

Product	<b>Sinopec Synthetic HD Industrial Gear Oil 4406 (PAG Based)</b>
Summary	<b>Product description</b> Sinopec Synthetic HD Industrial Gear Oil 4406 is a range of high-performance, heavy-duty, extreme pressure, industrial gear lubricants, formulated with polyalkylene glycol (PAG) base fluids and selected additives. These fluids offer excellent performance in severe operating conditions, particularly in worm gearbox applications where good EP properties and lubricity are required to lubricate sliding surfaces, but also in other industrial gears and bearings, particularly in applications where shock loading is experienced.

## Applications

Sinopec Synthetic HD Industrial Gear Oil 4406 is suitable for use in:

- Industrial worm gear applications, for example in conveyors, escalators, press drives, agitators and mixers.
- Enclosed industrial reduction gear systems operating in severe conditions, such as high loads, extreme high or low temperatures, or over a wide temperature range.
- Filled-for-life gearboxes fitted with high-ratio, low-efficiency worm gears.
- Bearings and circulation systems where bulk oil temperatures are high, for example in calendar roll mill bearings.
- Plain, slide and roller bearings operating in severe service conditions.

Caution: as with all PAG-based fluids, avoid mixing Sinopec Synthetic HD Industrial Gear Oil 4406 with conventional mineral oil lubricants, avoid contact with painted surfaces, avoid use with light metal alloys containing magnesium or aluminium, and check seal compatibility before use.

## Features and benefits

- PAGs have excellent frictional and lubricity characteristics and high thermal conductivity, which make them better at lubricating worm gears and sliding components than other synthetic and conventional mineral oils, leