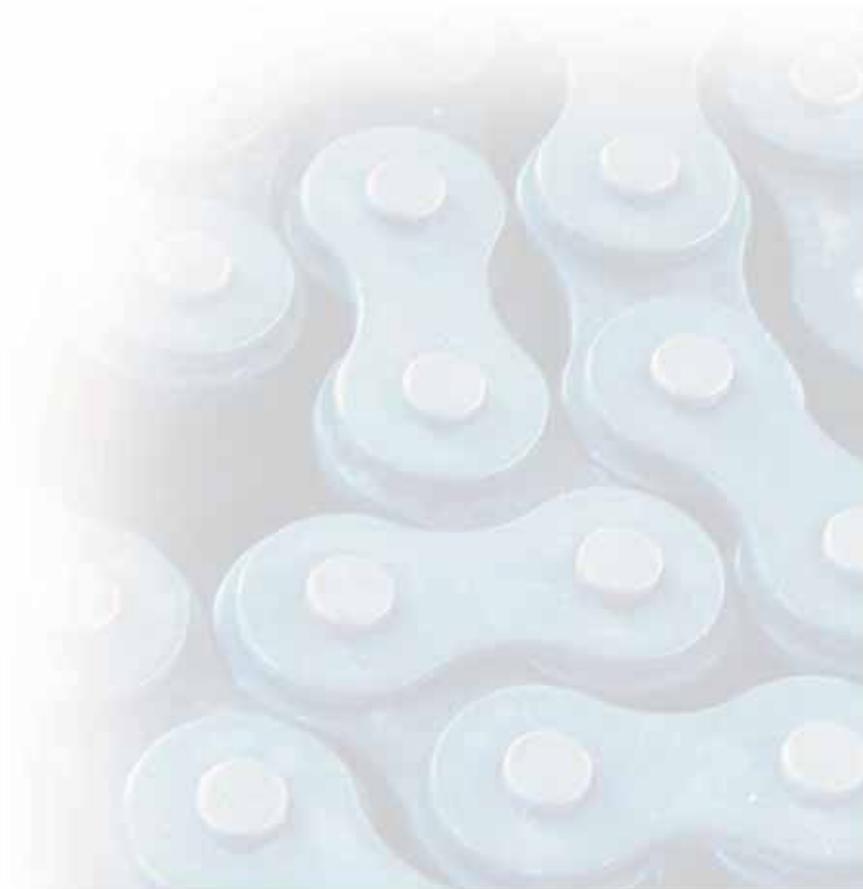
Special Attentions

- ⊙ Do not mix with other lubricant, which resulting to the reduction of product performance
- ⊙ Close the cap in time after each use, keeping moisture, dust away

Packing

- ⊙ To be packed with 4L, 200L drums (barrels) or as required by customer

Synthetic Hydraulic Oil



Special Oil for High Temperature Chain

SYNTHETIC LUBRICANTS

(58-62)



4402 Series Heat-setting Machine Oil

SINOPEC 4402 series heat-setting machine oil is blended with synthetic base oil and plural highly refined additives. It is grouped into 4402, 4402-1 and 4402-2 according to suitable temperature and viscosity.

Advantages

- ⊙ With advantages as high viscosity index and good viscosity-temperature property, it meets requirements on lubrication in high temperature condition and enables machine to start in normal temperature condition
- ⊙ High flash point which enables safe operation of heat-setting machine
- ⊙ Crack easily into small molecules under heat oxidation conditions, reducing carbon accumulation on chains of the setting machine and simplifying coke cleaning

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0010—90

Applications

- ⊙ Suitable for lubricating heat-setting machines used in textile industry, such as domestic M751, M771, ZH921 types and IL SUNG, YAFAN, LK, MEGATEX, as well as for lubricating track, chain of imported SST resin finishing machine
- ⊙ Max service temperature: 200℃

Typical Properties

Items	4402 series heat-setting machine oil		
	4402	4402-1	4402-2
Kinematic viscosity (100℃), mm ² /s	32.0	35.0	72.0
Viscosity index	188	150	220
Neutralization value, mgKOH/g	0.05	0.05	0.05
Flash point (open), ℃	270	265	270

Application Examples

- ⊙ This product is polyether type synthetic high temperature chain oil which has been applied in dyeing and printing industry of Jiangsu, Zhejiang and Guangdong provinces, China, for more than ten years, with most powerful influence and largest market shares

Special Attentions

- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Due to some evaporation loss in high temperature conditions, air duct of the setting machine shall be opened to avoid accident during use

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

SHT-500 Synthetic High Temperature Chain Oil

SINOPEC SHT-500 synthetic high temperature chain oil is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-wear agent, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding high temperature stability, service temperature can reach 240℃
- ⊙ Outstanding anti-wear property and lubricity, enabling heavy load possible
- ⊙ Few cokes with clean chain for a long time
- ⊙ Good viscosity-temperature property, ensuring easy start of machine in cold conditions
- ⊙ Low evaporation loss and oil consumption, environment friendly, improving operation conditions

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD233—2008

Applications

- ⊙ Suitable for lubrication of high temperature chain transmission system of machines used in textile, dyeing and printing industries, such as domestic and imported heat-setting machine, drawing and stretching machine, stamp setting machine
- ⊙ Applied temperature range: -20℃ ~ 240℃

Typical Properties

Items	SHT-500 synthetic high temperature chain oil
Kinematic viscosity, mm ² /s	
40℃	281.8
100℃	26.1
Viscosity index	121
Neutralization value, mgKOH/g	0.18
Flash point (open), ℃	273
Freezing point, ℃	-23
Noack evaporation (250℃, 1hr), %	3.3

Similar Foreign Products

- ⊙ Equivalent to PRIMIMUM FLUID SPECIAL of KLUBER, Germany; and 'CL-175' high temperature oil of ROCOL, Britain

Special Attentions

- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint
- ⊙ Different oil can be filled only after the existing oil has been exhausted

Packing

- ⊙ To be packed with 4L plastic drum, 200L iron barrel or as required by customer

SHT-518 Synthetic High Temperature Chain Oil

SINOPEC SHT-518 synthetic high temperature chain oil is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-wear agent, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding high temperature stability, service temperature can reach 250℃
- ⊙ Outstanding anti-wear property and lubricity, enabling heavy load possible
- ⊙ Few cokes with clean chain for a long time
- ⊙ Good viscosity-temperature property, ensuring easy start of machine in cold conditions
- ⊙ Low evaporation loss and oil consumption, environment friendly, improving operation conditions

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD233—2008

Applications

- ⊙ Suitable for lubrication of high temperature chain transmission system of machines used in textile, dyeing and printing industries, such as domestic and imported heat-setting machine, drawing and stretching machine, stamp setting machine
- ⊙ Suitable for lubricating high temperature chain transmission systems of drying room of building material industry, varnish baking room of automotive and other industries as well as drying cabinet of coating line
- ⊙ Applied temperature range: -20℃ ~ 250℃

Typical Properties

Items	SHT-518 synthetic high temperature chain oil
Kinematic viscosity, mm ² /s	
40℃	313.1
100℃	25.7
Viscosity index	108
Neutralization value, mgKOH/g	0.08
Flash point (open), ℃	270
Freezing point, ℃	-32
Noack evaporation (250℃, 1hr), %	2.0

Similar Foreign Products

- ⊙ Performs as good as 'Hotemp plus' of KLUBER, Germany

Special Attentions

- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint
- ⊙ Different oil can be filled only after the existing oil has been exhausted

Packing

- ⊙ To be packed with 4L plastic drum, 200L iron barrel or as required by customer

SHT-600 Synthetic High Temperature Chain Oil

SINOPEC SHT-600 synthetic high temperature chain oil is blended with special synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-wear agent, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding anti-wear property and lubricity, suitable for lubrication of chains operating under heavy load and high temperature conditions
- ⊙ With few cokes thus prolonged clean period, the chain works for long duration
- ⊙ Low evaporation loss and oil consumption, environment friendly
- ⊙ Excellent high temperature stability, keeping fluid state when temperature lasts high

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD233—2008

Applications

- ⊙ Suitable for lubricating chains of equipment used in high temperature services, such as drawing and stretching machine of BOPP and BOPET film of plastic industry, varnish baking room of automotive and other industries, plating board reflow soldering production line
- ⊙ Applied temperature range: -25℃ ~ 260℃

Typical Properties

Items	SHT-600 synthetic high temperature chain oil
Kinematic viscosity (40℃), mm ² /s	330
Acid number, mgKOH/g	0.62
Flash point (open), ℃	292
Freezing point, ℃	-36
Coking property (250℃ × 6hrs), mg	<5
Lubricity (room temperature, 1500rpm) Diameter of wear spot (392N, 60min), mm Maximum non-seizure load P _B , N	0.40 932

Special Oil for High Temperature Chain

Similar Foreign Products

- ⊙ Performs as good as 'PREMIUM SUPER M93' of Klueber, Germany; 'HATCOL3895' of HATCO, US

Special Attentions

- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint
- ⊙ Different oil can be filled only after the existing oil has been exhausted

Packing

- ⊙ To be packed with 3.5kg plastic drum, 200L iron barrel or as required by customer

SH 618 High Temperature Lubricant for Baking Varnish Chain

SINOPEC SH 618 high temperature lubricant for baking varnish chain is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, etc.

Advantages

- ⊙ With advantages as high viscosity index and good viscosity-temperature property, it meets requirements on lubrication in high temperature condition and enables machine to start in normal temperature condition
- ⊙ High flash point, ensuring safe operation of equipment
- ⊙ Crack easily into small molecules under heat oxidation conditions, reducing carbon accumulation on chains and tracks, simplifying coke cleaning
- ⊙ Good paint-compatibility due to special molecular structure, thus no 'fisheye', shrinkage cavity, or color aberration can be found on the varnish surface, no bad effect on adhesion of baking varnish

Applications

- ⊙ Suitable for the lubrication of high temperature chain in varnish baking room of automotive industry, as well as for other applications requiring varnish baking room
- ⊙ Max service temperature: 200℃

Typical Properties

Items	SH 618 high temperature lubricant for baking varnish chain
Kinematic viscosity, mm ² /s	
100℃	28
40℃	235.8
Viscosity index	188
Acid number, mgKOH/g	0.09
Flash point (open), ℃	276
Evaporation loss (200℃, 2hrs), % mass fraction	7.7
Corrosion (45#steel, 100℃, 3hrs)	Qualified

Application Examples

- ⊙ Qingling Motors (Group) Co., Ltd. offered relevant comments in 2005
- ⊙ FOTON MOTOR GROUP has put this product in general use since 2006

Special Attentions

- ⊙ Prevent moisture, dust from entering into during storage and usage
- ⊙ Do not mix with other oils
- ⊙ Due to some evaporation loss in high temperature conditions, air duct of the setting machine shall be opened to avoid accident during use

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer



Special Lubricant

SYNTHETIC LUBRICANTS

(63-72)



4041 High Temperature Lubricant

SINOPEC 4041 high temperature lubricant is blended with synthetic base oil and plural highly refined additives such as anti-oxidizer, anti-wear agent, anti-corrosion agent and so on.

Advantages

- ⊙ Outstanding viscosity-temperature property, meeting requirements on equipment in high/low temperature condition
- ⊙ Outstanding heat resistance stability, preventing oil from damage in high temperature condition
- ⊙ Good low temperature fluidity, ensuring easy start of equipment under low temperature
- ⊙ Good extreme pressure and anti-wear properties, reducing wear of equipment
- ⊙ Excellent shear stability, prolonging service life of oil

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 165—2007

Applications

- ⊙ Suitable for lubricating the three-hot rolling mill used in non-woven fabrics of textile and other light industries
- ⊙ No.220 is suitable for lubricating and cooling cylindrical bearings at both ends of upper/middle roll, applied temperature: -30℃ ~ 170℃
- ⊙ No.1000 is suitable for heat conduction, hydraulic pressure and lubrication of bearing roller, applied temperature: -20℃ ~ 180℃

Typical Properties

Items	4041 high temperature lubricant	
	220	1000
Appearance	Transparent liquid of yellow to red brown	
Kinematic viscosity (40℃), mm ² /s	228	983
Viscosity index	231	273
Flash point (open), ℃	297	275
Freezing point, ℃	-55	-42
Neutralization value, mgKOH/g	0.12	0.05
Corrosion (T ₂ copper sheet, 121℃, 3hrs), level	1b	1b

Similar Foreign Products

- ⊙ The 4041 high temperature lubricant performs as good as Molsyn series of Mollenberg & Sonntag (M&S), Synthoso D series of KLUBER and Glygoyle 30 of Mobil

Application Examples

- ⊙ An insulating materials plant and a non-woven plant applied this product on imported production equipment successfully instead of Syntheso D series of KLUBER, and result is satisfactory

Special Attentions

- ⊙ Do not mix with other kind of oil, and do clean the lubricating system before use to avoid contamination
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Material compatibility test should be carried out when used in lubricated part in contact with non-metallic material, such as rubber, plastic and paint

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

4301 Optical Silicon Oil

SINOPEC 4301 optical silicon oil is highly refined from silicon oil with high viscosity.

Advantages

- ⊙ Excellent luminousness and refractive index, moisture resistant and incorrosive, inert to chemical materials (e.g. alkali, metal halide)

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 097—2010

Applications

- ⊙ Suitable for using as sealing agent of special optical instrument
- ⊙ Applied temperature range: -20℃ ~ 40℃

Typical Properties

Items	4301 optical silicon oil
Appearance	Transparent and colorless liquid
Refractive index (20℃)	1.4061
Average molecular weight, M	129738
Luminousness, %	
420nm	91.3
500nm	92.8

Special Attentions

- ⊙ Store under clean, dry condition, away from light
- ⊙ Keep away from debris when use
- ⊙ Close the cap tightly in time after each use

Packing

- ⊙ To be packed with 250g wide mouth glass bottle or as required by customer

4304 Submersible Electric Pump Lubricant

SINOPEC 4304 submersible electric pump lubricant is blended with synthetic base oil and plural highly refined additives.

Advantages

- ⊙ Excellent electric insulation property, with low medium loss, ensuring safe operation of equipment
- ⊙ Good thermal oxidation stability, enhancing operation safety of equipment in high temperature condition
- ⊙ Good lubricity, protecting compressor from wear
- ⊙ Good low temperature fluidity, ensuring easy start of equipment under low temperature

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 099—2010

Applications

- ⊙ Suitable for lubrication and insulation of submersible electrical pump and motor used in deep wells of oil production, adaptable to long term operation in conditions as well pressure of 7.1MPa ~ 12.2MPa and temperature of 150℃

Typical Properties

Items	4304 submersible electric pump lubricant
Appearance	Transparent liquid of light yellow
Kinematic viscosity, mm ² /s	
100℃	5.81
40℃	37.14
Flash point (close), ℃	198
Freezing point, ℃	<-60
Neutralization value, mgKOH/g	0.01
Dielectric strength, kV	35

Application Examples

- ⊙ This product has been loaded for QYDB120 series submersible electrical pump produced by an electrical machinery plant in Chongqing, China

Special Attentions

- ⊙ Prevent moisture and dust from entering into during storage and usage
- ⊙ Do not mix with other oils

Packing

- ⊙ To be packed with 4L iron barrel or as required by customers

4410 (OA-2) Oil-air Lubricant

SINOPEC 4410 (OA-2) oil-air lubricant is blended with highly refined base oil and plural functional quality additives.

Advantages

- ⊙ Outstanding heat oxidation stability and anti-coking property, keeping equipment clean
- ⊙ Good lubricity ensuring outstanding operation of equipment
- ⊙ Excellent rust-proof, anti-corrosion property, preventing metal parts from corrosion
- ⊙ Good water separation ability, easily separating water from compressed air

Applications

- ⊙ Suitable for oil-air lubrication device equipped lubrication system, such as different hot/cool strip rolling mill, wire and bar rolling mill, bearings of conicaster and auxiliary equipment, high-speed spindle of all grinder used in metallurgical industry, as well as for the lubrication of large-sized exposed gear (e.g. ball grinder, rotary kiln, etc.), different guide, locomotive wheel flange and tracks, etc
- ⊙ Applied temperature range: -10℃ ~ 120℃, and 150℃ for short period of time

Typical Properties

Items	4410 (OA-2) oil-air lubricant			
	150	220	460	680
Kinematic viscosity (40℃), mm ² /s	144.5	217.0	455.2	667.3
Viscosity index	99	98	97	112
Flash point (open), ℃	271	275	283	264
Pour point, ℃	-16	-15	-12	-10
Corrosion (T ₂ copper sheet, 100℃, 3hrs), level	1b	1b	1b	1b
Four-ball sintering load P _D , N	2690	2960	3087	3090

Technical Certification

- ⊙ Technical recognition for matching material by lubrication technology Ltd. shanghai
- ⊙ Technical recognition for matching material by Wuhan Atlantic Metallurgical Engineering & Technology Co., Ltd
- ⊙ Technical recognition for matching material by CISDI Engineering Co., Ltd

Special Attentions

- ⊙ Do not mix with other lubricant resulting in possible performance reduction
- ⊙ Close the cap in time after each use, keeping moisture, dust away

Packing

- ⊙ To be packed with 200L iron barrel or as required by customer

4410 (OA-3) Oil-air Lubricant

SINOPEC 4410 (OA-3) oil-air lubricant is blended with synthetic base oil and plural highly refined additives such as extreme pressure agent, anti-wear agent and so on.

Advantages

- ⊙ Outstanding viscosity-temperature property
- ⊙ Outstanding low temperature fluidity, ensuring normal operation of equipment in low temperature condition
- ⊙ Outstanding heat resistance stability, preventing oil from damage in high temperature condition
- ⊙ Good extreme pressure and anti-wear properties, reducing wear of equipment
- ⊙ Neither coke nor deposit after durative application in high temperature condition

Applications

- ⊙ Suitable for lubrication of various medium/low speed medium duty close type industrial gears, worm gears, sliding/rolling bearings used in oil-air lubrication system of steel plant
- ⊙ Applied temperature range: -30℃~150℃ for #100 ~ #460; -25℃~150℃ for #680

Typical Properties

Items	4410 (OA-3) oil-air lubricant						
	100	150	220	320	460	680	
Kinematic viscosity, mm ² /s	100℃	17.09	24.76	33.20	49.34	68.25	103.7
	40℃	99.70	155	221.7	345.0	469.3	661.8
Viscosity index	185	195	208	211	225	238	
Flash point (open), ℃	255	267	270	272	278	279	
Pour point, ℃	-41	-40	-38	-38	-35	-30	
Copper corrosion (100℃, 3hrs)	1b	1b	1b	1b	1b	1b	

Technical Certification

- ⊙ Technical recognition for matching material by Lubrication Technology Ltd. shanghai
- ⊙ Technical recognition for matching material by Wuhan Atlantic Metallurgical Engineering & Technology Co., Ltd
- ⊙ Technical recognition for matching material by CISDI Engineering Co., Ltd

Special Attentions

- ⊙ Clean the lubricating system when first use
- ⊙ Do not mix with other lubricant resulting in performance reduction due to possible physical or chemical reactions between different oil
- ⊙ Close the cap in time after each use, keeping moisture, dust away
- ⊙ Use seals made of NBR within 100℃ and those of FKM or silicon rubber when temperature lasts high
- ⊙ Use EP resin or MPFR coating if industrial paint is not acceptable. Use oil level of glass or PA material

Packing

- ⊙ To be packed with 3.5kg plastic drum, 16kg/200L iron barrel or as required by customer

Special Lubricant

4501 Turbomolecular Pump Lubricant

SINOPEC 4501 turbomolecular pump lubricant is blended with synthetic base oil and plural highly refined additives.

Advantages

- ⊙ Excellent viscosity-temperature property, with wide temperature range
- ⊙ Outstanding high-vacuum property, low evaporation loss and oil consumption
- ⊙ Good lubricity, protecting equipment from wear
- ⊙ Good rubber compatibility, ensuring tightness of equipment and system

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 101—2010

Applications

- ⊙ Suitable for lubricating all kinds of molecular pump's bearings working at speed of 20,000r/min~60,000r/min, and under ultimate pressure of 1.3×10^{-9} Pa, as well as for lubricating vacuum equipment

Typical Properties

Items	4501 turbomolecular pump lubricant
Kinematic viscosity, mm ² /s	
100℃	3.76
40℃	14.3
Viscosity index	162
Flash point (open), ℃	232
Freezing point, ℃	<-60
Neutralization value, mgKOH/g	0.2
Evaporation loss (100℃, 3hrs), % (m/m)	0.3

Similar Foreign Products

- ⊙ Equivalent to Swiss T-12 and German LH-85328

Special Attentions

- ⊙ Clean the lubricating system when first use, and do not mix with other lubricant
- ⊙ Close the cap tightly after each use to keep moisture and debris away
- ⊙ Store under clean, dry condition, away from light

Packing

- ⊙ To be packed with 4L plastic drum or as required by customers

Special Silicon Oil for NBR

SINOPEC special silicon oil for NBR is blended with modified methyl silicone base oil and plural highly refined additives.

Advantages

- ⊙ Excellent viscosity-temperature property
- ⊙ Good rubber compatibility, preventing rubber from shrinking or rigidification effectively

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 452—2007

Applications

- ⊙ Suitable for lubricating and sealing brake valves of brake apparatus of locomotive

Typical Properties

Items	Special silicon oil for NBR
Appearance	Transparent and colorless liquid
Kinematic viscosity (25℃), mm ² /s	821.5
Flash point (open), ℃	274
Density (20℃), kg/m ³	0.9784
Acid number, mgKOH/g	0.01
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Rubber compatibility (70℃, 24hrs), % (V/V)	2.63

Special Attentions

- ⊙ Prevent moisture from entering into during storage and usage
- ⊙ Do not mix with other oil which results in performance reduction

Packing

- ⊙ To be packed with 4L iron barrel or as required by customer

Viscosity Standard Oil

SINOPEC viscosity standard oil is highly refined from silicon oil; it is specially used in the calibration of viscometer. It is grouped into 1000, 2000, 5000, 10000, 20000, 50000 and 100000 according to the kinematic viscosity at 20°C.

Advantages

- ⊙ With stable viscosity, this product overcomes defects of common mineral oil, such as difficult transportation and high rejection rate due to poor viscosity-time stability
- ⊙ High viscosity standards that out the range of mineral oil

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0526—92 (2007)

Applications

- ⊙ Standard oil dedicated for the calibration of viscometer

Typical Properties

Items	Viscosity standard oil				
	50	200	1000	5000	50000
Appearance	Transparent liquid without any suspended matter or deposit				
Kinematic viscosity (20°C), mm ² /s	53.44	190.25	1027.5	4978.4	46120
Density (20°C), kg/m ³	0.9629	0.9699	0.9735	0.9750	0.9336
Acid number, mgKOH/g	0.00	0.01	0.00	0.01	0.01
Mechanical impurity, % (m/m)	None	None	None	None	None
Water content, % (m/m)	None	None	None	None	None
Pour point, °C	<-10	<-10	—	—	—
Water soluble acid, %	None	None	—	—	—
Change rate of viscosity-temperature (20°C ± 0.01°C)	0.03	0.07	—	—	—

Special Attentions

- ⊙ Close the cap tightly after each use to keep moisture and debris away
- ⊙ Store under clean, dry condition, away from light

Packing

- ⊙ To be packed with 250g glass bottle

SH 710 Multifunctional Polymethylphenyl Siloxane Fluid

SINOPEC SH 710 multifunctional polymethylphenyl siloxane fluid is blended with polymethylphenyl siloxane fluid synthesized by advanced process and special refined anti-oxidizer.

Advantages

- ⊙ Excellent high temperature property, adaptable to long term use in high temperature condition
- ⊙ Proper viscosity and viscosity-temperature property, preserving proper lubricity in high temperature condition
- ⊙ Low smell and evaporation, hazardless to health

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 147—2007

Applications

- ⊙ Suitable for heat carrier of high-temperature oil bath, as well as for lubricating and sealing equipment working in high temperature condition for long period
- ⊙ Applied temperature range: -45℃ ~ 320℃

Typical Properties

Items	SH 710 multifunctional polymethylphenyl siloxane fluid
Appearance	Transparent and colorless liquid
Kinematic viscosity (25℃), mm ² /s	958.9
Flash point (open), ℃	> 300
Freezing point, ℃	< -50
Evaporation (250℃, 6hrs), %	6.01
Mechanical impurity, % (m/m)	None
Refractive index (20℃)	1.4913
Anti-wear property (four ball machine, normal temperature, 1500rpm)	
P _B , N	< 196
P _D , N	2453
D ^{196N} _{30min} , mm	0.69

Similar Foreign Products

- ⊙ Equivalent to Wacker-Chemie AP 1000

Special Attentions

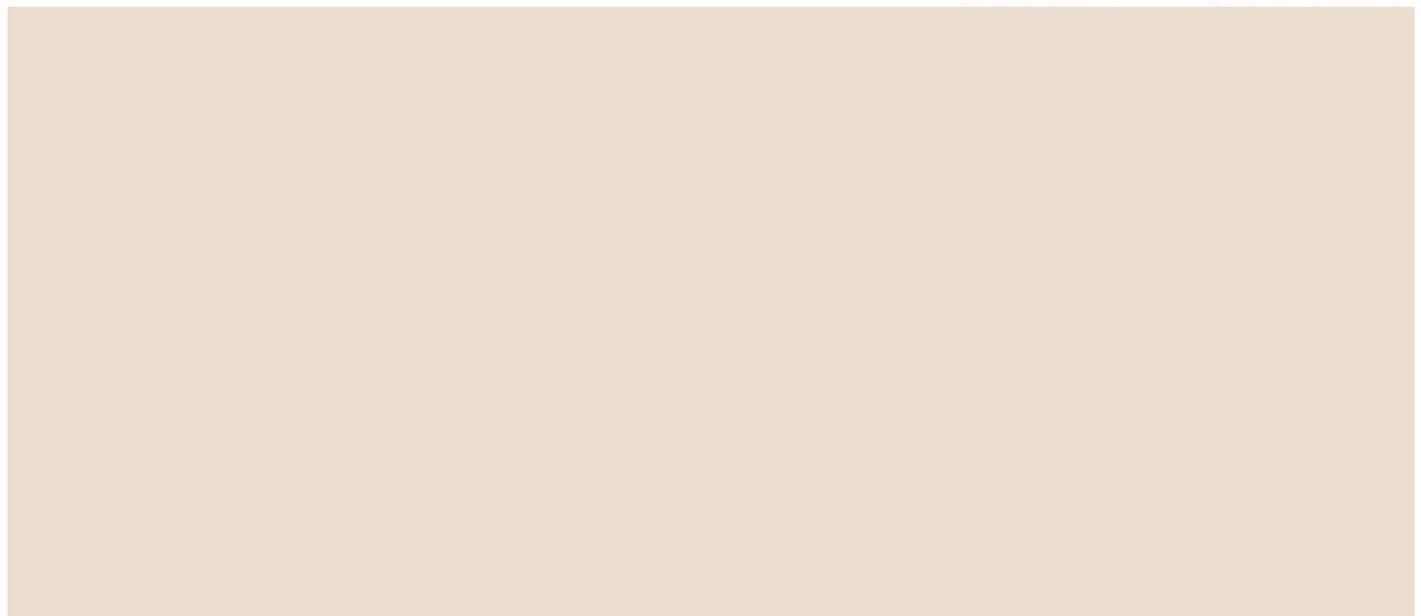
- ⊙ Prevent moisture from entering into during storage and usage
- ⊙ Do not mix with other oil which results in performance reduction

Packing

- ⊙ To be packed with 200L plastic drum or as required by customer



**High/low Temperature
Bearing Grease**
SYNTHETIC LUBRICANTS
(73-114)



221 Special Grease

SINOPEC 221 special grease is refined from densified synthetic oil and compound thickening agent.

Advantages

- ⊙ Good lubricity, ensuring normal operation of lubricated parts, protecting them from wear
- ⊙ Good water resistance, adaptable to lubrication of parts working in moist environment
- ⊙ Outstanding high/low temperature property, ensuring normal operation of lubricated parts working in wide temperature range
- ⊙ Outstanding barrier property, preventing lubricated parts from corrosion by external factors

Performance Specification

The product meets the following specifications:

- ⊙ SH 0459—92 (1998)

Applications

- ⊙ Suitable for lubricating and sealing friction assembly in contact with corrosive medium, such as interface between metal parts or between metal and rubber, also suitable for the lubrication of rolling bearings
- ⊙ Applied temperature range: -60℃ ~ 150℃

Typical Properties

Items	221 special grease
Appearance	Even grease of light brown
1/4 worked cone penetration, 0.1mm	71
Drop point, ℃	>250
Oil separation (200g ± 5g), % (m/m)	2.89
Water content, % (m/m)	Trace
Mechanical impurity, % (m/m)	None
Free alkali (NaOH), %	0.03
Similar viscosity (50 ℃, 10s ⁻¹), Pa·s	370
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified

Similar Foreign Products

- ⊙ Equivalent to Russian OKB-122-221

Special Attentions

- ⊙ Clean locations to be lubricated before use
- ⊙ Prevent moisture, dust from entering into during storage and usage

Packing

- ⊙ To be packed with 250g iron tin or as required by customers

7007, 7008 General Aviation Lubricating Oil

SINOPEC 7007, 7008 general aviation lubricating oil is blended with soap thickener, synthetic oil, structure modifier and anti-oxidizer. And quality rust-inhibiting additive is added in No. 7008 grease.

Advantages

- ⊙ Outstanding high/low temperature property, ensuring normal operation of lubricated parts in wide temperature range
- ⊙ Outstanding oxidation stability, ensuring long term operation of lubricated parts in high temperature condition
- ⊙ Outstanding mechanical and colloid stability, ensuring normal adhesion of this product without flowing away
- ⊙ Excellent rust-proof (7008[#] grease), effectively protecting metal parts of bearings from corrosion by external factors

Performance Specification

The product meets the following specifications:

- ⊙ SH 0437—92 (1998)

Applications

- ⊙ It is mainly designed especially for aeroplane lubrication, belonging to multifunctional grease. It is suitable for lubricating bearings and gears of aeroplane motor, supporting point of operating mechanism, assembling couplings and some instruments, as well as for high speed ball bearings
- ⊙ Yet it is also suitable for non-aeroplane applications. Such as main shaft of 5000r/min ~ 20000r/min grinder, spindle bearings of 2000r/min spinning and twisting machine working continuously, divided spindle bearings of 3600r/min rotor spinner and ball bearing working in outdoor and cold conditions (e.g. DC generator), bearings of instrument motor, household high-speed micromotor (such as muller, electric shaver) as well as bearings of cryogenic liquid pump motor (e.g. reflux pump of ethane and methane)
- ⊙ Applied temperature range: -60℃ ~ 120℃

Typical Properties

Items	7007, 7008 general aviation lubricating oil	
	7007	7008
Appearance	Even grease of light brown	Even grease of yellow brown
Drop point, ℃	183	177
1/4 penetration, 0.1mm	64	69
Oil separation by pressure, % (m/m)	18.8	16.9
Evaporation loss (120℃), % (m/m)	0.55	0.81
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified	Qualified
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	884	836
Chemical stability (oxygen tension: 0.78MPa, 100℃, 168hrs), pressure drop, MPa	None	None
Barrier property (45 [#] steel sheet, H62 brass sheet, 60℃, 48hrs)	—	Qualified

Technical Certification

- ⊙ Technical recognition by Xiangtan Electric Manufacturing Group

Similar Foreign Products

- ⊙ Meeting requirements of MIL-G-3278A, US; and D·T·D825B, Britain
- ⊙ 7007[#] oil can be used instead of British ISOFLEX LDS 18, and 7008[#] oil can be used instead of Becan 325 SHELL No. 7

Application Examples

- ⊙ Dozens of textile enterprises applied this product to lubricate bearings of high speed winder of spinning machine. With the speed of 8000r/min~10000r/min, the product meets all requirements on noise, vibration, wear, etc. during operation, performs as good as imported grease in terms of noise dB and bearing wear
- ⊙ A paper company has applied this product on all bearings of high speed motor (more than 5000r/min) for 5 years with service life of 6months~10months
- ⊙ A motor company in Hunan province, China, assigned this product as the exclusive grease for its bearings of high speed motor, and the lubricant had been used satisfactorily for 8 years

Special Attentions

- ⊙ Clean locations to be lubricated before use
- ⊙ Plastic compatibility test should be carried out when used in contact with plastic materials, apply only when test is passed
- ⊙ Prevent moisture and debris from entering into during storage and usage

Packing

- ⊙ To be packed with 250g or 1kg plastic boxes or as required by customer

7011 Low Temperature Extreme Pressure (EP) Grease

SINOPEC 7011 low temperature extreme pressure (EP) grease is refined based on soap type gelling agent thickened synthetic oil, with the addition of supramoly and additives for oxidation-resistant, rust-proofing and structure improving, etc.

Advantages

- ⊙ Excellent low-temperature performance guarantees the normal operation of the compressor under low temperature circumstances
- ⊙ Good lubricity protects compressor from being worn
- ⊙ Good mechanical and colloid stability prevents the lubricating grease from running off
- ⊙ Relatively low missing tendency of the compressor guarantees the normal lubricating of the compressor
- ⊙ Excellent ep performance guarantees the normal lubricating of the compressor under heavy load

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0438—92 (1998)

Applications

- ⊙ Suitable for the lubrication of the mechanical components of the plane such as heavy-load gear, flap gear, tailing wheel, dead-end bearing of the landing gear and other helical gearing hypoids, chain-driven, etc, as well as the lubrication and attrition resistant of the ejector of the machine tool when machining heavy type workpiece
- ⊙ Applied temperature range: -60℃ ~ 120℃

Typical Properties

Items	7011 low temperature extreme pressure (ep) grease
Appearance	Black, uniform ointment
1/4 penetration, 0.1mm	65
Drop point, ℃	180
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Pressured oil separation, % (m/m)	16.04
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	890
Evaporation loss (120℃), % (m/m)	0.65
Four-ball testing (1500rpm, room temperature), comprehensive wear value ZMZ, N	763
Chemical stability (oxygen tension 0.78MPa, 100℃, 100hrs) pressure drop, MPa	None

High/Low Temperature Bearing Grease

Special Attentions

- ⊙ Stored in clean, dry place away from sunlight
- ⊙ Lubricated parts, clean the lubricated parts during use
- ⊙ Close the cap tightly after each use to keep dust and debris away, ensuring quality of the product

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7014-1 High Temperature Lubricating Grease

SINOPEC 7014-1 high temperature lubricating grease is refined based on organic gelling agent thickened synthetic oil, with the addition of multiple additives for oxidation-resistant and anti-corrosion, etc.

Advantages

- ⊙ Excellent oxidation stability prevents oil from deteriorating under high temperature
- ⊙ Excellent mechanical stability and appropriate adhesion prevents the loss of lubricating grease
- ⊙ Excellent high/low temperature property assures the normal operation of the bearing in wide temperature range
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment
- ⊙ Good lubricity protects the bearing from wearing
- ⊙ Excellent comprehensive performance guarantees a relatively long service life for the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD124—2008

Applications

- ⊙ The grease is specially designed for high-temperature bearing, suitable for multiple lubrication in large scale chemical plant, such as the high-temperature bearing of swirl spark plug of the auxiliary boiler, the sleeve bearing of plastic extruding machine, induced draft fan of the cracking furnace, and the compressor of resurgent gas. It also applies to the lubrication of rolling bearing and sliding bearing of various machines working under high-temperature environment such as stretching machine, hot-melting blower, hot-setting drying room, baking machine and high-temperature dye vat, as well as lubrication for gears, chains and brakes working under high-temperature
- ⊙ Applied temperature range: -40℃ ~ 200℃

Typical Properties

Items	7014-1 high temperature lubricating grease
Appearance	Light brown, smooth, uniform ointment
1/4 penetration, 0.1mm	67
Drop point, ℃	316
Evaporation loss (200℃, 1hr), % (m/m)	2.66
Pressured oil separation, % (m/m)	6.41
Steel net oil separation (100℃, 24hrs), % (m/m)	1.65
Similar viscosity (-40℃, 10s ⁻¹), Pa·s	653
Anti-sprinkling performance (38℃ ± 3℃), % (m/m)	1.83
Corrosion (45#steel, 100℃, 3hrs)	Qualified

Similar Foreign Products

SINOPEC	Japan	U.S	Germany
7014-1 Grease	Maruzen WR-3	Dow corning 44	ISOFLEX NBU 15
		Caltex Unitemp Grease 550	
		Mobiltemp SHC 100	
		Mobiltemp SHC 32	

Application Examples

- It's been widely applied to the high-temperature blower bearing and speed-control lead screw of the hot-setting machines of the printing and dyeing enterprises in Jiangsu, Zhejiang, Guangdong Province of China
- A chemical group company has replaced the imported grease with this product on the bearing of boiler spark plug of the large chemical fertilizer unit (temperature of the bearing is over 200℃, rotational speed over 10000rpm) and achieved satisfied results

Special Attentions

- Do not mix with other greases resulting in for performance reduction due to possible physical or chemical reactions between different oil
- After use, the cap should be sealed right away to prevent the entering of water, dust and other impurities
- Lubricated parts material compatability test should be carried out when used in lubricated parts lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

- To be packed with 1kg plastic box or as required by customers

7014 Extended Temperature Aviation Lubricating Grease

SINOPEC 7014 extended temperature aviation lubricating grease is refined based on organic gelling agent thickened synthetic oil, with the addition of additives for oxidation-resistance, etc. It meets requirements of MIL-G-81322D.

Advantages

- ⊙ Excellent high/low temperature property can assure the normal operation of the bearing in extended temperature range
- ⊙ Good lubricity protects the bearing from wearing
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing in damp environment
- ⊙ Excellent mechanical and colloid stability prevents the lubricating grease from running off
- ⊙ Excellent oxidation stability prevents the lubricating grease from deteriorating under high temperature circumstances
- ⊙ Good rubber adaptation applies to most of rubbers
- ⊙ Excellent storage stability remains the product's performance unchanged for a long time
- ⊙ Excellent comprehensive performance guarantees a relatively long service life of the bearing

Performance Specification

The product meets the following specifications:

- ⊙ GJB 694—89

Applications

- ⊙ This product is particularly designed for aviation lubrication, and also applies to multiple civil lubrication. It's applicable for lubricating the big tail bearing of plane, operation, landing gear, wheel system, aviation electric machine, generator and variety of rolling bearing working medium, high and extended temperature of both imported and home-made equipment in petrochemical, textile and other light industries. It's also suitable for lubrication electric structure and ordinary gear
- ⊙ Applied temperature range: -60℃ ~ 200℃

Typical Properties

Items	7014 extended temperature aviation lubricating grease
Appearance	Light brown, uniform ointment
Working penetration, 0.1mm	
1/4 penetration	65
Standard penetration	269
Drop point, °C	322
Colloid-stability, % (m/m)	8.11
Evaporation loss (200°C, 1hr), % (m/m)	2.97
Corrosion (T ₃ copper sheet, 100°C, 3hrs)	Qualified
Corrosion (T ₂ copper sheet, 100°C, 24hrs)	1b
Anti-sprinkling property (41°C ± 1°C), % (m/m)	1.45
Anti-corrosion property (52°C, 48hrs), level	1
Similar viscosity (-50°C, 10s ⁻¹), Pa·s	664
Four-ball testing (1500rpm, room temperature), comprehensive wear value ZMZ, N	314

Similar Foreign Products

- ◎ It's of equal handling property with Dn ヴァリ - ス XCC-1[#] of Japan and SKF N0.28 of Swiss

Special Attentions

- ◎ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ◎ Close the cap in time after each use, keeping moisture and dust away

Packing

- ◎ To be packed with 250g and 1kg plastic box or as required by customers

7015 High/Low Temperature Lubricating Grease

SINOPEC 7015 high/low temperature lubricating grease is refined based on organic gelling agent thickened synthetic oil, with the addition of additives for oxidation-resistance, etc.

Advantages

- ⊙ A relatively high drop point guarantees the high-temperature performance of the product
- ⊙ Excellent high/low temperature performance assures the normal lubrication of the lubricated parts in extended temperature range
- ⊙ Excellent colloid and mechanical stability guarantees fully lubrication of the lubricated parts
- ⊙ Excellent water-resistant performance guarantees the use of the product under damp environment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 117—2010

Applications

- ⊙ Suitable for lubrication of rolling bearing working under extended temperature range (e.g. servo-actuator, selsyn motor, gyroscope and small scale precision instrument).
- ⊙ Applied temperature range: -40℃ ~ 200℃

Typical Properties

Items	7015 high/low temperature lubricating grease
Appearance	Cream white, uniform ointment
1/4 penetration, 0.1mm	69
Drop point, ℃	297
Pressured oil separation, % (m/m)	16.89
Evaporation loss (180℃, 1hr), % (m/m)	1.38
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Similar viscosity (-60℃, 10s ⁻¹), Pa·s	191
Chemical stability (oxygen tension 0.78 MPa, 100℃, 100hrs) pressure drop, MPa	None

Special Attentions

- ⊙ Dust and impurities entering into should be prevented during storage and use
- ⊙ During use, the lubricated part should be cleaned and dried before injecting it
- ⊙ Do not mix with other greases

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7016-1 Lubricating Grease for Precision Bearing

SINOPEC 7016-1 lubricating grease for precision bearing is refined based on organic gelling agent thickened synthetic oil, with the addition of additives for oxidation-resistance, etc.

Advantages

- ⊙ Excellent high/low temperature performance assures the normal lubrication of precision bearing in extended temperature range
- ⊙ Excellent mechanical and colloid stability guarantees fully lubrication of the precision bearing
- ⊙ Excellent chemical stability guarantees a relative long service life for the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD227—2008

Applications

- ⊙ Suitable for lubrication of high speed and long service life gyro motor bearings and high speed precision bearing
- ⊙ Applied temperature ranges: $-60^{\circ}\text{C} \sim 220^{\circ}\text{C}$, and 230°C for a short period

Typical Properties

Items	7016-1 lubricating grease for precision bearing
Appearance	Grey white, uniform ointment
1/4 penetration, 0.1mm	71
Drop point, $^{\circ}\text{C}$	> 300
Pressured oil separation, % (m/m)	12.4
Evaporation loss (200°C , 1hr), % (m/m)	1.0
Similar viscosity (-50°C , 10s^{-1}), Pa·s	678

Special Attentions

- ⊙ Dust and impurities entering should be prevented during the storage and using process so that it won't affect the application
- ⊙ During use, the lubricated parts should be cleaned and dried before injecting it
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7016 High/Low Temperature Lubricating Grease

SINOPEC 7016 high/low temperature lubricating grease is refined based on organic gelling agent thickened synthetic oil, with the addition of additives for oxidation-resistance, etc.

Advantages

- ⊙ Excellent high/low temperature performance assures the normal lubrication of the bearing in extended temperature range
- ⊙ Excellent mechanical and colloid stability guarantees fully lubrication of the precision bearing
- ⊙ Good water-resistant performance allows the bearing to work under damp environment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 119—2010

Applications

- ⊙ This product applies to the lubrication of bearing of aviation electric machines (e.g. generator, motor and inversion converter) and other industrially equipped rolling bearings working under high temperature environment
- ⊙ Applied temperature range: -60℃ ~ 200℃, 250℃ for short period of time

Typical Properties

Items	7016 high/low temperature lubricating grease
Appearance	Light yellow, uniform ointment
1/4 penetration, 0.1mm	62
Drop point, ℃	315
Pressured oil separation, % (m/m)	10.35
Evaporation loss (200℃, 1hr), % (m/m)	1.07
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	383
Chemical stability (oxygen tension 0.78 MPa, 100℃, 500hrs) pressure drop, MPa	None

Similar Foreign Products

- ⊙ It's of equal using performance with Kluber TK44N3 of Germany, TORAG SILICONE SH44 of Japan and DOW MOLYKOTE44 of the US

Special Attentions

- ⊙ Stored in clean and dry place away from sunlight
- ⊙ Dust and impurities entering should be prevented during the storage and using process
- ⊙ Lubricated parts during use, the lubricated part shall be cleaned and dried before injecting it
- ⊙ Do not mix with other greases

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7017-1 High/Low Temperature Lubricating Grease

SINOPEC 7017-1 high/low temperature lubricating grease is refined based on organic gelling agent thickened synthetic oil, with addition of multiple additives.

Advantages

- ⊙ Good high/low temperature performance, particularly excellent in high-temperature performance. The bearing will have a long bearing life under high-temperature environment
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment
- ⊙ Good oxidation-resistant performance guarantees the long-term performance under high-temperature environment
- ⊙ Good rust prevention property, protecting the bearing components from being rust-eaten

Performance Specification

The product meets the following specifications:

- ⊙ SH 0431—92 (1998)

Applications

- ⊙ Suitable for lubrication of rolling bearing working under high-temperature, high-speed, field operation in cold area and the extended temperature range with the temperature exceeding 200℃, such as aviation electric machine, electric appliances, thrust bearing of the clutch, high-temperature blower, wheel bearing of the racing car, etc. It also applies to the lubrication of operating bearings working under high-temperature environment, such as the plastic stretching machine, polyester hot-setting machine, resin finishing machine, molten salt bump motor, long-loop steamer, high-temperature dye vat, decating machine, shrinkage machine, etc
- ⊙ Applied temperature range: -60℃ ~ 250℃, and 280℃ for short period of time

Typical Properties

Items	7017-1 high/low temperature lubricating grease
Appearance	Grey, uniform ointment
Drop point, ℃	> 330
1/4 penetration, 0.1mm	72
Evaporation loss (200℃), % (m/m)	0.75
Pressured oil separation, % (m/m)	7.34
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	1492
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Chemical stability (oxygen tension 0.78 MPa, 100℃, 100hrs) pressure drop, MPa	None

Similar Foreign Products

It is as excellent as the following foreign brands under high temperature:

SINOPEC	SHELL	MOBIL	KLUBER
7017-1	Aeroshell Grease 15A	Grease 24	UNISLDOW TK44N2

Application Examples

- ⊙ A printing and dyeing company and a dyeing and finishing company have used this product on the blower bearing and speed-control lead screw for years. The feedback on the result is good
- ⊙ As to a printing and dyeing plant in Shanghai, its bearing temperature reaches 200°C ~ 250°C on the fabric hot-setting machine, loop drying machine, decating machine, leakage-proof machine, high-temperature and high-pressure dye vat and other equipment. When using this product, the bearing operates normally with good lubrication. The plant replaced the Germany Kluber Barrittra L55/2 with this product on the polyester hot-setting machine. Grease adding period is 3months~6months, which meets the lubrication requirement of the equipment
- ⊙ An insulation material plant has successfully replace the imported expensive fluoro-ether grease with this product on the plastic stretching machine
- ⊙ A printing and dyeing plant in Nantong has used the product on the bearing of high-temperature blower of Japan SST resin finishing machine, with no running-off or coking and good lubrication condition
- ⊙ A dyeing plant has used this product on the axial pump bearing pumping 400°C molten salt of the anthroquinone fixed bed reactor and the grease has been changed only once during the two-and-a-half year's running

Special Attentions

- ⊙ Stored clean and dry place away from sunlight
- ⊙ Before use, the lubricated part should be cleaned and dried before injecting it
- ⊙ Do not mix with other greases
- ⊙ After use, the cap should be sealed to prevent the entering of impurities

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7018 High Speed Bearing Lubricating Grease

SINOPEC 7018 high speed bearing lubricating grease is refined based on organic gelling agent thickened synthetic oil, with the addition of high-active additives.

Advantages

- ⊙ Excellent oxidation stability prevents oil from deteriorating under high temperature circumstances
- ⊙ Excellent mechanical stability and appropriate adhesion prevents the loss of lubricating grease
- ⊙ Excellent high/low temperature property can assure the normal operation of the bearing in extended temperature range
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment
- ⊙ Good lubricity protects the bearing from wearing
- ⊙ Excellent comprehensive performance guarantees a relatively long service life of the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 120—2004

Applications

- ⊙ It's particularly designed for the lubrication of high-speed light-loaded bearing, suitable for lubrication of long service life gyro motor, high-speed grinding head and other precision instrument, with one million of DN values
- ⊙ Applied temperature range: -45℃ ~ 140℃, and 160℃ for short period of time

Typical Properties

Items	7018 high speed bearing lubricating grease
Appearance	Light brown, uniform ointment
Drop point, ℃	322
1/4 penetration, 0.1mm	68
Pressured oil separation (200g ± 5g), %	3.56
Evaporation loss (140℃, 3hrs), % (m/m)	0.94
Similar viscosity (-40℃, 10s ⁻¹), Pa·s	765
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified

High/Low Temperature Bearing Grease

Similar Foreign Products

- ⊙ It's of equal performance with the ISOFLEX NBU 18 of KLUBER in high-speed light load bearing application

Special Attentions

- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Lubricated parts, material compatability test should be carried out when used in lubricated parts lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

- ⊙ To be packed with 250g and 1kg plastic box or as required by customers

7019-1 Ep High Temperature Lubricating Grease

SINOPEC 7019-1 EP high temperature lubricating grease is refined based on compound soap thickened refined semi-synthetic oil, adding multiple additives for extreme pressure, oxidation-resistance and rust prevention. It can be divided into five designations based on the level of thickness: 00, 0, 1, 2, 3.

Advantages

- ⊙ Good ep and anti-attribution performance provides effective for the load-bearing parts and reduces attrition
- ⊙ Good oxidation stability prevents the deteriorating of lubricating grease under high-temperature environment and guarantees a relatively long service life under high temperature
- ⊙ Good rust prevention performance prevents corrosion of metal components.
- ⊙ Good fretting wearing protection performance prevents pit corrosion and attrition under fretting circumstances

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD234—2008

Applications

- ⊙ It applies to the lubrication of the bearing working under high temperature environment in petrochemical, textile, printing and dyeing, mining, steel, float glass and other industries, various medium, heavy loaded ball bearing, pin roller, roller bearing as well as lubrication of the transmission parts and the couplings of the baking equipment gear, riding wheel of the chain, etc
- ⊙ Products with thickness level of 00, 0 and 1 are used in centralized lubrication system
- ⊙ Applied temperature ranges: -30℃ ~ 150℃, and 180℃ for short period of time

Typical Properties

Items	7019-1 EP high temperature lubricating grease			
	0	1	2	3
Appearance	Yellow, smooth, uniform ointment			
penetration	360	324	267	239
Drop point, ℃	>300	>300	>300	>330
Evaporation loss (180℃, 1hr)	2.36	2.2	1.9	2.68
Similar viscosity (-20℃, 10s ⁻¹)	430	721	1084	1438
Corrosion (45#steel, 100℃, 3hrs)	Qualified	Qualified	Qualified	Qualified
Bearing capacity				
Maximum non-seizure load P _B , N	1373	1236	1236	1373
Comprehensive wear value ZMZ, N	652	652	699	705

High/Low Temperature Bearing Grease

Technical Certification

- ◎ Technical recognition for matching material by Wuhan Atlantic Metallurgical Engineering & Technology Co., Ltd
- ◎ Technical recognition for matching material by CISDI Engineering Co., Ltd

Similar Foreign Products

It's of equal performance in bearing lubrication with following abroad products:

- ◎ FARMLAND BLUE GAB, CHEVRON WTRA DUTY GREASE 2, SHELLDARINA 2; MoM PLEX 47, 48; MOBILITH SrtC 200; SHELL ALVANIA; SKF LGMT ESSOBEACON 2; RONEX MP; SHELL RETINAX LX; TRI-PAX MEOALUBE; MOBILUX NUWON 24 (RUS)

Application Examples

- ◎ Yanshan Petrochemical Company, Dalian Petrochemical Corporation and Liaoyang Petrochemical Corporation have thousands of various types of electric machine from 500kW to 900kW. The original choice is 3[#]supramoly lithium grease for lubrication. It's specified by the lubrication rules that the lubricating grease should be replaced every 3months~6months. Due to bad lubrication, seizure of large electric machines happens occasionally and badly affects the production. After using this product, lubrication period of the bearing has extended to over a year, and seizure of large electric machines disappears. It has saved both time and money
- ◎ The steel plant of a steel group company replaced the ordinary lithium grease with this product on bearing of the driving electric machine in high-temperature radiation area. After that, the amount of repairing work reduce to the half, and the originally frequent recovering service due to ineffective lubrication of the electric machine bearing has basically disappeared, which is a great favor to the recover service staff

Special Attentions

- ◎ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ◎ Close the cap in time after each use, keeping moisture and dust away

Packing

- ◎ To be packed with 1kg plastic box and 17kg plastic drum or as required by customers

7020 Lubricating Grease for Bearing of Kiln Car

SINOPEC 7020 lubricating grease for bearing of kiln car is refined based on the inorganic gelling agent thickened synthetic oil, with the addition of multiple additives for oxidation-resistant and extreme pressure, etc.

Advantages

- ◎ Good high-temperature performance, particularly good lubricity under high temperature, guarantees the normal lubrication of the bearing of kiln car under high temperature environment
- ◎ Good oxidation-resistant capability guarantees the high-temperature performance of the lubricating grease
- ◎ Good water-resistant performance, possibly being used under damp environment
- ◎ Good protective performance, preventing lubricated parts from the erosion of external environment

Performance Specification

The product meets the following specifications:

- ◎ Q/SH303 122—2010

Applications

- ◎ It applies to the lubrication of rolling bearing under high temperature, low speed and heavy loaded working conditions. For example, as to bearing of ceramics, electromagnetic, tiles and other kiln cars and chains and bearings of some baking equipment, if properly greased, service life of the bearing can be extended to 7years. Meanwhile, it's also applicable for lubrication bearing of sintering pallet, standstill heated steel ingot, aluminum ingot, tempering skip car, the upper central bearing of the active charcoal resurgent furnace for sewage disposal as well as the lubrication of high temperature bearing of combustion furnace, regeneration furnace, regeneration evacuating machine, spray paint drying production line, etc
- ◎ Applicable temperature: 250℃ for long term and as high as 300℃ for short term

Typical Properties

Items	7020 lubricating grease for bearing of kiln car
1/4 penetration, 0.1mm	68
Drop point, ℃	> 330
Pressured oil separation, % (m/m)	7.17
Evaporation loss (250℃, 1hr), % (m/m)	4.18
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified

Technical Certification

- ⊙ Technical recognition for matching material by CISDI Engineering Co., Ltd

Similar Foreign Products

- ⊙ It's of equal performance in using with Germany UNISLON TK44N2 RecA of Kluber

Application Examples

- ⊙ It's been applied to the high-temperature bearing of constructional ceramics production equipment in Dongguan and Foshan of Guangdong Province. Feedback on the application is good

Special Attentions

- ⊙ The grease should be sealed right after used in prevention of dust contamination
- ⊙ This product will become drier when the using temperature is over 250℃. It'll form a layer of solid membrane and still can lubricate

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7023 Low Temperature Aviation Lubricating Grease

SINOPEC 7023 low temperature aviation lubricating grease is refined based on organic gelling agent thickened synthetic oil, with the addition of additives for oxidation-resistance and rust prevention, etc. It meets requirements of roct 6267-74.

Advantages

- ⊙ Excellent low-temperature performance, ensuring the normal lubrication of the using parts under low temperature environment
- ⊙ Excellent rust prevention and protective property, effectively preventing the metal components from external erosion
- ⊙ Good lubricity, ensuring the normal lubrication of the bearing and reducing attrition of the bearing
- ⊙ Excellent storage stability, ensuring the normal using of the product
- ⊙ Excellent colloid and mechanical stability, preventing the product from oil bleeding and easily liquidizing and running off
- ⊙ Good adhesion, ensuring that the product is adhered to the lubricated parts

Performance Specification

The product meets the following specifications:

- ⊙ GJB 2660—96 (type B)

Applications

- ⊙ It applies to the lubrication, prevention and protection of the aerogun, retraction system and operation system of the plane
- ⊙ Applied temperature range: -60℃ ~ 120℃

Typical Properties

Items	7023 low temperature aviation lubricating grease
Appearance	Red, uniform ointment
Drop point, ℃	244
Penetration, 0.1mm	286
Pressured oil separation, %	14.38
Water content, % (m/m)	None
Evaporation loss (120℃), % (m/m)	3.23
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	744
Corrosion (T ₃ copper, 100℃, 3hrs)	Qualified
Acid value, mgKOH/g	1.02
Protective performance (45 [#] steel sheet, H62 brass sheet, 60℃, 48hrs)	Qualified

Special Attentions

- ⊙ Please clean the lubricated parts before using the product
- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away

Packing

- ⊙ To be packed with 250g and 1kg plastic box or as required by customers

7023B Low Temperature Lubricating Grease

SINOPEC 7023B low temperature lubricating grease is refined based on organic gelling agent thickened semi-synthetic oil, with the addition of additives for oxidation-resistance and rust prevention, etc.

Advantages

- ⊙ Excellent low-temperature performance, ensuring the normal lubrication of the using parts under low temperature environment
- ⊙ Excellent rust prevention and protective property, effectively preventing the metal components from external erosion
- ⊙ Good lubricity, ensuring the normal lubrication of the bearing and reducing attrition of the bearing
- ⊙ Excellent storage stability, ensuring the normal using of the product
- ⊙ Excellent colloid and mechanical stability, preventing the product from oil bleeding and easily liquidizing and running off
- ⊙ Good adhesion, ensuring that the product is adhered to the lubricated parts

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 124—2007

Applications

- ⊙ It applies to the lubrication of civil machinery such as automobile window regulator
- ⊙ Applied temperature range: -50℃ ~ 140℃

Typical Properties

Items	7023B low temperature lubricating grease
Appearance	Light yellow, uniform ointment
1/4 penetration, 0.1mm	73
Drop point, ℃	>250
Pressured oil separation, % (m/m)	12.38
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Chemical stability (oxygen tension 0.78 MPa, 100℃, 500hrs) pressure drop, MPa	None
Similar viscosity (-50℃, 20s ⁻¹), Pa·s	876
Protective performance (45#steel sheet, H62# copper sheet, 60℃, 48hrs)	Qualified
Anti-sprinkling performance (38℃ ± 2℃), % (m/m)	7.82
Evaporation loss (120℃, 1hr), % (m/m)	7.79

Application Examples

- ⊙ The power room air separation station of a beer group company has applied the 7023B low-temperature lubricating grease at the air cooling separating equipment, and thus solved the problem of bad lubrication with the original lubricating grease hardened under low temperature
- ⊙ An automobile accessories manufacturing company in Wenzhou has applied the 7023B low-temperature lubricating grease in the exporting automobile accessories, thus having solved the problem of the low cold tolerance of the original lithium grease and guaranteed the climate adaptation of the exported products

Special Attentions

- ⊙ Please clean the lubricated parts before using the product
- ⊙ Do not mix with other greases
- ⊙ Dust and impurities should be prevented during storing and using

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7025 High Temperature Lubricating Grease

SINOPEC 7025 high temperature lubricating grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of improving agent and lubrication agent.

Advantages

- ⊙ Good high-temperature and lubrication performance, possessing good lubrication performance and a relatively long service life particularly under high temperature
- ⊙ No coking and guarantying the normal lubrication of the bearing
- ⊙ Good adhesion performance, ensuring there are adequate lubricating grease at the lubricated parts

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 125—2004

Applications

- ⊙ It applied to the lubrication of low speed and medium speed heavy loaded sliding and rolling bearing, chain, gear working under high temperature of various industrial device and equipment
- ⊙ Using temperature may reach 300℃

Typical Properties

Items	7025 high temperature lubricating grease
1/4 working penetration, 0.1mm	72
Drop point, ℃	> 330
Evaporation loss (200℃, 1hr), % (m/m)	5.39
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified

Similar Foreign Products

- ⊙ It's of equal using performance with Germany KS 365 AFF of Kluber

Application Examples

- ⊙ A paper company in Panyu, Guangdong province, has applied this product on the rolling bearing of high-temperature setting machine of corrugated board production line. Result of use is good
- ⊙ A plate glass manufacturing enterprise in Qinhuangdao City has used this product on the rolling bearing of torch-cutting machine on the glass production line. Result of high-temperature bearing lubrication is good

Special Attentions

- ⊙ Before using, the lubricated parts should be cleaned with kerosene or other dissolvent and dried before pouring in this product
- ⊙ After use, the cap should be sealed to prevent the entering of impurities
- ⊙ Do not mix with other greases, or otherwise the result will be affected
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7026 Lubricating Grease for Automobile and Cannon Bearings

SINOPEC 7026 lubricating grease for automobile and cannon bearings is refined based on organic gelling agent thickened synthetic oil, with the addition of additives for oxidation-resistance, attrition protection and rust prevention, etc. It meets requirements of MIL-G-10924D-1984.

Advantages

- ⊙ Excellent low-temperature performance, ensuring a small starting torque for the bearing under low temperature environment
- ⊙ Excellent mechanical and colloid stability guarantees fully lubrication of the precision bearing

Performance Specification

The product meets the following specifications:

- ⊙ GJB 1730—93

Applications

- ⊙ Suitable for lubrication, prevention and protection of the bush bearing, bottom head and operating structure of the vehicles in cold areas
- ⊙ Applied temperature range: -45℃ ~ 110℃

Typical Properties

Items	7026 lubricating grease for automobile and cannon bearings
Working penetration, 0.1mm	272
Drop point, ℃	240
Pressured oil separation, % (m/m)	5.6
Evaporation loss (100℃, 1hr), % (m/m)	2.8
Similar viscosity (-45℃, 20s ⁻¹), Pa·s	1220
A hundred of thousand of watered cutting, penetration added value	34
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Rust prevention of the bearing (52℃, 48hrs), level	1

Special Attentions

- ⊙ Dust and impurities entering into should be prevented during the storage and using process so that it won't affect the application
- ⊙ Lubricated parts during use, the lubricated part shall be cleaned and dried before injecting it
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7028 Lubricating Grease for Aviation Wheel

SINOPEC 7028 lubricating grease for aviation wheel is refined based on organic gelling agent thickened synthetic oil, with the addition of multiple additives for oxidation-resistant, anti-corrosion and rust prevention, etc. It meets requirements of AIR 4205/B-75

Advantages

- ⊙ Excellent high/low temperature property can assure the normal operation of the bearing in extended temperature range
- ⊙ Excellent rust prevention and protective property, effectively preventing the metal components from external erosion
- ⊙ Good lubricity, ensuring the normal lubrication of the bearing and reducing attrition of the bearing
- ⊙ Excellent storage stability, ensuring the normal using of the product
- ⊙ Excellent shock-resistance loading, effectively ensuring the normal running of the bearing under occasional overload circumstances
- ⊙ Good rubber adaptation applies to most of rubbers

Performance Specification

The product meets the following specifications:

- ⊙ GJB 1239—91

Applications

- ⊙ Suitable for lubrication and tightening of aviation wheel bearing, aircraft engine accessories, rubber components of tightened system and other parts
- ⊙ Applied temperature range: -40℃ ~ 150℃, and 180℃ for short period of time

Typical Properties

Items	7028 lubricating grease for aviation wheel
Appearance	Light brown, smooth, uniform ointment
Drop point, ℃	227
Penetration, 0.1mm Working 60 times Working 10,000 times	261 264
Evaporation loss (100℃, 22hrs), %	0.24
Steel net oil separation, % (m/m)	4.82
Corrosion (T ₂ copper sheet, 100℃, 24hrs), A method, level	1b
Loss of water-resistant (41℃ ± 1℃) Grease, % (m/m) Appearance of the grease after water sprinkling	1.53 Colloid not damaged, grease smooth and uniform
Anti-corrosion property (52℃, 48hrs), level	1
Chemical stability (oxygen tension 0.78 MPa, 100℃, 500hrs) pressure drop, MPa	None

Similar Foreign Products

- ⊙ This product is of equal use performance with US Aeroshell Grease 5# and French AIR-4286 SI-4

Special Attentions

- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away

Packing

- ⊙ To be packed with 250g and 1kg plastic boxes or as required by customers

7029 Uramino Lubricating Grease for Continuous Caster

SINOPEC 7029 uramino lubricating grease for continuous caster is refined based on organic gelling agent thickened synthetic oil, with the addition of high-active additives.

Advantages

- ⊙ Excellent temperature resistant property, ensuring the normal operation of the bearing in extended temperature range
- ⊙ Excellent oxidation stability performance, preventing lubricating grease from deteriorating under high temperature circumstances
- ⊙ Good anti-acidic gas dielectric behavior, applicant for the lubrication under the environment of acidic gas medium
- ⊙ Good pumping property, guarantee effective lubrication of the central lubrication system
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment
- ⊙ Good lubricity can protect the bearing from wearing
- ⊙ Excellent comprehensive performance guarantees a relatively long service life of the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD224—2008

Applications

- ⊙ This product applies to long-term lubrication of medium, heavy loaded ball bearing, pin roller and sliding bearing under high-temperature and damp environment. For example, it applies to lubrication bearing of the steel plant's continuous casting production line, water pump bearing and bearing of the equipment that easily contacts water of the cement plant
- ⊙ Applied temperature range: $-10^{\circ}\text{C} \sim 150^{\circ}\text{C}$, 180°C for short period of time

Typical Properties

Items	7029 Uramino lubricating grease for continuous caster			
	2	1.5	1	0
Penetration, 0.1mm	265~295	295~325	310~340	355~385
Drop point, $^{\circ}\text{C}$	≥ 281	≥ 278	≥ 276	≥ 267
Evaporation loss (150°C), % (m/m)	≤ 1.2	≤ 1.5	≤ 1.9	≤ 2.5
Similar viscosity (-10°C , 10s^{-1}), Pa·s	≤ 873	≤ 387	≤ 453	≤ 251

Technical Certification

- ◎ Technical recognition for matching material by Wuhan Atlantic Metallurgical Engineering & Technology Co., Ltd
- ◎ Technical recognition for matching material by CISDI Engineering Co., Ltd

Similar Foreign Products

- ◎ This product is of equal lubricating grease performance with Japan's エマルグーリー
Lバニトグーヌヌ 2#, Germany's Kluber GH461 and F 020 in the applications on the continuous caster bearing and traveling roller table of the steel plant

Application Examples

- ◎ The steel plant of a steel group company has been using this product for years. The bearing loss rate has significantly dropped compared to original aluminum complex soap grease, and coking of the pipeline has basically been eliminated. Result of use is good
- ◎ The steel plant of a steel stock limited company introduced an ultra-low head slab continuous caster from SMS-Siena company of Germany in 1990. When using 1# ep lithium grease, various equipment operation failure related to lubrication occurred, such as bearing of the traveling roller table of the stretcher leveler occurring large areas of starvation, bad severe bearing damage due to bad lubrication, electric current of the stretcher leveler motor abnormally ascending, the system alerting and stopping the production, etc. After replaced with this product, the above failures disappeared. The bearing is in good lubrication and meets the lubrication requirement for imported equipment
- ◎ The steel plant of a steel group company has been using this product for the continuous caster for eight years. According to the company's feedback, bearing loss is very low. The comprehensive economic benefit is quite obvious

Special Attentions

- ◎ When applying 7029# grease to the centralized lubrication system, there no need to remove and wash the whole lubrication system, only injecting the grease into the centralized lubrication system and pushing the old grease out

Packing

- ◎ To be packed with 1kg plastic box, 17kg and 175kg iron barrel

7029A Uramino Lubricating Grease

SINOPEC 7029A uramino lubricating grease for continuous caster is refined based on organic gelling agent thickened high-quality mineral oil, with the addition of multiple additive for extreme pressure, oxidation resistant and rust prevention. It's divided into four designations based on thickness level: 0, 1, 1.5, 2.

Advantages

- ⊙ Good oxidation stability performance, preventing lubricating grease from deteriorating under high temperature circumstances
- ⊙ Good high/low temperature property, assuring the normal operation of the bearing in extended temperature range
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment
- ⊙ Good anti-acidic gas dielectric behavior, applicant for the lubrication under the environment of acidic gas medium
- ⊙ Good lubricity can protect the bearing from wearing
- ⊙ Good pumping performance, applicable for the centralized lubrication system
- ⊙ Excellent comprehensive performance, ensuring a relatively long service life of the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD224—2008

Applications

- ⊙ Suitable for a long-term lubrication of medium, heavy loaded ball bearing, pin roller and sliding bearing under high-temperature and damp environment. For example, it applies to lubrication bearing of the steel plant's continuous casting production line, water pump bearing and bearing of the equipment that easily contacts water of cement plant
- ⊙ Applied temperature range: -10℃ ~ 150℃

Typical Properties

Items	7029A uramino lubricating grease			
	2	1.5	1	0
Penetration, 0.1mm	285	305	323	375
Drop point, ℃	287	284	279	268
Evaporation loss (150℃), % (m/m)	1.2	2.1	2.8	3.1
Similar viscosity (-10℃, 10s ⁻¹), Pa·s	893	654	356	234

Similar Foreign Products

- ◎ This product is of equal lubricating grease performance with Japan's エマルーブー Lバ2#ニトゲースヌ, Germany's Kluber GH461 and F 020 in the applications on the continuous caster bearing and traveling roller table of the steel plant

Application Examples

- ◎ The steel plant of a steel group company used to apply lithium grease and aluminum complex grease for lubrication on the lubrication system of billet continuous caster. Problems such as blocking of lubrication pipeline, running off too fast of the grease, attrition rate remaining high due to bad lubrication of the bearing have occurred to both of the above lubricating greases. It requires large amount of maintaining work and has affected continuous productive operation. After using this product, the lubrication conditions have been improved and the amount of maintaining work on equipment lubrication has been significantly reduced
- ◎ The medium plate plant of a steel group company has been using this product for centralized lubrication on its newly introduced the sheet material production line of continuous casting and rolling since it went into production. Feedback on result of use is good

Special Attentions

- ◎ When applying 7029A grease to the centralized lubrication system, there no need to remove and wash the whole lubrication system, only injecting the grease into the centralized lubrication system and pushing the old grease out

Packing

- ◎ To be packed with 17kg plastic drum and 170kg iron barrel or as required by customers

7029D Lubricating Grease

SINOPEC 7029D lubricating grease is refined based on organic gelling agent thickened synthetic oil, with the addition of multiple additives for oxidation-resistant and anti-corrosion, etc. It's divided into three designations based on thickness level: 0, 1 and 1.5.

Advantages

- ⊙ Excellent oxidation stability performance, preventing the lubricating grease from deteriorating under high temperature circumstances
- ⊙ Excellent low-temperature performance can guarantee the normal operation of the bearing under low temperature circumstances
- ⊙ Excellent low-temperature performance, ensuring normal starting and lubrication of the bearing under low temperature environment
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment
- ⊙ Good pumping performance, applicable for the centralized lubrication system
- ⊙ Good lubricity can protect the bearing from wearing
- ⊙ Excellent comprehensive performance, ensuring a relatively long service life for the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD224—2008

Applications

- ⊙ This product applies to long-term lubrication of medium, heavy loaded ball bearing, pin roller and sliding bearing under high/low-temperature and damp environment
- ⊙ This product is particularly applicable for the centralized lubrication system
- ⊙ Applied temperature range: -40℃ ~ 180℃

Typical Properties

Items	7029D lubricating grease		
	0	1	1.5
Working penetration, 0.1mm	362	326	298
Drop point, ℃	269	275	271
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified	Qualified	Qualified
Evaporation loss (150℃, 1hr), % (m/m)	1.26	1.31	1.60
Similar viscosity (-30℃, 10s ⁻¹), Pa·s	387	703	790

Technical Certification

- ◎ Technical recognition for matching material by CISDI Engineering Co., Ltd

Application Examples

- ◎ An engine limited company used this product to lubricate the bearing of cooling fan of a high-power electricity generator after strict experiments. After years of using, it's been proved reliable in performance, ensuring the normal operation of the engine cooling fan under various temperature environments
- ◎ The rolling mill of a steel group company has applied this product to the centralized lubrication of cooling bank bearing. It has thoroughly solved the equipment lubrication problems when using lithium grease, such as coking and running off due to excess temperature of the cooling bank

Special Attentions

- ◎ After each use, the cap should be sealed to prevent the entering of impurities
- ◎ Do not mix with other greases, or otherwise the result will be affected
- ◎ When applying this product to the centralized lubrication system, there's no need to remove and wash the whole lubrication system, only injecting the grease into the centralized lubrication system and pushing the old grease out

Packing

- ◎ To be packed with 1kg plastic box, 17kg plastic drum, 175kg iron barrel or as required by customers

7035-1 Lubricating Grease for Rolling Bearing

SINOPEC 7035-1 lubricating grease for rolling bearing is refined based on organic gelling agent thickened high-quality base oil, with the addition of high-active additives.

Advantages

- ⊙ Excellent oxidation stability, preventing the lubricating grease from deteriorating under high temperature circumstances
- ⊙ Excellent adhesion property, preventing the lubricating grease from running off
- ⊙ Good lubricity can protect the bearing from wearing
- ⊙ Excellent ep performance can guarantee the normal operation of the bearing under heavy load
- ⊙ Excellent high-temperature performance, ensuring the normal operation of the bearing in relatively high temperature range
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment
- ⊙ Excellent comprehensive performance, ensuring a relatively long service life under high temperature, heavy load and sprinkling circumstances

Applications

- ⊙ Suitable for lubrication of the operating hot roll bearing under high temperature, high humidity and heavy load working environment in metallurgy industry, such as cogging, pre-finishing and finishing rolling bearing, etc. Application of this product has reduced the attrition rate of rolling bearing and amount of repairing work significantly
- ⊙ Suitable for lubrication of the operating equipment of straightening and sizing under the damp-heat working environment in metallurgy industry, prolonging fatliquoring period, and decreasing maintenance facility load
- ⊙ Suitable for lubrication occasions with relatively high requirement, or needing simplifying lubrication repairing, such as bearings of various large and medium blower, large water pump, medium and small electric machine, shaker, coupling, etc

Typical Properties

Items	7035-1 lubricating grease for rolling bearing	
	1	2
Appearance	Yellow, uniform, shiny ointment	
1/4 penetration, 0.1mm	78	68
Drop point, ℃	312	320
Anti-sprinkling property (90℃, 15min), %	0.91	0.85
Evaporation loss (180℃, 1hr), %	1.82	1.12
Similar viscosity (-10℃, 10s ⁻¹), Pa·s	346	432
Corrosion (45#steel, 100℃, 3hrs)	Qualified	
Steel net oil separation (100℃, 24hrs), %	3.23	2.86
Carrying capacity (four-ball testing method)		
Maximum non-seizure load P _B , N	1029	
Sintering load P _D , N	4900	

Special Attentions

- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away

Packing

- ⊙ To be packed with 17kg plastic drum and 170kg iron barrel or as required by customers

7035-1F Lubricating Grease for Rolling Bearing

SINOPEC 7035-1F lubricating grease for rolling bearing is refined based on organic gelling agent thickened high-quality base oil, with the addition of high-active additives.

Advantages

- ⊙ Excellent oxidation stability, preventing the lubricating grease from deteriorating under high temperature circumstances
- ⊙ Excellent adhesion property, preventing the lubricating grease from running off
- ⊙ Good lubricity can protect the bearing from wearing
- ⊙ Excellent ep performance can guarantee the normal operation of the bearing under heavy load
- ⊙ Excellent high-temperature performance, ensuring the normal operation of the bearing in relatively high temperature range
- ⊙ Good anti-sprinkling performance applies to lubrication bearing under damp environment
- ⊙ Excellent comprehensive performance, ensuring a relatively long service life under high temperature, heavy load and sprinkling circumstances

Applications

- ⊙ Suitable for applies lubrication of the operating hot roll bearing under high temperature, high humidity and heavy load working environment in metallurgy industry, such as cogging, pre-finishing and finishing rolling bearing, etc. Application of this product has reduced the attrition rate of rolling bearing and amount of repairing work significantly
- ⊙ Suitable for lubrication of straightening and sizing equipment working under damp and hot environment in industries of metallurgy, mining, power, machining, etc. Application of this product can effectively extend the operation life of the bearing and reduce the amount of repairing work
- ⊙ No.3 dense grease is applicable for the first manual assembly of the rolling machine bearing, and No.1.5 dense grease is applicable for the regular pumping refilling during operation of the rolling machine bearing
- ⊙ Applied temperature range: -20℃ ~ 180℃

Typical Properties

Items	7035-1F lubricating grease for rolling bearing	
	1.5	3
Appearance	Yellow, uniform, shiny ointment	
Penetration, 0.1mm	301	247
Drop point, ℃	197	203
Anti-sprinkling property (90℃, 15min), %	0.85	0.01
Evaporation loss (180℃, 1hr), %	1.24	1.13
Similar viscosity (-10℃, 10s ⁻¹), Pa·s	432	819
Corrosion (45#steel, 100℃, 3hrs)	Qualified	Qualified
Steel net oil separation (100℃, 24hrs), %	1.86	0.01
Carrying capacity (four-ball testing method)		
Maximum non-seizure load P _B , N	1029	1029
Sintering load P _D , N	4900	4900

Special Attentions

- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away

Packing

- ⊙ To be packed with 17kg plastic drum and 170kg iron barrel or as required by customers

7035 Special Sealing Grease for Sintering Machine Slide Way

SINOPEC 7035 special sealing grease for sintering machine side way is refined based on particular organic gelling agent thickened mineral oil, with the addition of high-active additives. It can be divided into four designations based on thickness level: 0, 0.5, 1 and 2.

Advantages

- ⊙ Excellent oxidation stability, preventing the lubricating grease from deteriorating under high temperature circumstances
- ⊙ Excellent high-temperature performance, preventing the lubricating grease from thinning down and running off under high temperature environment and maintaining good lubrication for the slide way
- ⊙ Excellent seal property, maintaining good seal effectiveness of the slide way, reducing air leakage rate and effectively improving sintering efficiency and quality
- ⊙ Good pumping performance, ensuring grease supply for the centralized lubrication system
- ⊙ Good lubricity can protect the slide way from wearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD228—2008

Applications

- ⊙ This product applies to the lubrication and sealing of the sintering machine slide way as well as other parts of sliding attrition needing lubrication and sealing under high temperature
- ⊙ Applied temperature range: -10℃ ~ 200℃

Typical Properties

Items	7035 special sealing grease for sintering machine side way
Penetration, 0.1mm	325
Drop point, ℃	> 330
Pressured oil separation (1kg), % (m/m)	2.56
Corrosion (45#steel, 100℃, 3hrs)	Qualified
Evaporation loss (180℃, 1hr), % (m/m)	2.5
Viscosity (-10℃, 10s ⁻¹), Pa·s	578
Anti-sprinkling property (38℃, 1hr), % (m/m)	2.0
Carrying capacity (room temperature, 1500rpm)	
Maximum non-seizure load P _B , N	1127
Sintering load P _D , N	2450
Diameter of wear spot (294N, 30min), mm	0.31
Sealing experiment (moving, 150℃) Vacuum level no less than 700mmHg, hr	> 10
Baking experiment (180℃, 2hrs)	No discoloration or running off

Technical Certification

- ◎ Technical recognition for matching material by Zhongye Changtian International Engineering Co., Ltd

Application Examples

- ◎ Over 10 large and medium-sized steelworks have applied this product for lubrication of sintering machine slide way for years. General feedback is that lubrication effectiveness of this product is better than lithium grease, ep lithium grease, aluminum complex grease and ordinary uramino lubricating grease, manifested mainly as following: This product has excellent high-temperature performance, good thickness consistency, strong adhesion at the high temperature section of the slide way, good sealing quality of the slide way and low air leakage rate. It also proves good lubrication effectiveness while consuming quantity of the lubricating grease is somewhat reduced. Attrition extent of the slide way is at least 30% lower comparing that uses ordinary lubricating grease

Special Attentions

- ◎ When applying this product to the centralized lubrication system, there's no need to clean the whole lubrication system, just pushing out the original grease with this product

Packing

- ◎ To be packed with 17kg plastic drum and 170kg iron barrel or as required by customers

7036 High/Low Temperature Lubricating Grease

SINOPEC 7036 high/low temperature lubricating grease is refined based on compound soap thickened synthetic oil, with the addition of additives for oxidation-resistance, ep attrition protection, etc. It's divided into three categories based on different kinematic viscosity of base oil 40℃: 7036 (100), 7036 (220) and 7036 (460).

Advantages

- ⊙ Excellent high/low temperature performance can assure the normal operation of the bearing in extended temperature range
- ⊙ Good lubricity can protect the bearing from wearing
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment
- ⊙ Excellent mechanical and colloid stability, preventing the lubricating grease from running off
- ⊙ Excellent oxidation stability, preventing the lubricating grease from deteriorating under high temperature circumstances

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 439—2007

Applications

- ⊙ This product applies to the lubrication of heavy-loaded low speed to medium-high speed rolling bearings in metallurgy, paper-making and textile industries, etc
- ⊙ Applied temperature range: -40℃ ~ 180℃, and 200℃ for short period of time

Typical Properties

Items	7036 high/low temperature lubricating grease		
	7036 (100)	7036 (220)	7036 (460)
Appearance	Light yellow, uniform ointment		
Working penetration, 0.1mm	280	—	270
Pressure oil separation (1kg), % mass fraction	8.4	7.5	8.7
Drop point, ℃	>300	>300	>300
Evaporation loss (180℃, 1hr), % (m/m)	4.3	3.2	2.9
Similar viscosity (-20℃, 10s ⁻¹), Pa·s	432	462	579
Rust prevention of the bearing, level	1	1	1
Corrosion (45#steel, 100℃, 3hrs)	Qualified		
Anti-sprinkling property (38℃, 1hr), % (m/m)	3.49	3.58	2.66
Four-ball testing (room temperature, 1500rpm)			
Maximum non-seizure load P _B , N	785	785	882
Sintering load P _D , N	2450	2450	3090

Similar Foreign Products

- ⊙ This product can replace Mobil SHC100, 220 and 460 in using performance

Special Attentions

- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away

Packing

- ⊙ To be packed with 250g and 1kg plastic boxes or as required by customers

7111 Semi-Fluid Lubricating Grease

SINOPEC 7111 semi-fluid lubricating grease is refined based on soap base gelling agent thickened synthetic oil, with the addition of additives for oxidation-resistance, rust prevention, etc. It's divided into five designations based on thickness level: 0, 00, 000, 0000 and 7111-5.

Advantages

- ⊙ Good high-speed performance, small starting torque ensuring fast starting
- ⊙ Excellent high/low temperature property can assure the normal operation of the bearing in extended temperature range
- ⊙ Good lubricity can protect the bearing from wearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 206—2004

Applications

- ⊙ This product applies to the lubrication of micro-motor, electrical toy bearing and precision instrument
- ⊙ Applied temperature range: -60℃ ~ 120℃

Typical Properties

Items	7111 semi-fluid lubricating grease			
	0	00	000	7111-5
Appearance	Light brown, uniform semi-fluid			
Penetration, 0.1mm	363	419	450	497
Drop point, ℃	175	170	—	—
Evaporation loss (120℃), %	0.74	0.4	0.8	0.5
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified	Qualified	Qualified	Qualified

High/Low Temperature Bearing Grease

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned and dried
- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Lubricated parts material compatability test should be carried out when used in lubricated parts lubricated part in contact with non-metallic material such as rubber, plastic and paint
- ⊙ This product changes color as soon as meet light, however, no impact on its use

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7112 Extended Temperature Aviation Lubricating Grease

SINOPEC 7112 extended temperature aviation lubricating grease is refined based on complex gelling agent thickened synthetic oil, with the addition of multiple additives for oxidation-resistant and anti-corrosion, etc.

Advantages

- ⊙ Excellent high/low temperature performance assures the normal lubrication of the lubricated parts in extended temperature range
- ⊙ Excellent oxidation stability, ensuring a relatively long service life for the bearing
- ⊙ Good colloid stability, ensuring a stable using performance of the lubricating grease
- ⊙ Good bearing anti-leakage property, preventing the lubricating grease from leaking out of the bearing and providing fully lubrication

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0445—92

Applications

- ⊙ Suitable for lubrication of the instrument and panel bearing, and other rolling bearing working light-loaded in extended-temperature range, such as various aviation airborne electric machines, electric appliances, meters, electrical structure and lubrication of other instrument, meter and micro-motor with high requirement about low-temperature starting property
- ⊙ Applied temperature range: -70℃ ~ 180℃

Typical Properties

Items	7112 extended temperature aviation lubricating grease
Appearance	Cream white, uniform ointment
Drop point, ℃	234
1/4 penetration, 0.1mm	74
Pressured oil separation, % (m/m)	11.55
Evaporation loss (180℃), % (m/m)	1.25
Similar viscosity (-60℃, 10s ⁻¹), Pa·s	283
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Chemical stability (oxygen tension 0.78 MPa, 100℃, 168hrs) pressure drop, MPa	None

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned and dried
- ⊙ After the first using, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7123 Lubricating Grease for Gyro Motor

SINOPEC 7123 lubricating grease for gyro motor is refined based on compounding soap base gelling agent thickened synthetic oil, added with oxidation-resistant, rust prevention and other additives.

Advantages

- ⊙ Good high/low temperature performance assures the normal lubrication of gyro motor in extended temperature range
- ⊙ Good mechanical and colloid stability, ensuring the normal lubrication of gyro motor bearing and reducing attrition
- ⊙ Good mechanical and colloid stability, ensuring the stability of the lubricating grease and stable lubrication of gyro motor bearing
- ⊙ Good protective performance, preventing the lubricated parts from the erosion of external environment
- ⊙ Excellent oxidation stability, ensuring a long service life for gyro motor bearing
- ⊙ Excellent oxidation stability, preventing the lubricating grease from deteriorating under high temperature circumstances

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 131—2010

Applications

- ⊙ Suitable for lubrication of gyro motor bearing
- ⊙ Applied temperature range: -60℃ ~ 120℃, and 150℃ for short period of time

Typical Properties

Items	7123 lubricating grease for gyro motor
1/4 penetration, 0.1mm	69
Drop point, ℃	186
Steel net oil separation (100℃, 24hrs), % (m/m)	4.95
Evaporation loss (120℃, 1hr), % (m/m)	0.56
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	530
Chemical stability (oxygen tension 0.78MPa, 121℃, 100hrs), pressure drop, MPa	0.015

High/Low Temperature Bearing Grease

Special Attentions

- ⊙ Before use the lubricated parts should be cleaned and dried
- ⊙ After each use, the cap should be sealed right away, or impurities will enter into the bottle to affect the application
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7201 Lubricating Grease for Rust Prevention of the Bearing

SINOPIEC 7201 lubricating grease for rust prevention of the bearing is refined based on organic gelling agent thickened mineral oil, with the addition of multiple additives for oxidation-resistant and anti-corrosion, etc. It's divided into two designations based on thickness level: 1.5 and 2.

Advantages

- ⊙ Good high-temperature performance and very long service life of the bearing
- ⊙ Good water-resistant property, providing good protective performance for the bearing under damp environment
- ⊙ Extraordinarily excellent rust prevention property and good acidic gas resistant capacity
- ⊙ Good lubricity, reducing noise of the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 210—2007

Applications

- ⊙ Suitable for prevention, protection and lubrication of open and sealed bearing when machines are operated under high-temperature, damp, harmful medium and other severe working environment. It also applies to the bearing lubrication and protection of domestic appliances which require low-noise, rust prevention and long service life (even 'lubrication for life')
- ⊙ Applied temperature range: -20℃ ~ 120℃, and 150℃ for short period of time

Typical Properties

Items	7201 lubricating grease for rust prevention of the bearing	
	2	1.5
1/4 penetration, 0.1mm	65	—
Drop point, ℃	266	260
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified	Qualified
Evaporation loss (120℃, 1hr), % (m/m)	0.87	0.91
Similar viscosity (-15℃, 10s ⁻¹), Pa·s	857	668
Pressured oil separation, %	2.82	4.42
Rust prevention of the bearing (52℃, 48hrs), level	1	1

Similar Foreign Products

- ⊙ This product is of equal performance with CALTEX BPM, Mobil GREASE BRB2 and CHEVRON SRI in rolling bearing lubrication and protection

Special Attentions

- ⊙ After each use, the cap should be sealed to prevent the entering of impurities
- ⊙ Do not mix with other greases, or otherwise the result will be affected

Packing

- ⊙ To be packed with 1kg plastic box and 17kg plastic drum or as required by customers

7417 EP Uramino Lubricating Grease

SINOPEC 7417 EP uramino lubricating grease is refined based on particular kind organic gelling agent thickened base oil, with the addition of high-active additives.

Advantages

- ⊙ Excellent oxidation stability, preventing the lubricating grease from deteriorating under high temperature circumstances
- ⊙ Excellent mechanical stability and adhesion property, preventing the loss of lubricating grease
- ⊙ Good anti-shock load capacity, ensuring the effective lubrication of the bearing under shock load
- ⊙ Good anti-acidic gas dielectric behavior, applicant for the lubrication under the environment of acidic gas medium
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment
- ⊙ Excellent EP wearing resistant property, protecting the bearing from wearing
- ⊙ Excellent comprehensive performance guarantees a relatively long service life of the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 222—2007

Applications

- ⊙ Suitable for lubrication of medium, heavy loaded ball bearing and pin roller under high-temperature, damp and relatively large shock load circumstances, such as the thermal vibrator bearing, bearing of large-sized blower, rolling bearing of the rolling machine of metallurgy industry, pulping machine, drying machine of paper-making plant and bearing of mining machine
- ⊙ Applied temperature range: -15℃ ~ 150℃, 180℃ for short period of time

Typical Properties

Items	7417 EP uramino lubricating grease
Appearance	Yellow, uniform ointment
Drop point, ℃	278
1/4 penetration, 0.1mm	68
Corrosion (T ₂ copper sheet, 100℃, 3hrs), B method	Qualified
Pressured oil separation, % (m/m)	3.5
Similar viscosity (-10℃, 10s ⁻¹), Pa·s	1213
Evaporation loss (150℃, 1hr), % (m/m)	1.2
Four-ball testing (room temperature, 1500rpm)	
Maximum non-seizure load P _B , N	833
Sintering load P _D , N	4900

High/Low Temperature Bearing Grease

Special Attentions

- ⊙ Stored in clean and dry place away from sunlight. After using for the first time, impurities entering should be prevented, or otherwise the application will be affected
- ⊙ Its color shall will darken as soon as meet light that doesn't affect its use
- ⊙ Do not mix with other greases

Packing

- ⊙ To be packed with 17kg plastic drum and 1kg plastic box or as required by customers



Special Kind Meters Grease

SYNTHETIC LUBRICANTS

(115-124)



Special 7, 75 Precision Meters Grease

SINOPEC special 7, 75 precision meters grease is refined based on special gelling agent thickened synthetic precision meters oil.

Advantages

- ⊙ Good lubricity, ensuring the normal lubrication of precision meters
- ⊙ Excellent rust prevention and prevention property, preventing the precision meter from rusting
- ⊙ Relatively small friction drag, ensuring the smooth operation of the precision meter
- ⊙ Good lower-temperature starting property, ensuring the normal starting of the precision meter under low temperature environment

Performance Specification

- ⊙ Lubricating grease 7 meets the following specification: SH 0456—92 (1998)
- ⊙ Lubricating grease 75 meets the following specification: Q/SH303 229—2004

Applications

- ⊙ Suitable for lubrication and protection agent on bearing and friction parts of the precision instrument and meter
- ⊙ Suitable for lubrication and protection of domestic appliances
- ⊙ Applied temperature range for lubricating grease special 7: -70℃ ~ 120℃, applied temperature range for lubricating grease special 75: -70℃ ~ 80℃

Typical Properties

Items	Special 7, 75 precision meters grease	
	Special grease 7	Special grease 75
Drop point, ℃	194	175
Amount of oil separation (50℃, 48hrs), % (m/m)	1.37	3.5
Evaporation loss (120℃), % (m/m)	1.44	1.55
Water content, % (m/m)	None	None
Mechanical impurities, % (m/m)	None	None
Corrosion (50℃, 48h, 40#steel sheet, H62 brass sheet, LY11 hard al-alloy sheet)	Qualified	Qualified
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	2047	800
Free alkali (NaOH), % (m/m)	0.03	0.03

Similar Foreign Products

- ⊙ This special 7 precision meter grease is of equal performance in using with OKB-122-7 specification products of Russia. The special 75 precision meter grease is of equal performance with OKB-122-75 specification products of Russia

Special Attentions

- ⊙ During use, the lubricated parts should be cleaned
- ⊙ Water and dust contamination should be prevented during storage and using

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7101 Instrument Grease

SINOPEC 7101 instrument grease is refined based on organic gelling agent thickened semi-synthetic oil, with the addition of additives for oxidation-resistance, etc.

Advantages

- ⊙ Good lubricity, ensuring the normal lubrication of instrument parts
- ⊙ Good protective performance, preventing the instrument parts from the erosion of external environment
- ⊙ Good colloid stability, ensuring the stable performance of the instrument and long-term normal lubrication of the instrument parts
- ⊙ Relatively low friction drag, ensuring the flexible operation of instrument and reducing attrition at the same time
- ⊙ Good lower-temperature starting property, ensuring the normal starting of the instrument under low temperature environment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 127—2010

Applications

- ⊙ This product applies to the lubrication and protection of optical instrument and meter as well as other precision machinery and instrument
- ⊙ Applied temperature range: -60℃ ~ 60℃

Typical Properties

Items	7101 instrument grease
Appearance	Light brown, uniform ointment
Drop point, ℃	77
Amount of oil separation (50℃, 24hrs), % (m/m)	None
Acid value, mgKOH/g	0.12
Water content, % (m/m)	None
Corrosion (40#steel sheet, H62 brass sheet, LY11 hard al-alloy sheet, 100℃, 4hrs)	Qualified
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	2009

Similar Foreign Products

- ⊙ This product is of equal performance in use with y II C-30 of Russia

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned and dried before pouring in this product
- ⊙ After the first using, the cap should be sealed right away, or impurities or water will enter the grease and affect the application
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 250g and 1kg plastic boxes or as required by customers

7102, 7103, 7104 Potential Device Damping Grease

SINOPEC 7102, 7103, 7104 potential device damping grease is refined based on inorganic gelling agent thickened synthetic oil, with addition of rust prevention, anti-corrosion additives and structure improving agent, etc.

Advantages

- ⊙ Excellent damping property, ensuring that the damping components have proper damping
- ⊙ Excellent lubrication property, ensuring excellent lubrication of the lubrication components and reducing wearing
- ⊙ Excellent rust prevention property, preventing lubrication and damping components from external erosion
- ⊙ Excellent insulation property, ensuring safety of the potential device
- ⊙ Excellent sealing property, preventing running off and providing full damping and lubrication

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0640—1997

Applications

- ⊙ 7102 and 7103 apply to the rotating shaft of rotary potential device, inductor, etc, and the damping and lubrication of the audio equipment slow-gated damper as well as the regulating system and rotary knob of instruments and meters such as microscope, telescope, etc
- ⊙ Damping property of 7102 is a little stronger than that of 7103
- ⊙ Applied temperature range: -30℃ ~ 130℃
- ⊙ 7104 applies to the damping and lubrication of the gliding slab and track of slide potential device. It also applies to the damping and lubrication of the sliding and rotary parts of regulation system of other precision instruments and meters
- ⊙ Applied temperature range: -50℃ ~ 150℃

Special Kind Meters Grease

Typical Properties

Items	7102, 7103, 7104 potential device damping grease		
	7102	7103	7104
Appearance	Sticky, uniform ointment		Cream white, uniform ointment
1/4 penetration, 0.1mm	65	66	90
Drop point, ℃	> 330	> 330	> 330
Evaporation loss (120℃, 1hr), % (m/m)	1.0	1.0	2.0
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified	Qualified	Qualified

Similar Foreign Products

This product is of equal performance in use with following abroad brands:

SINOPEC	Japan
7102, 7103	Japan ALPS, Panasonic GR-10, Toshiba D-43, Kanto FLOIL, Shin Etsu G331, Kanto FLOIL GP-574, Japan VRG50-90 414VR

Application Examples

- ⊙ A large-sized potential device manufacturing enterprise of Guangdong uses this product on the potential device. The quality is good and the products have been exported
- ⊙ A large-sized hardware manufacturing enterprise of Zhejiang Province has applied this product to the damping and lubrication of high-end loose-leaf bearing. The products have been sold to overseas market in large quantity

Special Attentions

- ⊙ Water and dust contamination should be prevented during storage and using
- ⊙ Before use, the lubricated parts should be cleaned and dried before pouring in this product
- ⊙ Do not mix with other greases

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7105 Optical Instrument EP Grease

SINOPEC 7105 optical instrument EP grease is refined based on soap base gelling agent thickened synthetic oil, with the addition of supramoly and additives for oxidation-resistant, rust-proofing and structure improving, etc.

Advantages

- ⊙ Excellent low-temperature performance, ensuring the normal starting and operation of the optical instrument under low temperature environment
- ⊙ Excellent lubrication ep property, ensuring the normal lubrication of the optical instrument and reducing wearing
- ⊙ Excellent sealing and adhesion property, ensuring the normal lubrication of the optical instrument
- ⊙ Relatively low evaporation loss and excellent 'fog-resistant' property, preventing the optical lens from oil fog and ensuring the optical property of optical instrument
- ⊙ Good 'mould-proof' property, ensuring the performance in use of this produce not affected by the breeding of microorganism

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0442—92

Applications

- ⊙ This product applies to lubrication the ep parts of the optical instrument, including worm wheel, gear, steel and copper rods, dovetail slot, dovetail guide, etc
- ⊙ Applied temperature range: -50℃ ~ 70℃

Typical Properties

Items	7105 optical instrument EP grease
Appearance	Black, uniform ointment
1/4 penetration, 0.1mm	60
Drop point, ℃	185
Pressured oil separation, % (m/m)	10.9
Evaporation loss (120℃), % (m/m)	0.66
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	1186
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned with gasoline or other dissolvent and dried
- ⊙ After each use, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7106, 7107 Optical Instrument Lubricating Grease

SINOPEC 7106, 7107 optical instrument lubricating grease is refined based on soap base gelling agent thickened synthetic oil, with the addition of supramoly and additives for oxidation-resistant, rust-proofing and structure improving, etc.

Advantages

- ⊙ Excellent low-temperature performance, ensuring the normal starting and operation of the optical instrument under low temperature environment
- ⊙ Excellent lubrication property, ensuring the normal lubrication of the optical instrument and reducing wearing
- ⊙ Excellent sealing and adhesion property, ensuring the normal lubrication of the optical instrument
- ⊙ Relatively low evaporation loss and excellent 'fog-resistant' property, preventing the optical lens from oil fog and ensuring the optical property of optical instrument
- ⊙ Good 'mould-proof' property, ensuring the performance in use of this produce not affected by the breeding of microorganism

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0443—92

Applications

- ⊙ These products apply to the lubrication and sealing of the rolling or sliding parts of optical instrument. 7106 is applicable for smaller clearance and 7107 is applicable for larger clearance
- ⊙ Applied temperature range: -50℃ ~ 70℃

Typical Properties

Items	7016, 7017 optical instrument lubricating grease	
	7106	7107
Appearance	Light brown, uniform ointment	Yellow brown, uniform ointment
1/4 penetration, 0.1mm	68	47
Drop point, ℃	104	104
Pressured oil separation, % (m/m)	5.50	2.41
Evaporation loss (120℃), % (m/m)	1.44	1.30
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	1357	—
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified	Qualified

Special Attentions

- ⊙ Before using, the lubricated parts should be cleaned with gasoline or other dissolvent and dried
- ⊙ After each use, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7108 Optical Instrument Dust-proof Grease

SINOPEC 7108 optical instrument dust-proof grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of structure improving agent and other additives.

Advantages

- ⊙ Excellent high/low temperature performance assures the normal lubrication of the optical instrument in extended temperature range
- ⊙ Good lubricity, ensuring the fully lubrication of the optical instrument
- ⊙ Good sealing property, ensuring a precise tolerance of the optical instrument
- ⊙ Good adhesion property, preventing the grease from running off and providing adequate lubricant for the optical instrument
- ⊙ Excellent dust-proof property, protecting the optical instrument from dust contamination

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0444—92

Applications

- ⊙ Suitable for the internal wall 'dust-proof' of the optical instrument
- ⊙ Applied temperature range: -50℃ ~ 70℃

Typical Properties

Items	7108 optical instrument dust-proof grease
Appearance	White, uniform ointment
1/4 penetration	57
Pressured oil separation, % (m/m)	4.30
Evaporation loss (120℃, 1hr), % (m/m)	0.54
Similar viscosity (-40℃, 10s ⁻¹)	389
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned with gasoline or other dissolvent and dried
- ⊙ After each use, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7109, 7110 Optical Instrument Lubricating Grease

SINOPEC 7109, 7110 optical instrument lubricating grease is refined based on soap base gelling agent thickened synthetic oil, with the addition of additives for oxidation-resistance, rust prevention, etc.

Advantages

- ⊙ Good pulling and adhesion property, adhering the lubricating grease at the lubricated parts
- ⊙ Excellent mould proof property, repressing the breeding of microorganism in optical instrument
- ⊙ Excellent high/low temperature property can assure the normal operation of the bearing in extended temperature range
- ⊙ Excellent free-running resistant property, protecting the optical instrument from contamination of the lubricating grease
- ⊙ Excellent anti-fogging property, ensuring cleanness of the optical lens
- ⊙ Good protective property, good protection on the metal components of optical instrument

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 130—2010

Applications

- ⊙ These products are applicable to the instrumented fine adjustment of optical instrument such as the metrological instrument, geodetic instrument, microscope, aerial remote sensing instrument, physical optics and camera. They're also applicable for parts lubrication and sealing of the focusing multi-start thread, worm and gear, screw shaft, converter, elevating screws, hand wheel, telescopic ocular as well as potential device of wireless instrument. No.7109 applies to larger clearance, and No.7110 applies to smaller clearance. Application of these products can significantly improve quality of the instrument, extend the service life and satisfy the requirements related to adhesion property, mould proof, fog proof, rust prevention and free-running resistance, etc
- ⊙ Applied temperature range: -40℃ ~ 120℃

Typical Properties

Items	7109, 7110 optical instrument lubricating grease	
	7109	7110
Appearance	Light brown, uniform ointment	Light brown, uniform ointment
1/4 penetration, 0.1mm	65	81
Drop point, ℃	186	179
Funnel oil separation (50℃, 24hrs), % (m/m)	None	0.11
Evaporation loss (120℃, 1hr), % (m/m)	0.81	0.89
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified	Qualified

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned and dried
- ⊙ After each use, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 250g and 1kg plastic boxes or as required by customers

7161 Special Damping Grease

SINOPEC 7161 special damping grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of multiple additives.

Advantages

- ⊙ Good colloid stability, ensuring stable performance of damping grease products and gaining a relatively long work life
- ⊙ Good low-temperature performance, ensuring the normal starting under low temperature environment
- ⊙ Good special-medium resistant capability, protecting damping components from external erosion
- ⊙ Excellent viscosity and temperature properties, ensuring that the change of damping property with temperature is smooth and no abrupt change
- ⊙ A relatively long storage life, ensuring the normal using of damping grease

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 132—2010

Applications

- ⊙ This product applies to the damping and lubrication of calibrator

Typical Properties

Items	7161 special damping grease
Appearance	Light brown, uniform ointment
1/4 penetration, 0.1mm	58
Pressured oil separation (200g ± 5g), % (m/m)	1.45
Corrosion (T ₃ copper sheet, 100 °C, 3hrs)	Qualified
Similar viscosity, Pa·s	
50 °C, 1000s ⁻¹	5.93
-40 °C, 10s ⁻¹	315

Special Attentions

- ⊙ Before using this product, the lubricated parts should be cleaned and dried
- ⊙ After each use, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7163 Special Damping Grease

SINOPEC 7163 special damping grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of anti-corrosion additive and structure improving agent.

Advantages

- ⊙ Excellent high/low-temperature performance, ensuring the working performance requirement in extended temperature range
- ⊙ Good adhesion property, preventing the product from running off and for full performance
- ⊙ Good pulling and appropriate damping properties, ensuring the working performance requirement of the product
- ⊙ Good adaptation to acrylonitrile-butadiene rubber, ensuring the mechanical property of rubber stay in normal range
- ⊙ Proper thickness, not running off under high temperature

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0447—92

Applications

- ⊙ This product applies to the special damping medium of vibration damper. It can also be used as damping lubricating grease for other equipment
- ⊙ Applied temperature range: -50℃ ~ 150℃

Typical Properties

Items	7163 special damping grease
Appearance	Light brown, uniform ointment
1/4 penetration, 0.1mm	80
Pressured oil separation (200g ± 5g), % (m/m)	6.02
Evaporation loss (120℃, 1hr), % (m/m)	0.12
Corrosion (45# steel sheet, 100℃, 3hrs)	Qualified
Similar viscosity (-40℃, 10s ⁻¹), Pa·s	183

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned and dried
- ⊙ After each use, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ Do not mix with other greases
- ⊙ Stored in clean and dry place away from sunlight

Packing

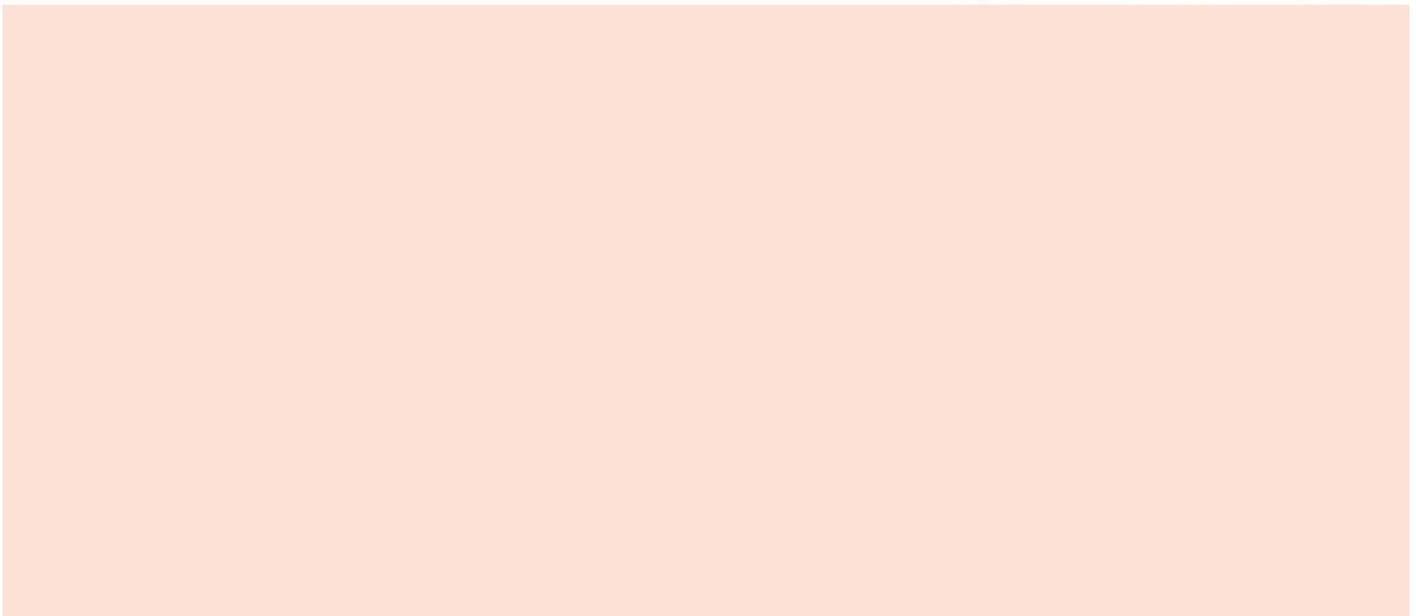
- ⊙ To be packed with 250g plastic box or as required by customers



Special Sealing Grease

SYNTHETIC LUBRICANTS

(125-140)



7013 Special Sealing Lubricating Grease

SINOPEC 7013 special sealing lubricating grease is refined based on soap base gelling agent thickened synthetic oil, with the addition of oxidation-resistant additive. It meets requirements of MIL-C-4343C.

Advantages

- ⊙ Excellent high/low temperature performance assures the normal lubrication of the sealed lubricated parts in extended temperature range
- ⊙ Excellent lubricity, ensuring the normal lubrication of the lubricated parts and reducing wearing
- ⊙ Good rubber adaptation, especially for acrylonitrile-butadiene rubber. It won't cause the swelling or contraction of the rubber and the sealing effectiveness can be guaranteed

Performance Specification

The product meets the following specifications:

- ⊙ GJB 3936—2000

Applications

- ⊙ This product applies to the lubrication and sealing between acrylonitrile-butadiene rubber piston ring and the cylinder. It can also be used as lubricant for common instrument bearing
- ⊙ Applied temperature range: -60℃ ~ 120℃

Typical Properties

Items	7013 special sealing lubricating grease
Appearance	Light brown, uniform ointment
1/4 penetration, 0.1mm	73
Drop point, ℃	193
Evaporation loss (120℃, 1hr), % (m/m)	0.75
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Similar viscosity (-50℃, 10s ⁻¹), Pa·s	301
Pressured oil separation, % (m/m)	21.09

Special Attentions

- ⊙ Please clean the lubricated parts before use
- ⊙ Water and dust contamination should be prevented during storage and use

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7405-1 Sealing Grease for High-temperature and pressure Screw Thread

SINOPEC 7405-1 sealing grease for high-temperature and pressure screw thread is refined based on particular kind inorganic gelling agent thickened high-quality base oil, with the addition of high-active additives. It meets requirements of API Bull 5A2.

Advantages

- ⊙ Extraordinary oxidation stability, preventing the lubricating grease from deteriorating under high temperature circumstances
- ⊙ Excellent rust prevention property, ensuring that the screw thread does not rust easily
- ⊙ Excellent sealing property, with good toleration against mediums such as hydrochloric acid, alkali liquor, saturate calcium chloride flushing fluid with medium concentration and natural gas containing sulphur
- ⊙ Excellent anti-viscosity property, ensuring that the screw thread is easy to detach after working normally under extended temperature
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0595—94 (acceptable parts)

Applications

- ⊙ Suitable for sealing and lubrication of oil and gas field deep-well sleeve screw thread. Applicable temperature can reach 180℃. Pressure tolerance can be 58.8MPa. It can tolerate medium concentration chemical mediums such as acid, alkali and salt

Typical Properties

Items	7405-1 sealing grease for high-temperature and pressure screw thread
Appearance	Black, uniform ointment
Drop point, ℃	> 300
Working penetration, 0.1mm	324
Evaporation loss (150℃, 3hrs), % (m/m)	0.94
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified

Special Attentions

- ⊙ Lubricated parts should be cleaned and dried before use
- ⊙ Do not mix with other greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Stored in clean and dry place away from sunlight

Packing

- ⊙ To be packed with 22kg iron barrel or as required by customers

7405 Sealing Grease for High-temperature and pressure Screw Thread

SINOPEC 7405 sealing grease for high-temperature and pressure screw thread is refined based on inorganic gelling agent thickened refined base oil, adding a certain amount of solid filling material, heavy polymer and anti-corrosion additive, etc. It meets requirements of API Bull 5A2.

Advantages

- ⊙ Excellent properties of tolerating acid, alkali and salt with medium concentration and water-resistance, guaranteeing excellent water-resistant and sealing properties under high temperature and high pressure environment

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0595—94 (first-class)

Applications

- ⊙ Suitable for sealing and lubrication of oil and gas field deep-well sleeve screw thread as well as down-hole casing in deep well or ultra deep well. Temperature at use can reach 200℃. It can tolerate the steam pressure of 59MPa and chemical mediums like acid, alkali and salt dissolvent with medium concentration

Typical Properties

Items	7405 sealing grease for high-temperature and pressure screw thread
Appearance	Black, uniform ointment
Penetration, 0.1mm	322
Drop point, ℃	> 300
Steel net oil separation (65℃, 24hrs), % (m/m)	1.6
Evaporation loss (150℃, 1hr), % (m/m)	0.2
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned and dried
- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away

Packing

- ⊙ To be packed with 17kg plastic drum or as required by customers

7409 Drill Tool Screw Thread Lubricating Grease

SINOPEC 7409 drill tool screw thread lubricating grease is refined based on soap base gelling agent thickened base oil, with addition of solid filling material.

Advantages

- ⊙ Good high-temperature performance, preventing screw thread from gluing under high temperature, easy to detach and clean
- ⊙ Good ep anti-attribution property, preventing screw thread scratching and gluing under high load and huge torque stress circumstances
- ⊙ Excellent sealing property and medium-tolerating property, preventing leakage at the joining part of screw thread

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 136—2007

Applications

- ⊙ Suitable for sealing and lubrication of the drill collar and drill pod component screw thread used in oil and gas field and geological exploration drilling
- ⊙ Applied temperature range: -15℃ ~ 200℃

Typical Properties

Items	7409 drill tool screw thread lubricating grease
1/4 penetration, 0.1mm	85
Evaporation loss (150℃, 1hr), % (m/m)	1.35
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified
Similar viscosity (-10℃, 10s ⁻¹), Pa·s	136

Similar Foreign Products

- ⊙ This product is of equal performance with Canada BESTOLIFE Zn-50 in sealing and lubrication of the drill collar and drill pod component screw thread

Application Examples

- ⊙ Since 1983, this product has been successively promoted and applied in Daqing, Xinjiang, Huabei, Zhongyuan, Qinghai and other oil fields. Practice has shown that this product is better in performance over other various drill rod screw thread grease, especially with deep well
- ⊙ A drilling team has used this product and drilled 104 times in a well with a depth of 4210m. No thread gluing or accident occurred
- ⊙ The steel pipe factory of a steelworks greased this product on the petroleum casing pipe screw thread. Result of use is good and thread gluing never occur

Special Attentions

- ⊙ Before use, the joining part of the screw thread should be cleaned with kerosene or other dissolvent and dried
- ⊙ Do not mix with other greases
- ⊙ After each use, the lid should be sealed right away, or impurities will enter into the bottle to affect the application

Packing

- ⊙ To be packed with 17kg plastic drum or as required by customers

7501 Fine Vacuum Silicone Grease

SINOPEC 7501 fine vacuum silicone grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of multiple additives and structure improving agent.

Advantages

- ◎ Good high/low-temperature performance, ensuring the lubrication and sealing properties under high/low temperature environment
- ◎ Good water-resistant sealing property, applicable for lubrication and sealing under damp environment
- ◎ Good dissolvent resistant property, ensuring lubrication and sealing under dissolvent environment
- ◎ Good dielectric property, ensuring safety of using electric appliances
- ◎ Excellent anti-corrosion property, assuring not to corrode the metal components
- ◎ Excellent adaptation property to material, excellent adaptation to multiple non-metal material such as rubber, nylon, polypropylene, etc

Performance Specification

The product meets the following specifications:

- ◎ Q/SH PRD129—2008

Applications

- ◎ Suitable for lubrication and sealing of the glass piston and the fitting of polished edge in a 6.65×10^{-4} pa vacuum system
- ◎ Suitable for lubrication and sealing when bromine, water and other chemical medium exist
- ◎ Suitable for electricity insulation and sealing
- ◎ Applied temperature range: $-40^{\circ}\text{C} \sim 200^{\circ}\text{C}$

Typical Properties

Items	7501 fine vacuum silicon grease
Appearance	White, half transparent, smooth, uniform ointment
1/4 penetration, 0.1mm	52
Evaporation loss (200°C), % (m/m)	0.86
Similar viscosity (-40°C , 10s^{-1}), Pa·s	510
Pressured oil separation, % (m/m)	2.80

Technical Certification

- ◎ Technical recognition of matching material by Henan Pinggao Electric Co., Ltd

Similar Foreign Products

It's of equal performance with following abroad brands in lubrication and sealing properties:

SINOPEC	US Dow-Corning Company	Britain	
7501	DC-111	EDWARDS HIGH VACUUM GREASE FISHER 14-635-5	NO. 234 SILICONE GREASE

Application Examples

- ◎ Lots of well logging companies at home have applied this product as protective sealing grease on faucet of the deep well logging instrument. It can tolerate temperature of 200℃ and 1400 atm press. Logging depth can reach 7000m at the maximum
- ◎ A well-established low-pressure manufacturer at home has applied this product to realize vacuum on the sealing fetting of vacuum switch of the medium-pressure switch cabinet. The company has been using the 7501 fine vacuum silicone grease since 2000, and the feedback on result of use is good

Special Attentions

- ◎ Stored in clean and dry place away from sunlight
- ◎ The glass piston and fitting should be cleaned with dissolvent and died before use
- ◎ After each use, the cap should be sealed right away, or impurities will enter into the bottle to affect the application

Packing

- ◎ To be packed with 50g and 1kg plastic boxes or as required by customers

7502, 7503 Silicone Grease

SINOPEC 7502, 7503 silicone grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of multiple additives and structure improving agent. They meet respectively requirements of SAE AS8660-1999, MIL-DTL-21567B (OS)-2009.

Advantages

- ⊙ Good high/low temperature performance, ensuring the lubrication and sealing properties under high/low temperature environment
- ⊙ Good water-resistant sealing property, applicable for lubrication and sealing under damp environment
- ⊙ Good dissolvent resistant property, ensuring lubrication and sealing under dissolvent environment
- ⊙ Good dielectric property, ensuring safety of using electric appliances
- ⊙ Excellent anti-corrosion property, ensuring not to corrode the metal components
- ⊙ Excellent adaptation property to material, excellent adaptation to multiple non-metal material such as rubber, nylon, polypropylene, etc

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0432—92 (1998)

Applications

- ⊙ No.7502 is applicable for the sealing and lubrication between rubber and metal, glass, ceramics contacting certain chemical materials, or metal valve whirler, fitting and other low-speed sliding parts; the potential device damper and insulation and sealing of electric appliances; filling medium of liquid coupling, etc. It can also be used in the lubrication and sealing of vacuum system with the vacuity reaching 1.33×10^{-4} Pa
- ⊙ Applied temperature range: $-54^{\circ}\text{C} \sim 205^{\circ}\text{C}$, and 260°C for short period of time
- ⊙ No. 7503 is used as the corrosion restraining agent and lubricant of black metal parts (screw thread and non-screw thread), also suitable for prevention, protection and insulation of electric appliances
- ⊙ Applied temperature range: $-60^{\circ}\text{C} \sim 200^{\circ}\text{C}$

Typical Properties

Items	7502, 7503 silicone grease	
	7502	7503
Appearance	White, half transparent, smooth, uniform ointment	
1/4 penetration, 0.1mm	59	68
Evaporation loss (200°C), % (m/m)	0.51	0.50
Similar viscosity (-40°C , 10s^{-1}), Pa·s	480	97 (-54°C , 25s^{-1})
Corrosion (LC9 ultra-hard al-alloy, 45#steel sheet, 100°C , 3hrs)	Qualified	Qualified
Pressured oil separation, % (m/m)	3.05	10.59
Water-resistant sealing property ($25^{\circ}\text{C} \pm 3^{\circ}\text{C}$, 24hrs)	Qualified	—

Similar Foreign Products

Excellent as same as the foreign brands in performance as follows:

SINOPEC	Nissan	Japan (Shin Etsu)	US Dow-Corning Company
7502号 7503号	ユニベツニトブシル (V4L VESAL)	SH-11 Siliconfett	DC-111

Special Attentions

- ⊙ Dust contamination should be prevented during storage and use
- ⊙ Tools and lubricated parts should be cleaned and dried before greasing
- ⊙ Do not mix with other greases

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7602 High-temperature Sealant

SINOPEC 7602 high-temperature sealant is refined in particular process based on inorganic gelling agent thickened synthetic oil, with addition of solid filling material.

Advantages

- ⊙ Excellent thermal stability, ensuring the sealing property under high temperature
- ⊙ Good lubricity, ensuring the lubricity under high temperature
- ⊙ Good sealing property, ensure the sealing of the using parts
- ⊙ Relatively low friction coefficient, reducing the wearing of the sealed parts
- ⊙ Good mechanical stability, preventing the product from running off and providing good sealing property
- ⊙ Excellent chemical medium resistant property, able to resist mediums like ammonia water, hydrochloric acid with medium concentration, water, etc

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0446—92

Applications

- ⊙ Suitable for the secondary sealing and lubrication of various high-temperature and high-pressure valves used in delivering mediums like vapor, diluted acid, air, etc
- ⊙ Temperature of the mediums can reach 530℃, and pressure may reach 10.29MPa

Typical Properties

Items	7602 high-temperature sealant
Appearance	Light yellow, plastic club
1/4 penetration, 0.1mm	23
Drop point, ℃	>300
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified

Similar Foreign Products

Excellent as same as the foreign brands in performance as follows:

SINOPEC	Japan	Britain	United States
7602	Yamatake G22, G42, Niigata 5	CROSBY C6	Climax750 asonlilan 5 Walworthlh Wolseal 2

Application Examples

- ⊙ Many chemical fertilizer manufacturers at home have successfully applied this product in replacement of Climax-750, Masonlilan 5, Walworth, Wolseal2, CrosbyC6, G22 nad G42 of Janpan Yamatake, Niigata 5 and other imported similar products made by foreign companies of the US, Britain, Japan, etc

Special Attentions

- ⊙ This product is a plastic club sealant which isn't easy to solidify. According to specific situations, it can be filled into different sealing parts after willfully moulding
- ⊙ This product is poisonless and there's no need to take particular prevention measures during using. It won't cause any harm when contacting human skin
- ⊙ Do not use this product in mixture with other oil products
- ⊙ Stored in cool and dry place away fro sunlight

Packing

- ⊙ To be packed with 150g paper box or as required by customers

7605, 7605-1 Oil-resistant High Temperature Sealing Grease

SINOPEC 7605, 7605-1 oil-resistant high temperature sealing grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of ep additive.

Advantages

- ⊙ Good resistant properties against mediums like mineral oil and vapor, ensuring the using performance of the sealing grease at the using parts and guaranteeing the sealing
- ⊙ Good high-temperature sealing property, ensuring the sealing under high temperature
- ⊙ Good cementation resistant property, ensuring the normal detachment of the screw thread without cementation

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 140—2010

Applications

- ⊙ These products apply to the sealing and lubrication of the steam injection well system of exploring thick oil with thermal force at the oil field, screw thread coupling parts of the wellhead device and the starting and closing parts of the valves
- ⊙ The 7605 grease mainly applies to the sealing and lubrication of the paddle valve starting and closing parts of the thermal exploration wellhead device
- ⊙ The 7605-1 grease mainly applies to the sealing and lubrication of coupling parts of the thermal-insulated oil tubing of thermal exploration steam injection well, pumping rod, heat-resistant sealer, wellhead device, etc. The products can be used under the working condition when the steam injection temperature is 350℃ and pressure is 17.5 MPa (178kgf/cm²)

Typical Properties

Items	7605, 7605-1 oil-resistant high temperature sealing grease	
	7605	7605-1
Appearance	Black, uniform ointment	
1/4 penetration, 0.1mm	70	77
Drop point, ℃	>330	>330
Pressured oil separation (200g ± 5g), % (m/m)	2.43	2.43

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned and dried
- ⊙ Dust and impurities entering into should be prevented during the storage and use, otherwise the application shall be affected the application
- ⊙ Do not mix with other greases

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7606 Special Lubrication Sealing Grease

SINOPEC 7606 special lubrication sealing grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of additives for oxidation resistant, anti-corrosion, etc.

Advantages

- ⊙ Excellent high/low temperature performance assures the normal lubrication and sealing of the using parts in extended temperature range
- ⊙ Good anti-corrosion property, preventing the using parts from the erosion of external environment
- ⊙ Good ep property, ensuring the normal lubrication and sealing of the using parts under heavy load
- ⊙ Good compatibility to rubber, ensuring that the swelling or contraction of the rubber parts of using parts is within appropriate tolerance range

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 141—2010

Applications

- ⊙ This product applies suitable for lubrication and sealing of N-674-70 rubber seal packing ring
- ⊙ Applied temperature range: -45℃ ~ 120℃

Typical Properties

Items	7606 special lubrication sealing grease
1/4 penetration, 0.1mm	62
Drop point, ℃	242
Pressured oil separation, % (m/m)	6.5
Evaporation loss (120℃, 1hr), % (m/m)	4.3
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Similar viscosity (-35℃, 10s ⁻¹), Pa·s	1478
Chemical stability (oxygen tension 0.78MPa, 100℃, 100hrs) pressure drop, MPa	None

Special Attentions

- ⊙ Dust and impurities entering into should be prevented during the storage and use
- ⊙ Lubricated parts during use, the lubricated part shall be cleaned and dried before injecting it
- ⊙ Do not mix with other greases

Packing

- ⊙ To be packed with plastic box or as required by customers

7903 Oil-resistant Packing Grease

SINOPEC 7903 oil-resistant packing grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of multiple additives for oxidation-resistant and anti-corrosion, etc. There are four designations of this product series: 7903, 7903-1, 7903-2 and 7903-3. It meets requirements of MIL-G-6032D.

Advantages

- ⊙ Good oil-resistant property. Gasoline, kerosene oil and lubricant, water, ethanol and liquefied petroleum gas won't cause dissolution or decomposition to this product, gaining excellent sealing effectiveness
- ⊙ Good lubricity, lubrication while sealing
- ⊙ Excellent adhesion property and good high-temperature performance, fully displaying the sealing property of the product
- ⊙ Good oxidation-resistant performance guarantees the long-term performance of the product
- ⊙ Good pressure resistance, vibration resistance and non-solidification properties, ensuring good sealing property of the product and making the parts easy to detach

Performance Specification

The product meets the following specifications:

- ⊙ 7903 meets the specification of SH/T 0011—90
- ⊙ 7903-1, 7903-2 and 7903-3 meet the specification of Q/SH303 511—2007

Applications

- ⊙ 7903[#]packing grease applies to the sealing and lubrication of gasket-type seal, sliding with low speed and rotating seal plane of the mechanical equipment, locomotive, pipeline, valves, etc, which is in contact with gasoline, kerosene oil, lubricant, water, ethanol, liquefied petroleum gas and other mediums. Applied temperature range: -10℃ ~ 150℃
- ⊙ 7903-1[#]packing grease applies to the lubrication and sealing of the low-speed rolling or sliding bearing which is in contact with the above mediums. Applied temperature range: -20℃ ~ 150℃
- ⊙ 7903-2[#]packing grease applies to the sealing and lubrication of the valve rod of the pipeline which carries the above mediums. Applied temperature range: -10℃ ~ 150℃
- ⊙ 7903-3[#]packing grease applies to the sealing and lubrication of the seal part which need filling-up with the grease gun. Applied temperature range: -10℃ ~ 150℃

Typical Properties

Items	7903 oil-resistant packing grease			
	7903	7903-1	7903-2	7903-3
Appearance	Sticky, uniform ointment			
1/4 Non-working penetration, 0.1mm	61	58	45	75
Drop point, ℃	>330			
Corrosion (T ₃ copper sheet, 100℃, 24hrs), level	1b	—		
Corrosion (45 [#] steel sheet, 100℃, 3hrs)	—	Qualified		
Fuel oil resistant property Dissolubility (room temperature)	Passed			

Similar Foreign Products

- ◎ This product is of equal performance with the SHELL Aviation S7108 and Kluber NOSOL UTA

Application Examples

- ◎ In the case of the medium-sized rolling mill of a steel company, due to severe aging of the equipment, the 24hrs oil leakage amount of press-down device of the 2350 rolling machine reached 540kg. Without making any changes on the seal parts, by applying this product for sealing on the moving or static seal planes at the junction surfaces between rack and pedestal, pedestal and intermediate axle housing, copper sleeve and pedestal, thrust bearing, copper sleeve and hollow screw, the sealing result is good and leakage has disappeared after a year's running
- ◎ A boiler factory has applied this product as auxiliary sealing material on the maintaining valve and seal device of its 400t oil hydraulic press, 30# hydraulic fluid used as the medium, pressure at 10kg/cm² and temperature at 60℃. After half year's running, no leakage occurred
- ◎ A gas mine has applied this product as slide valve sealant on the parallel paddle valve of the natural gas recovering wellhead device, with the pressure at 380kg/cm²~400kg/cm². Sealing of the valve is good and no leakage occurs. Sichuan Petroleum Administration has applied this product on the above equipment for a hundred times of starting testing with the pressure at 500kg/cm². Sealing property of this product is proved good

Special Attentions

- ◎ Before applying, the greasing parts should be cleaned with kerosene (or gasoline), acetone or watered synthetic cleaning solvent, and blown to dry or dried in the air
- ◎ After the first using, the bucket lid should be sealed right away, or impurities will enter the bottle and affect the application
- ◎ It's applicable to be cleaned with acetone or watered synthetic cleaning solvent

Packing

- ◎ To be packed with 1kg plastic box or as required by customers

7903-4 Methanol Resistant Sealing Grease

SINOPEC 7903-4 methanol resistant sealing grease is refined based on particular kind organic gelling agent thickened base oil, with the addition of high-active additives.

Advantages

- ⊙ Excellent chemical stability, preventing the lubricating grease from deteriorating under high temperature circumstances
- ⊙ Excellent methanol resistant property, applicable for the lubrication of bearing which is in contact with methanol
- ⊙ Excellent mechanical stability, preventing the loss of lubricating grease
- ⊙ Excellent high-temperature performance, guaranteeing the normal operation of the bearing in extended temperature range

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 511—2007

Applications

- ⊙ This product is particularly designed for lubrication the bearing in contact with polyvinyl alcohol and methanol vapor in petroleum and chemistry industries
- ⊙ Applied temperature range: $-45^{\circ}\text{C} \sim 140^{\circ}\text{C}$, and 160°C for short period of time

Typical Properties

Items	7903-4 methanol resistant sealing grease
1/4 penetration, 0.1mm	62
Drop point, $^{\circ}\text{C}$	263
Pressured oil separation, %	4.52
Similar viscosity (-40°C , 10s^{-1})	1103
Brass (140°C , 3hrs)	Qualified
Corrosion (45# steel sheet, 100°C , 3hrs)	Qualified
Water content, % (m/m)	0.03

Special Attentions

- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Lubricated parts Material compatability test should be carried out when used in lubricated parts lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

- ⊙ To be packed with 250g and 1kg plastic boxes or as required by customers

7903-5 High/low-temperature Oil-resistant Sealing Grease

SINOPEC 7903-5 high/low-temperature oil-resistant sealing grease is refined based on inorganic gelling agent thickened synthetic oil, with the addition of multiple additives for oxidation-resistant and anti-corrosion, etc.

Advantages

- ⊙ Good oil-resistant property, used for auxiliary sealing of mechanical equipment which is in contact with mediums like crude oil, petroleum lubricant, water, etc
- ⊙ Good low-temperature performance, ensuring the starting and sealing of the valve under low temperature

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 511—2007

Applications

- ⊙ Suitable for auxiliary sealing of the mechanical equipment, locomotive, pipeline or valve which is contact with mediums like crude oil, heavy petroleum lubricant, water, etc
- ⊙ Applied temperature: $-40^{\circ}\text{C} \sim 150^{\circ}\text{C}$

Typical Properties

Items	7903-5 high/low-temperature oil-resistant sealing grease
Appearance	Cream white, uniform, smooth ointment
1/4 penetration: 0.1mm	89
Drop point, $^{\circ}\text{C}$	>300
Corrosion (T_3 copper sheet, 100°C , 24hrs)	Qualified
Similar viscosity (-50°C , 10s^{-1}), Pa·s	1800

Special Attentions

- ⊙ Before applying, the greasing parts should be cleaned with kerosene (or gasoline), acetone or watered synthetic cleaning solvent, and blown to dry or dried in the air
- ⊙ After the first using, the bucket lid should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ This product is not applicable for the sealing of pipeline or valve which is contact with the solvent naphtha

Packing

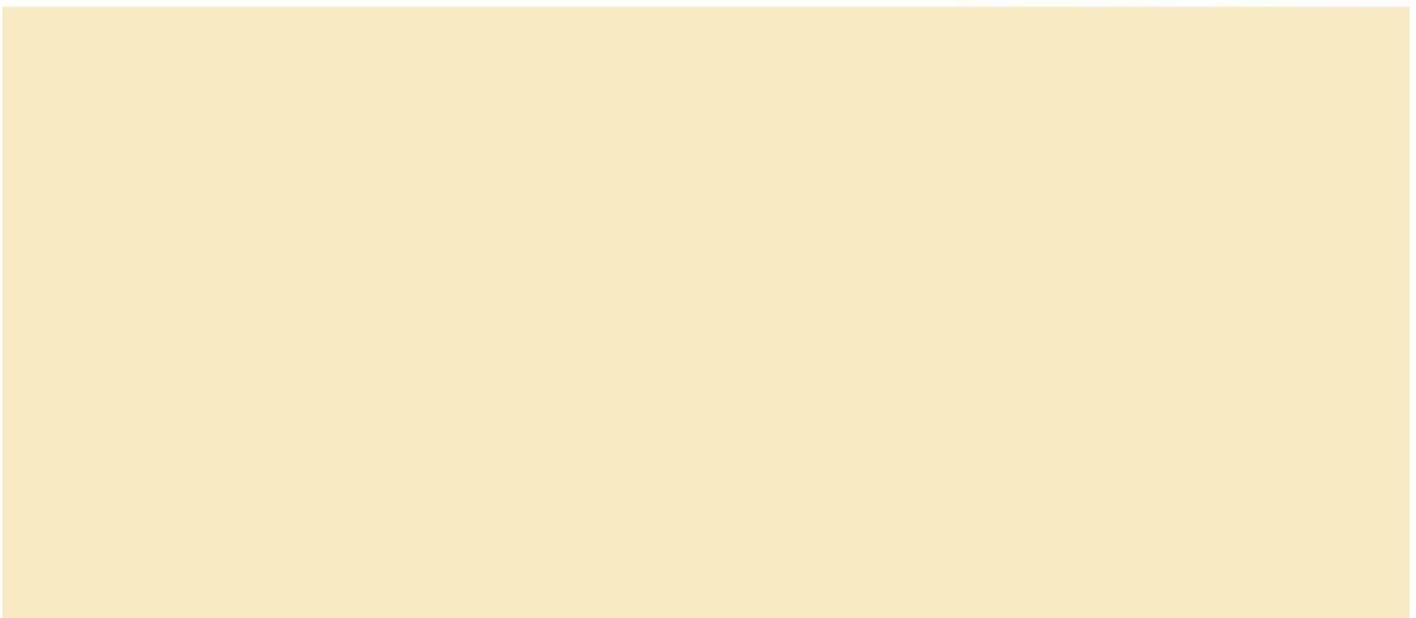
- ⊙ To be packed with 1kg plastic box or as required by customers



**Special Lubricating Grease
of Automobile Industry**

SYNTHETIC LUBRICANTS

(141–150)



7607 Sealing Grease for Vehicle Braking System

SINOPEC 7607 sealing grease for vehicle braking system is refined based on compounding soap base gelling agent thickened synthetic oil, with the addition of additives for oxidation resistant, anticorrosion, etc.

Advantages

- ⊙ Good high/low temperature performance, assuring the normal operation of the bearing in extended temperature range
- ⊙ Good oxidation stability, ensuring the long-term normal lubrication and sealing of the using parts
- ⊙ Good colloid stability, ensuring the stable lubricant and sealing of the using part
- ⊙ Good compatibility to acrylonitrile rubber, ensuring that the swelling or contraction of the acrylonitrile rubber using parts is within appropriate tolerance range
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 142—2007

Applications

- ⊙ This product applies to the lubrication and sealing between the rubber piston and cylinder wall of the valve in the motor vehicle air brake system for various heavy vehicles
- ⊙ Applied temperature range: $-40^{\circ}\text{C} \sim 100^{\circ}\text{C}$, possibly reaching 150°C in short time

Typical Properties

Items	7607 sealing grease for vehicle braking system
Appearance	Yellow brown, smooth, uniform ointment
Working penetration, 0.1mm	333
Drop point, $^{\circ}\text{C}$	204
Steel net oil separation (40°C , 18hrs), % (m/m)	0.31
Evaporation loss (150°C , 1hr), % (m/m)	0.86
Corrosion (T_2 copper sheet, 120°C , 3hrs), level	1b
Similar viscosity (-40°C , 10s^{-1}), Pa·s	1073
Anti-sprinkling performance ($79^{\circ}\text{C} \pm 1^{\circ}\text{C}$), % (m/m)	1.92

Technical Certification

- ⊙ Technical recognition of matching material by Zhejiang Shuion Group
- ⊙ Technical recognition of matching material by the auto-parts company of Dongfeng Motor Engineering Research Institute

Application Examples

- ⊙ A profession brake manufacturing factory has applied this product on the brake

Special Attentions

- ⊙ This product is not suitable to be used in mixture with other greases. Before using, the using part should be cleaned
- ⊙ After the first using, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ When using the grease, it's required to check whether the chosen rubber match this product. Use under the direction of the manufacturer if necessary
- ⊙ Stored in cool and dry place away from sunlight

Packing

- ⊙ To be packed with 17kg plastic drum or as required by customers

7608 Sealing Grease for Hydraulic Braking System

SINOPEC 7608 sealing grease for hydraulic braking system is refined based on soap base gelling agent thickened synthetic oil, with the addition of additives for oxidation resistant, anti-corrosion, etc. It meets requirements of JIS K2228.

Advantages

- ⊙ Good compatibility to the brake fluid, not causing undesirable change on the constituent of brake fluid
- ⊙ Good colloid stability, ensuring the stable lubricating and sealing of the using part
- ⊙ Good adaptation to ternary ethylene propylene rubber, good adaptation to rubber cup. Swell or contraction is within appropriate tolerance range
- ⊙ Good anti-sprinkling performance applies to lubrication of bearing of damp environment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 225—2004

Applications

- ⊙ Suitable for ubrimedium, preventing and protection between rubber cup and metal in the automobile hydraulic braking system
- ⊙ Applied temperature range: -40℃ ~ 110℃

Typical Properties

Items	7608 sealing grease for hydraulic braking system
Appearance	Yellow to brown, uniform, smooth ointment
1/4 penetration, 0.1mm	78
Drop point, ℃	202
Steel net oil separation (40℃, 24hrs), % (m/m)	0.24
Evaporation loss (150℃, 1hr), % (m/m)	0.91
Corrosion (T ₃ copper sheet, 100℃, 3hrs)	Qualified
Similar viscosity (-30℃, 10s ⁻¹), Pa·s	888

Special Attentions

- ⊙ This product should not be used in mixture with other greases. Please clean the using parts before using the product
- ⊙ After the first using, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ When using this product, be sure that the chosen rubber matches this product, or use under the direction of the manufacturer when necessary
- ⊙ Stored in cool and dry place away fro sunlight

Packing

- ⊙ To be packed with 17kg plastic drum or as required by customers

SHB6 Lubricating Grease for Accessories of the Auto Body

SINOPEC SHB6 lubricating grease for accessories of the auto body is refined based on soap base thickened synthetic oil, with addition of multiple additives.

Advantages

- ⊙ Excellent mechanical stability, ensuring that the lubricating grease is on accessories of the car body for lubrication and protecting
- ⊙ Excellent high/low temperature performance assures the lubrication, prevention and protection of accessories of the car body in extended temperature range
- ⊙ Excellent prevention and protection property, protecting accessories of the car body from external erosion
- ⊙ Excellent oxidation stability, ensuring the long-term lubrication, prevention and protection of accessories of the car body
- ⊙ Excellent water-resistant property, ensuring the normal lubrication, prevention and protection of accessories of the car body under damp environment

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 458—2007

Applications

- ⊙ Suitable for lubrication, prevention and protection of automobile accessories, such as window regulator, door lock, etc
- ⊙ Applied temperature range: -30℃ ~ 120℃

Typical Properties

Items	SHB6 lubricating grease for accessories of the auto body
Working penetration, 0.1mm	340
Drop point, ℃	192
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified
Corrosion (Zinc sheet, 100℃, 3hrs)	Qualified
Evaporation loss (100℃, 1hr), % (m/m)	0.39
Similar viscosity (-20℃, 10s ⁻¹), Pa·s	624
Running-off volume from sprinkling (40℃ ± 1℃), % (m/m)	2.62
Anti-corrosion property (52℃, 48hrs), level	1

Technical Certification

- ⦿ This product has gained the 'S' level of final recognition of France Peugeot car company

Special Attentions

- ⦿ Before use, the lubricated parts should be cleaned and dried
- ⦿ After each use, the cap should be sealed right away, or impurities will enter into the bottle to affect the application
- ⦿ Do not mix with other greases

Packing

- ⦿ To be packed with 17kg plastic drum or as required by customers

SHGL-9700 Lubricating Grease for Flexible Shaft

SINOPEC SHGL-9700 lubricating grease for flexible shaft is refined based on organic gelling agent thickened synthetic oil, with addition of multiple additives.

Advantages

- ⊙ Excellent mechanical and oxidation stability guarantees long-term lubrication of the flexible bearing
- ⊙ Excellent lubricity, guaranteeing normal lubrication of the flexible shaft
- ⊙ Excellent high/low temperature performance assures the normal lubrication of the flexible shaft in extended temperature range
- ⊙ Excellent prevention and protection property, protecting the flexible shaft from external erosion

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 435—2007

Applications

- ⊙ Suitable for lubrication, prevention and protection of the flexible shaft of automobile instrument
- ⊙ Applied temperature range: $-40^{\circ}\text{C} \sim 150^{\circ}\text{C}$

Typical Properties

Items	SHGL-9700 lubricating grease for flexible shaft
1/4 penetration, 0.1mm	71
Drop point, $^{\circ}\text{C}$	275
Corrosion (45#steel sheet, 100°C , 3hrs)	Qualified
Evaporation loss (100°C , 1hr), % (m/m)	0.36
Similar viscosity (-30°C , 10s^{-1}), Pa·s	1116

Special Attentions

- ⊙ Before use, the lubricated parts should be cleaned and dried
- ⊙ After each use, the cap should be sealed right away, or impurities will enter the bottle and affect the application
- ⊙ Do not mix with other greases

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

SHCVJ Automobile Constant Universal Joint Lubricating Grease

SINOPEC SHCVJ automobile constant universal joint lubricating grease is refined based on organic gelling agent thickened base oil, with the addition of multiple additives for oxidation-resistant and anti-corrosion, etc. It's divided into two designations based on thickness level: 2 and 2.5.

Advantages

- ⊙ Excellent high-temperature property, guaranteeing the normal operation of universal joint, which works very fast, under high temperature
- ⊙ Good low-temperature starting performance, guaranteeing normal starting and lubrication of the universal joint under low temperature environment
- ⊙ Excellent ep attrition resistance, reducing attrition of the universal joint and providing good vibration reduction property
- ⊙ Good anti-sprinkling property, providing good rust prevention property for the universal joint at the bottom head
- ⊙ Excellent comprehensive performance, guaranteeing a relatively long service life for the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 442—2007

Applications

- ⊙ Suitable for lubrication, prevention and protection of various constant universal joints, or other occasions which have rigorous requirements about water-resistance, anti-corrosion and ep attrition resistance
- ⊙ Applied temperature range: $-20^{\circ}\text{C} \sim 150^{\circ}\text{C}$, and 200°C for short period of time

Typical Properties

Items	SHCVJ automobile constant universal joint lubricating grease	
	2.5	2
Working penetration, 0.1mm	259	282
Drop point, °C	278	264
Corrosion (T ₃ copper sheet, 100°C, 3hrs)	1b	1b
Evaporation loss (150°C, 1hr), % (m/m)	1.2	1.5
Similar viscosity (-20°C, 20s ⁻¹), Pa·s	968	884
Pressured oil separation, %	3.3	3.5
Shearing stability, working penetration at 100,000 times, 0.1mm	318	343
Four-ball testing		
P _B , N	1118	1118
P _D , N	4905	4905

Technical Certification

- Technical recognition of matching material by Sichuan Huaqing Machinery Co., Ltd

Similar Foreign Products

- This product is of equal performance with Germany TL-738 in universal joint lubrication

Special Attentions

- After using, the cap should be sealed to prevent the entering of impurities
- Do not mix with other greases, or otherwise the result will be affected
- Its color may be darkened as soon as meet the light that is normal

Packing

- To be packed with 1kg plastic box and 17kg plastic drum or as required by customers

SHCVJ-WUT Automobile Constant Universal Joint Lubricating Grease

SINOPEC SHCVJ-WUT automobile constant universal joint lubricating grease is refined based on compounding organic gelling agent thickened semi-synthetic base oil, with the addition of multiple additives for oxidation-resistant anti-corrosion, special attrition resistant agent, etc. Its thickness level is 2.

Advantages

- ⊙ Excellent ep attrition resistance, reducing attrition of the universal joint and providing good vibration reduction property
- ⊙ Excellent high-temperature property, guaranteeing the normal operation of universal joint, which works very fast, under high temperature
- ⊙ Good low-temperature starting performance, guaranteeing normal starting and lubrication of the universal joint under low temperature environment
- ⊙ Good anti-sprinkling property, providing good rust prevention property for the universal joint at the bottom head
- ⊙ Excellent comprehensive performance, guaranteeing a relatively long service life for the bearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 442—2007

Applications

- ⊙ Suitable for to the lubrication, prevention and protection of various constant universal joints, or other occasions which have rigorous requirements about water-resistance, anti-corrosion and ep attrition resistance
- ⊙ Applied temperature range: $-40^{\circ}\text{C} \sim 150^{\circ}\text{C}$, and 200°C for short period of time

Typical Properties

Items	SHCVJ-WUT automobile constant universal joint lubricating grease
Working penetration, 0.1mm	282
Drop point, °C	254
Corrosion (45# steel sheet, 100°C, 3hrs)	Qualified
Evaporation loss (150°C, 1hr), % (m/m)	2.1
Similar viscosity (-30°C, 20s ⁻¹), Pa·s	1090
Low temperature torque (-40°C), N·m	
Starting torque	1.095
Working torque	0.254
Pressured oil separation, %	3.0
Four-ball testing	
P _B , N	1030
P _D , N	4095

Technical Certification

- ⊙ Technical recognition by Xiangyang Automobile Bearing Co., Ltd
- ⊙ This product has passed the endurance testing conducted by Xiangfan national automobile quality monitoring and examining centre

Similar Foreign Products

- ⊙ This product is of equal performance with Germany TL-738 in universal joint lubrication

Special Attentions

- ⊙ After use, the cap should be sealed to prevent the entering of impurities
- ⊙ Do not mix with other greases, or otherwise the applications shall be affected
- ⊙ Its color may be darkened as soon as meet the light that is normal

Packing

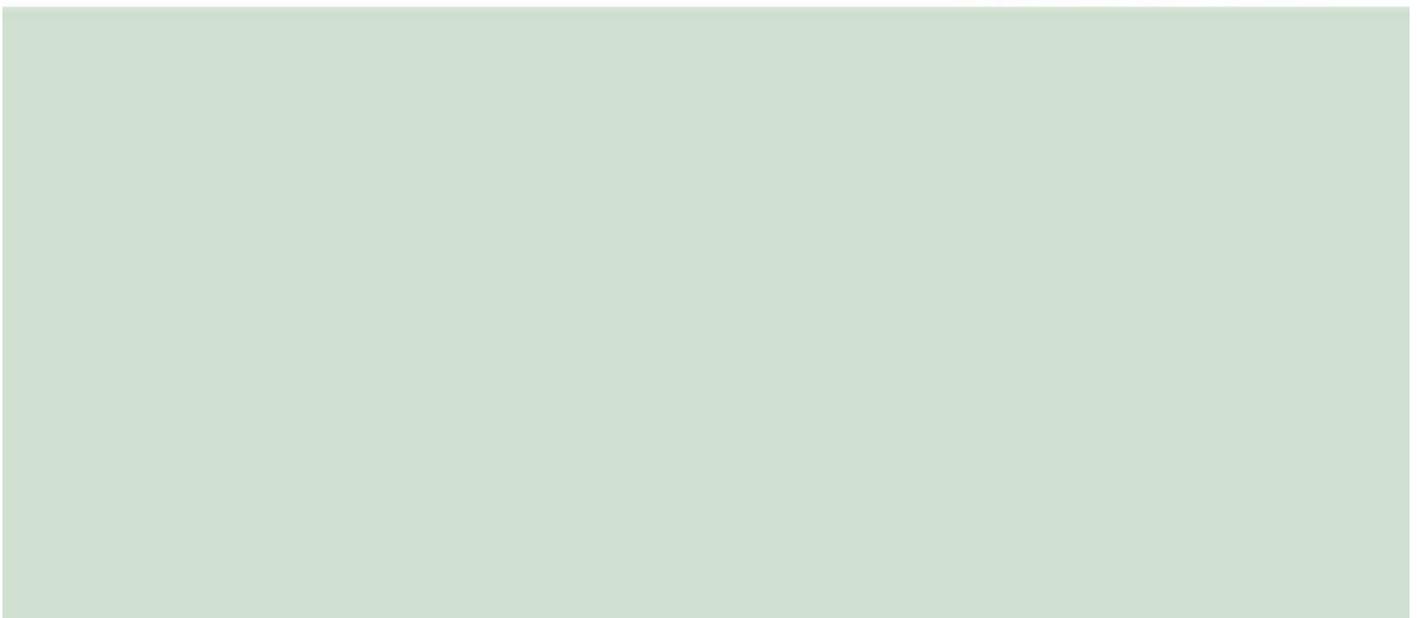
- ⊙ To be packed with 1kg and 17kg plastic drum or as required by customers



**Special Gear
Lubricating Grease**

SYNTHETIC LUBRICANTS

(151–159)



7403 High Temperature Gear Grease

SINOPEC 7403 high temperature gear grease is refined based on compounding soap base gelling agent thickened synthetic oil, with addition of antioxidant, supramoly, etc.

Advantages

- ⊙ Good high-temperature performance, no thinning or dry out, ensuring normal oil-bound film and good lubrication
- ⊙ Excellent sintering resistant capability, ensuring that the screw thread will no be sintered under high temperature and heave load

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 133—2010

Applications

- ⊙ Suitable for lubrication of heavy load gear, worm in a periodic running
- ⊙ Applied temperature range: -40℃ ~ 200℃

Typical Properties

Items	7403 high temperature gear grease
1/4 Non-working penetration, 0.1mm	54
1/4 penetration, 0.1mm	70
Drop point, ℃	297
Pressured oil separation (300g ± 10g), % (m/m)	1.64
Evaporation loss (250℃, 1hr), % (m/m)	8.45
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified
Similar viscosity (-30℃, 10s ⁻¹), Pa·s	592

Special Attentions

- ⊙ Before use, the greasing parts should be cleaned and dried
- ⊙ Do not mix with other greases

Packing

- ⊙ To be packed with 250g plastic box or as required by customers

7407 Gear Lubricating Grease

SINOPEC 7407 gear lubricating grease is refined based on the compounding soap base gelling agent thickened semi-synthetic oil, with the addition of multiple additives for oxidation-resistant and extreme pressure, etc.

Advantages

- ⊙ Excellent ep property, with the tolerable shock load of the oil-bound film is $2.45 \times 10^5 \text{N}$ (25000kgf/cm^2). At the same time of protecting the normal lubrication of the gear, it can also protect the normal operation of the gear under instant high and strong shock load
- ⊙ Excellent adhesion property, ensuring adequate oil-bound films for the gear
- ⊙ Good re-applying property, convenient for re-lubrication
- ⊙ Relatively long re-lubrication period. Re-applying this product every 3months~6months can ensure the normal operation of the equipment

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0469—94

Applications

- ⊙ This product applies to the lubrication of various low-speed, medium and heavy load gear, chain wheel, coupling, etc. Brush application method for chain wheel is suitable
- ⊙ Applied temperature range: $-10^\circ\text{C} \sim 120^\circ\text{C}$

Typical Properties

Items	7407 gear lubricating grease
Appearance	Brown, smooth, uniform ointment
1/4 penetration, 0.1mm	79
Drop point, $^\circ\text{C}$	218
Evaporation loss (120°C , 1hr), % (m/m)	0.68
Corrosion (45# copper sheet, 100°C , 3hrs)	Qualified
Adhesion property ($66^\circ\text{C} \pm 1^\circ\text{C}$, $150 \pm 10 \text{r/min}$, adhesion rate, %)	100
Pressured oil separation, % (m/m)	8.11
Maximum non-molten salt seizure load P_B , N	1176
Sintering load P_D , N	>6080

Special Attentions

- ⊙ The ratcheting parts should be thoroughly cleaned with kerosene oil or gasoline and dried before applying this product. Re-applying can be done every 3months~6months or even longer depending on circumstances
- ⊙ This product is suitable for the lubrication of the gear of which linear speed is lower than 4.5m/s. When applied to higher linear speed, lubrication effectiveness should be closely watched
- ⊙ This product is inappropriate for new gears that have not run in

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7408 Semi-fluid Gear Lubricating Grease

SINOPEC 7408 semi-fluid gear lubricating grease is refined based on soap base gelling agent thickened base oil, with the addition of additives for oxidation-resistance, ep, rust protection, etc. It's divided into three designations based on thickness level: 0, 00 and 000.

Advantages

- ⊙ Excellent ep property and proper adhesion property, ensuring good lubrication for the gear
- ⊙ Simple application process, convenient greasing and reduced amount of work
- ⊙ In replacement of the gear oil, it can reduce leakage of the oil tank, and the longer oil-change period reduces amount of repairing work and consumption of lubricating grease

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 135—2007

Applications

- ⊙ Suitable for various low, medium-speed (linear speed lower than 15m/s) heavy load enclosed gear, turbo, chain wheel, etc. It's particularly suitable for the lubrication of various medium-speed, heavy load enclosed speed reducer working under high temperature, dust and iron hammer scale circumstances, such as lubrication of the gear of speed reduce of different models of oil extractor (Model CYJ10-3-48HB, CYJ11-3-48) at the oil and gas field. It also applies to the gear lubrication of speed reducer of the 5t~30t bridge crane, major speed reducer of the 17 roll straightened, composite console, front console and the indicator speed reducer of 200, 1200 hot rolling mill in metallurgy industry
- ⊙ Applied temperature range: -20℃ ~ 100℃

Typical Properties

Items	7408 semi-fluid gear lubricating grease		
	0	00	000
Appearance	Light brown semi fluid		
Drop point, ℃	201	190	188
Working penetration, 0.1mm	369	413	466
Evaporation loss (120℃), % (m/m)	0.87	0.7	0.7
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified	Qualified	Qualified
Bearing capacity			
Maximum non-seizure load P _B , N	1234	1177	1079
Sintering load P _D , N	3924	3090	3090
Comprehensive wear value ZMZ, N	624	566	521

Technical Certification

- ◎ Technical recognition for matching material by CISDI Engineering Co., Ltd

Application Examples

- ◎ The medium plate plant of a steel group company has applied 7408 semi-fluid lubricant in replacement of the original industrial gear oil on all its speed reducing gear box, and thus solved the problem of severe leakage when using the gear oil due to aging of the equipment
- ◎ The assembling workshop of a heavy-type casting and forging factory originally applied the 220[#] CKC industrial gear oil for lubrication, followed by gear oil leaking and inconvenient for re-applying, severe environment pollution and gear damages frequently caused by inadequacy of the oil level. After using 7408[#] semi-fluid lubricant, the leaking problem has been solved and maintenance and repairing work is possible to avoid. After the constant operation for a year, working conditions of the equipment is good
- ◎ The oil extractor of the oil recovery factory of a oil field is located in the wild area and inconvenient for management. The originally applied oil extractor lubricant filled in the speed reducing box of the oil extractor not only leaked, but was also often stolen, which led to great loss due to 'dry-milling' of the equipment. Since the use of 7408 semi-fluid gear lubricant, the above stopped occurring. The operational life has extended over 3 times and the economic benefits are great. The factory has applied 7408[#] semi-fluid gear lubricant for the lubrication oil extractor speed reducing box of all its over 2000 oil extractors

Special Attentions

- ◎ Not suitable for newly installed gears that haven't run in, because it can't bring away materials generated during the running-in process
- ◎ Water and dust contamination should be prevented during storage and use
- ◎ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ◎ Close the cap in time after each use, keeping moisture and dust away. Close the cap in time after each use, keeping moisture and dust away

Packing

- ◎ To be packed with 17kg plastic drum or as required by customers

7412 Gear Lubricating Grease

SINOPEC 7412 gear lubricating grease is refined based on organic gelling agent thickened synthetic oil, with the addition of multiple additives for ep, oxidation-resistant and anti-corrosion, etc. It's divided into four designations based on thickness level: 0, 00, 000 and 0000.

Advantages

- ⊙ Good high/low temperature performance assures the normal lubrication of the gear in extended temperature range
- ⊙ Good thermal stability, ensuring the normal lubrication of the gear under high temperature environment
- ⊙ Good mechanical stability, ensuring stability of the gear lubricating grease and the normal lubrication of the gear
- ⊙ Excellent ep performance can guarantee the normal lubricating of the bearing under heavy load
- ⊙ Excellent comprehensive performance, guaranteeing a relatively long service life for the gear

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 137—2007

Applications

- ⊙ Suitable for lubrication of various low and medium speed (linear speed lower than 15m/s), heavy load gear drive or worm gear operated system and P type chain speed variator. It's applicable for the lubrication of closed full-life gear box
- ⊙ Applied temperature range: -40℃ ~ 150℃

Typical Properties

Items	7412 gear lubricating grease			
	0	00	000	0000
Appearance	Light yellow, uniform ointment			
Working penetration, 0.1mm	368	421	457	490
Drop point, ℃	259	225	210	209
Evaporation loss (150℃, 1hr), % (m/m)	1.42	0.93	1.12	1.20
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified	Qualified	Qualified	Qualified
Maximum non-seizure load P _B , N	1373	1305	1283	1305
Sintering load P _D , N	4900	4900	4900	4900
Comprehensive wear value ZMZ, N	690	837	692	680

Technical Certification

- Technical recognition for matching material by CISDI Engineering Co., Ltd
- Technical recognition of matching material by Huafeng Electric Appliances Co., Ltd of Guizhou Province, China

Similar Foreign Products

Excellent as same as the foreign brands in performance as follows:

SINOPEC	SHELL	BP	Germany Kluber
7412	Tivla compound A	Energrease GSF	Kluber Synth GE461 200

Application Examples

- A large-sized chemical fiber factory at home has applied this product on its textile heat processing P type chain speed variator and YL411 speed reducer. The re-greasing period at one time reaches 17240 hours
- A factory of Jiangsu Province is a professional manufacturer of small-sized P type speed reducer, whose production volume ranks No.1 through China. It has used this product since the designing and entering into production of its products. Its products have been sold to overseas market. The lubrication life of this product has satisfied the maintenance-free full-life lubrication requirement of the equipment
- The furnace door elevating speed reducer has become a rub for equipment lubrication of a aluminum material factory in Tianjin City. Due to the relatively high radiation temperature and rapid deterioration of the oil, the originally applied ordinary industrial gear oil can't ensure gear lubrication and oil leakage occasionally occurred. After replace with this product, leakage hasn't occurred any more. The re-applying period can reach 2 years and thus ensures the normal and stable proceeding of production

Special Attentions

- This product is not suitable for newly installed gears that haven't run in, because it can't bring away materials generated during the running-in process

Packing

- To be packed with 17kg plastic drum or as required by customers

7415 Lubricating Grease for Cannon Launching Structure

SINOPEC 7415 lubricating grease for cannon launching structure is refined based on soap base gelling agent thickened synthetic oil, with the addition of multiple additives for oxidation-resistant, anti-corrosion, solid lubricant, etc. It's divided into four designations based on thickness level: 0, 1, 2 and 000.

Advantages

- ⊙ Solid lubricated particles guarantees excellent lubricity
- ⊙ Good high/low temperature property, ensuring the normal starting and operation of the cannon launching structure 24/7

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH PRD223—2008

Applications

- ⊙ Suitable for lubrication of cannon launching structure, as well as other heavy and medium load friction spokes

Typical Properties

Items	7415 lubricating grease for cannon launching structure			
	0	1	2	000
Appearance	Black, smooth, uniform ointment			Black, smooth, uniform semi-fluid
Drop point, °C	196	198	210	—
1/4 penetration	86	81	72	443 standard penetration
Evaporation loss (120°C, 1hr)	0.58	0.42	0.43	0.68
Similar viscosity (-40°C, 10s ⁻¹)	525	880	952	—
Corrosion (45# steel sheet, 100°C, 3hrs)	Qualified	Qualified	Qualified	Qualified
Sintering load P _D , N	3924	3924	3924	3924

Special Attentions

- ⊙ Do not mix with other lubricating grease resulting in performance reduction due to possible physical or chemical reactions between different greases
- ⊙ Close the cap in time after each use, keeping moisture and dust away
- ⊙ Lubricated parts, material compatability test should be carried out when used in lubricated parts lubricated part in contact with non-metallic material such as rubber, plastic and paint

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

7420 Heavy Load Gear Lubricating Grease

SINOPEC 7420 heavy load gear lubricating grease is refined based on soap base gelling agent thickened high-viscosity base oil, with addition of extremely fine solid lubricant, additives for ep attrition resistant, oxidation resistant, anti-corrosion, rust prevention, etc.

Advantages

- ⊙ Excellent ep attrition resistance, ensuring good lubricity under heavy load, protecting the gear and reducing wearing
- ⊙ Excellent oxidation stability, preventing the lubricating grease from oxidative deterioration and prolonged the operational life
- ⊙ Good adhesion property, preventing the lubricating grease from running off and ensuring lubrication for the lubricated parts
- ⊙ Good anti-sprinkling property, retaining good lubrication when water exists

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 223—2007

Applications

- ⊙ Suitable for lubrication of various types of large-sized, heave load, low-speed to medium speed open gear, various models of dental coupling with the load capacity over 20000kgf/cm² such as the open large gear of ball mill of thermal power plant and cement plant or forging machine of machinery plant, etc
- ⊙ Applied temperature range: -30℃ ~ 120℃

Typical Properties

Items	7420 heavy load gear lubricating grease		
	000	00	0
Penetration, 0.1mm	450	426	370
Similar viscosity (-10℃, 20s ⁻¹), Pa·s	340	400	680
Drop point, ℃	180	185	190
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified		
Adhesion property (66℃, 15min), %	70		99.5
Sintering load P _D , N	>6082		

Special Gear Lubricating Grease

Similar Foreign Products

SINOPEC	MOBIL		KLUBER	Germany
7420	OGL-007, Mobi1Tac-c 375nc, 325nc	DYNAGEAR	GRAFOSOLON C-SG0	CEPLATTYN MG15

Application Examples

- ⊙ A power plant introduced a type of coal mill of generating unit from France, with the diameter of the large tooth 6m, width 750mm, 224teeth, rotational speed 13.6r/min and power of the driving motor 2800kW. Since replacing the originally designed and used Mobil OGL007 with 7402 heavy load gear lubricating grease in 1996, results of use have been good and the operational costs of the equipment have been reduced significantly
- ⊙ A cement group company introduced cement raw mill from Denmark. Because of large quantity of dust and rigorous operation conditions, it had successively applied Mobile TAC81, Kluber CS-G00# and Fuchs Ceplattyn kg1000. Later, in order to reduce the equipment operation costs, it applied the 7420 heavy gear lubricating grease. Ejecting pressure is normal, and no pipeline blockage. Ejecting pressure is stable, and the adhesion property of the lubricating grease on the tooth face is good, with small tooth face wearing and good water resistant property. Since in use in 1999 till now, result of use is good and fully satisfies the operation requirement of the gear

Special Attentions

- ⊙ Do not use this product in mixture with other lubricating greases. Close the cap in time after each use, keeping moisture and dust away
- ⊙ This product is applicable for smearing, oil bath or ejecting
- ⊙ This product is not suitable for newly installed gears that haven't run in, because it can't bring away materials generated during the running-in process

Packing

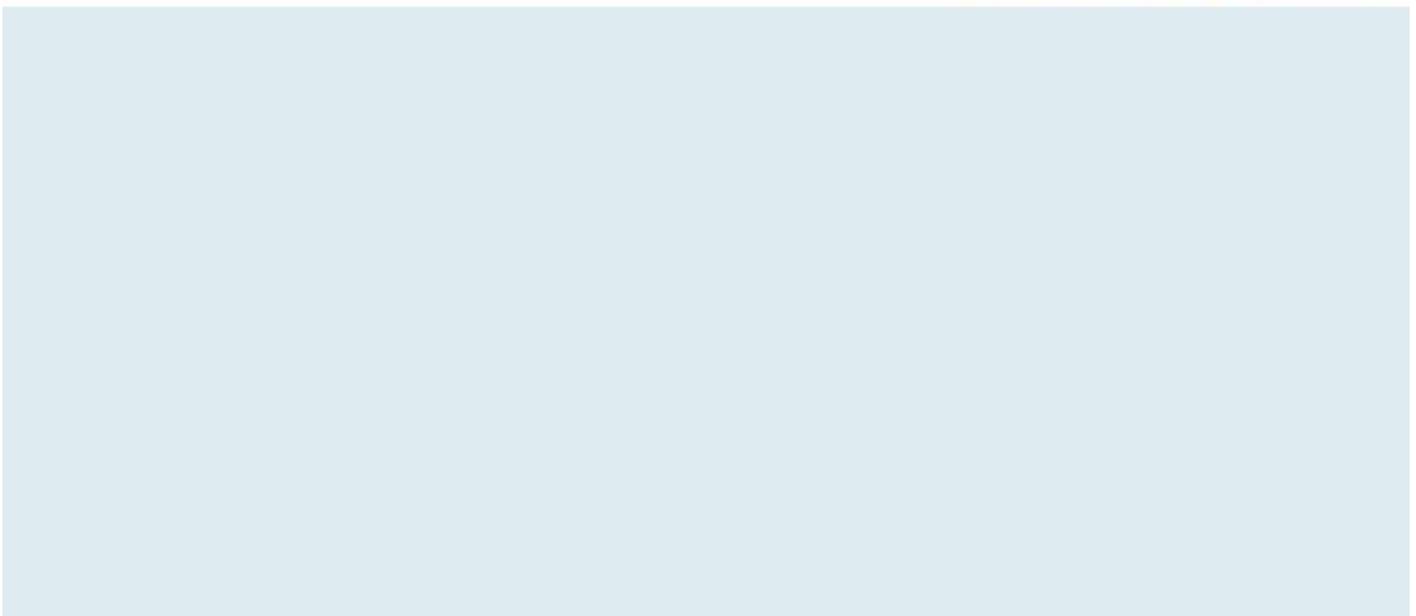
- ⊙ To be packed with 17kg plastic drum and 170kg iron barrel or as required by customers



Lubricating Grease for Special Use

SYNTHETIC LUBRICANTS

(160–163)



7418 Flange Lubricating Grease

SINOPEC 7418 flange lubricating grease is refined based on soap base gelling agent thickened refined mineral oil, with the addition of high-active additive.

Advantages

- ⊙ Excellent oxidation stability, preventing the lubricating grease from deteriorating under high temperature circumstances
- ⊙ Appropriate adhesion property, ensuring the lubricating grease adheres to the flange and won't run off
- ⊙ Good pumping performance, applicable for the centralized lubrication system
- ⊙ Excellent spraying property, spraying the grease evenly on flange of the rail track and fully lubrication the flange
- ⊙ Good lubricity, protecting the flange of car wheel and rail track and reducing wearing

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 138—2010

Applications

- ⊙ Suitable for lubrication of the inner friction face of car wheel and rail track flange of locomotives powered by electricity or combustion motor in south reaches of the Yangtze River in China
- ⊙ Applied temperature range: -10℃ ~ 120℃

Typical Properties

Items	7418 flange lubricating grease	
	0	00
Appearance	Black, shiny, uniform ointment	
1/4 penetration, 0.1mm	89	101
Drop point, ℃	182	190
Rotational viscosity (-10℃, 0.6s ⁻¹), Pa·s	619	305
Corrosion (45# copper sheet, 100℃, 3hrs)	Qualified	Qualified
Free alkali (NaOH), %	0.003	0.003
Water content, % (m/m)	None	None
Carrying capacity (room temperature, 1500rpm)		
Maximum non-seizure load P _B , N	490.0	656.6
Sintering load P _D , N	3920.0	3920.0
Comprehensive wear value ZMZ, N	472.5	440.2
Diameter of wear spot D (392N, 30min), mm	0.45	0.45

Special Attentions

- ⊙ Close the cap in time after each use, keeping moisture and dust away

Packing

- ⊙ Packed in a 1kg toothpaste-shaped tube

SHDD Series of Electric Conduction Lubricating Grease

SINOPEC SHDD series of electric conduction lubricating grease is refined based on special type of conductive materials, mixing with base oil and additives for rust prevention, oxidation resistant, etc.

Advantages

- ⊙ Good lubricity, ensuring lubrication of the electric contact, lowering the heat generating temperature of the conductor's contacting face
- ⊙ Excellent conductivity, reducing the contact resistance of the contact face
- ⊙ Good prevention and protection property to conducting materials such as copper, aluminum, steel, etc, preventing the electric contact face from erosion and rust
- ⊙ Compatible to most of the plastic materials and rubber pieces is good

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 447—2007

Applications

- ⊙ Suitable for cable conductor contact face and other parts which need all of conduction, prevention and protection and lubrication of copper-copper, copper-aluminum, aluminium-aluminium in high/low-pressure power system
- ⊙ Applied temperature range: -30℃ ~ 120℃

Typical Properties

Items	SHDD series of electric conduction lubricating grease
1/4 penetration, 0.1mm	79
Drop point, ℃	>300
Corrosion (45#steel sheet, 100℃, 3hrs)	Qualified
Evaporation loss (120℃, 1hr), % (m/m)	0.56
Resistance property (25℃), specific conductance	0.55

Special Attentions

- ⊙ The product should be kept clean and away from dust and water
- ⊙ Do not use this product in mixture with other products

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers

Lubricating Grease for Special Use

GFR-073 High-temperature Anti-sticking Lubricant

SINOPEC GFR-073 high-temperature anti-sticking lubricant is processed based on special type of gelling agent thickened special base oil, with additive for EP attrition resistance.

Advantages

- ⊙ Excellent spreading capability, ensuring that there's adequate lubricant at the guide bar of the rotary kiln and satisfy the need for lubrication
- ⊙ Excellent high-temperature lubricity, ensuring the normal lubrication of the guide bar of the rotary kiln under high temperature environment
- ⊙ Excellent ep property, ensuring the need for ep lubrication of the guide bar of the rotary kiln under heavy load

Applications

- ⊙ Suitable for lubrication of the hydraulic wheel chock stand bar (or known as guide bar) of the rotary kiln in modern cement production device

Typical Properties

Items	GFR-073 high-temperature anti-sticking lubricant
1/4 penetration, 0.1mm	80
Drop point, °C	>300
Pressured oil separation (200g ± 5g), % (m/m)	1.74
Similar viscosity (-10°C, 10s ⁻¹), Pa·s	1577
Corrosion (45# steel sheet, 100°C, 3hrs)	Qualified
Maximum non-seizure load P _B , N	1501
Sintering load P _D , N	>6082

Technical Certification

- ⊙ This product was appointed as the special lubricant for inner surface of the rotary kiln belt pulley of the new dry method cement production device by National Building Materials Office in 1992

Similar Foreign Products

- ⊙ This product is of equal using performance with products of Huchs Reiner Chemistry Company, Ceplattyn HT-BF and PBC products of Paul Company

Special Attentions

- ⊙ The greasing parts should be cleaned and wiped before using
- ⊙ Prevent the entering of impurities when pouring the grease

Packing

- ⊙ To be packed with 1kg plastic box and 17kg paint bucket or as required by customers

LW-1000 High-temperature Thread Anti-sticking Sealing Grease

SINOPEC LW-1000 high-temperature thread anti-sticking sealing grease is refined based on high-temperature resistance gelling agent, mixing with additives of high-temperature resistant lubricant, powder of soft metal, anti-corrosion, rust prevention, etc.

Advantages

- ⊙ Good lubricity, guaranteeing normal lubrication of the bolt thread
- ⊙ Excellent high-temperature performance, ensuring normal operation of the bolt thread under high temperature
- ⊙ Excellent sintering resistant property, ensuring the bolt thread is easy to detach after high temperature
- ⊙ Good construction property, easy to smear the grease on the bolt thread

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 395—2007

Applications

- ⊙ Suitable for preventing sticking and sintering of various bolt threads. The result will be especially good when the product is used on bolt thread with high temperature
- ⊙ Applied temperature range: -30℃ ~ 100℃

Typical Properties

Items	LW-1000 high-temperature thread anti-sticking sealing grease
1/4 penetration, 0.1mm	83
Drop point, ℃	220
Corrosion (45# steel sheet, 100℃, 3hrs)	Qualified
Evaporation loss (100℃, 1hr), % (m/m)	2.6
Four-ball sintering load P _D , N	6076

Similar Foreign Products

- ⊙ This product is of equal using performance with EVER-SEEZ of US Bosik Company, Molykote1000 of US Dow-corning Company, Japan Smooth Compound and Germany OKS240

Special Attentions

- ⊙ The product should be kept clean and away from dust and water
- ⊙ Do not use this product in mixture with other products

Packing

- ⊙ To be packed with 1kg plastic box or as required by customers



Fluorine-containing Special Lubricant

SYNTHETIC LUBRICANTS

(164-170)



4830 Leak Detecting Solution

SINOPEC 4830 leak detecting solution is refined with chlorofluorocarbons as the base oil. It's the special oil for detecting leaks in electronic components.

Advantages

- ⊙ Good chemical stability
- ⊙ Good electric insulation property
- ⊙ Colorless, poisonless, non-combustible

Performance Specification

The product meets the following specifications:

- ⊙ SH/T 0435—92 (1998)

Applications

- ⊙ Suitable for leak detection of electronic components

Typical Properties

Items	4830 leak detecting solution
Appearance	Colorless, transparent liquid
Kinematic viscosity (25℃), mm ² /s	8
Density (25℃), kg/m ³	1920
Condensation point, ℃	-22
Initial boiling point, ℃	175
Acid value, mgKOH/g	0.04

Special Attentions

- ⊙ It's advised to use this product under normal pressure, below 200℃ and with ventilation
- ⊙ This product should not be used in mixture with other oil products. It can be stored in the long term sealed, dry and away from light
- ⊙ This product should not directly contact with eyes. If so, please wash your eyes immediately with clean water and seek treatment and curing from medical staff

4836 Chemical Medium Resistant Instrument Oil

SINOPEC 4836 chemical medium resistant instrument oil is refined with chlorofluorocarbons as the base oil.

Advantages

- ⊙ Good chemical stability
- ⊙ Poisonless, non-combustible, good insulating property and large specific gravity

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 249—2004

Applications

- ⊙ This product is an ideal special oil product for rough environment or rigorous working conditions

Typical Properties

Items	4836 chemical medium resistant instrument oil
Appearance	Red liquid
Kinematic viscosity (25℃), mm ² /s	12
Density (25℃), kg/m ³	1911
Condensation point, ℃	-22
Acid value, mgKOH/g	0.04

Special Attentions

- ⊙ It's advised to use this product under normal pressure and below 200℃
- ⊙ This product should not be used in mixture with other oil products. It can be stored in the long term sealed, dry and away from light
- ⊙ This product should not directly contact with eyes. If so, please wash your eyes immediately with clean water and seek treatment and curing from medical staff

4838, 4839, 4840 Chemical Medium Resistant Lubricants

SINOPEC 4838, 4839, 4840 chemical medium resistant lubricants are refined with chlorofluorocarbons as the base oil.

Advantages

- ◎ Good chemical stability, safe and reliable when contacting with pure oxygen and fluorine gas, non-combustible and non-explosive

Performance Specification

The product meets the following specifications:

- ◎ Q/SH303 249—2004

Applications

- ◎ This product is a special lubrication material for anti-corrosion of instrument, meter, transmission instrument and other electronic equipment

Typical Properties

Items	4838, 4839, 4840 chemical medium resistant lubricants		
	4838	4839	4840
Appearance	Colorless, transparent liquid		Semi transparent liquid
Kinematic viscosity (50 °C), mm ² /s	18.6	31.2	50.3
Density (25 °C), kg/m ³	1930	1960	--
Acid value, mgKOH/g	0.04	0.04	0.04
Condensation point, °C	--	-12	--

Special Attentions

- ◎ It's advised to use this product under normal pressure and below 200 °C
- ◎ This product should not be used in mixture with other oil products. It can be stored in the long term sealed, dry and away from light
- ◎ This product should not directly contact with eyes. If so, please wash your eyes immediately with clean water and seek treatment and curing from medical staff

4803, 4807 Chemical Medium Resistant Lubricants

SINOPEC 4803, 4807 chemical medium resistant lubricants are refined with chlorofluorocarbons as the base oil.

Advantages

- ⊙ Excellent viscosity and temperature properties: non-combustible, high-temperature tolerant, not eroded by sulfuric acid, nitric acid, hydrofluoric acid, caustic alkali and other materials, compatible with plastic, rubber, nylon, etc
- ⊙ Good insulation property, stability under radiation and long operational life

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 248—2004

Applications

- ⊙ This product is an ideal lubrication material and gyro charging liquid in aviation, space flight, ship craft and other fields

Typical Properties

Items	4803, 4807 chemical medium resistant lubricants	
	4803	4807
Appearance	Colorless, transparent liquid	
Solid impurities	None	
Water content, % (m/m)	None	
Kinematic viscosity (50 ℃), mm ² /s	35.4	92.1
Acid value, mgKOH/g	0.04	0.04
Condensation point, ℃	-42	-22
Corrosion (ZL4 metal testing sheet, 100 ℃, 3hrs)	Qualified	

Special Attentions

- ⊙ It's advised to use this product under 20.0MPa
- ⊙ This product should not be used in mixture with other oil products. It can be stored in the long term sealed, dry and away from light
- ⊙ This product should not directly contact with eyes. If so, please wash your eyes immediately with clean water and seek treatment and curing from medical staff

FM-1, FM-2, FM-3 Chemical Medium Resistant Lubricants

SINOPEC FM-1, FM-2, FM-3 chemical medium resistant lubricants are refined with perfluoropolyether oil as the base oil.

Advantages

- ⊙ Excellent viscosity and temperature properties: non-combustible, high-temperature tolerant, not eroded by sulfuric acid, nitric acid, hydrofluoric acid, caustic alkali and other materials, compatible with plastic, rubber, nylon, etc
- ⊙ Good insulation property, stable when radiated and long operational life

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 248—2004

Applications

- ⊙ This product is the ideal lubrication material and gyro charging liquid in aviation, space flight, ship craft and other fields

Typical Properties

Items	FM-1, FM-2, FM-3 chemical medium resistant lubricants		
	FM-1	FM-2	FM-3
Appearance	Colorless, transparent liquid		
Kinematic viscosity (25℃), mm ² /s	6.2	12.3	17.5
Density (25℃), kg/m ³	1820	1840	1860
Condensation point, ℃	-62	-57	-52
Acid value, mgKOH/g	0.04	0.04	0.04
Water content, % (m/m)	None	None	None

Special Attentions

- ⊙ It's advised to use this product under the pressure of 20.0MPa
- ⊙ This product should not be used in mixture with other oil products. It can be stored in the long term sealed, dry and away from light
- ⊙ This product should not directly contact with eyes. If so, please wash your eyes immediately with clean water and seek treatment and curing from medical staff

FLZ-1, FLZ-3 Chemical Medium Resistant Lubricating Grease

SINOPEC FLZ-1, FLZ-3 chemical medium resistant lubricating grease is processed with chlorofluorocarbons as the base oil, mixed with perfluorinated resin and thickened.

Advantages

- ⊙ Excellent chemical stability, lubricity and thermal stability

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 250—2004

Applications

- ⊙ This product applies to the lubrication and sealing of pumps and valves which contact with strong caustic medium or when there is strong oxidizer
- ⊙ It's special lubricating grease for bearings of liquid oxygen pump and pipeline components

Typical Properties

Items	FLZ-1, FLZ-3 chemical medium resistant lubricating grease	
	FLZ-1	FLZ-3
Appearance	White, uniform ointment	
Drop point, °C	104	104
1/4 penetration, 0.1mm	70	70
Amount of oil separation, %	4.0	9
Evaporation loss (100°C, 1hr), %	4.0	11

Special Attentions

- ⊙ It's advised to use this product under 20.0MPa and under 260°C
- ⊙ This product should not be used in mixture with other oil products. It can be stored in the long term sealed, dry and away from light
- ⊙ This product should not directly contact with eyes. If so, please wash your eyes immediately with clean water and seek treatment and curing from medical staff

FMZ-1, FMZ-2 Chemical Medium Resistant Lubricating Grease

SINOPEC FMZ-1, FMZ-2 chemical medium resistant lubricating grease is processed with perfluoropolyether oil as the base oil, mixed with perfluorinated resin and thickened.

Advantages

- ⊙ Excellent chemical stability, lubricity and thermal stability
- ⊙ This product is non-combustible, showing chemical inertness

Performance Specification

The product meets the following specifications:

- ⊙ Q/SH303 252—2004

Applications

- ⊙ This product has shown excellent performance under pure oxygen-contact environment in aviation, space flight, diving, steel production and other industries

Typical Properties

Items	FMZ-1, FMZ-2 chemical medium resistant lubricating grease	
	FMZ-1	FMZ-2
Appearance	White, uniform ointment	
Drop point, °C	122	122
1/4 penetration, 0.1mm	72	74
Amount of oil separation, %	2.4	4.5
Evaporation loss (100°C, 1hr), %	4	4

Special Attentions

- ⊙ It's advised to use this product with the pressure under 20.0MPa
- ⊙ This product should not be used in mixture with other oil products. It can be stored in the long term sealed, dry and away from light
- ⊙ This product should not directly contact with eyes. If so, please wash your eyes immediately with clean water and seek treatment and curing from medical staff

Announcements

The product typical data listed in the manual is average value calculated by the Company according to the product data manufactured in a certain period of time. It represents or guarantees neither the accordance of the data with that of product made anytime, nor a kind of quality index for judgment of qualification of product. The data in the manual is just reference for the clients of lubricants.

The name, specification and data of the products listed in the manual are tried to be correct and accurate. Due to everlasting study and improvement of all products carried out by the Company for better meeting the requirements of our clients, notice shall not be made if relevant data of the products listed in the manual is already changed.

For the sake of better understanding of product applications, the names of some products have been adjusted. In this case, actual name on the package shall prevail.

Sinopec Lubricant Company has copyright of the manual. Unless authorized in written style, it, in any way, shall not be copied, reprinted, or stored in the retrieval system.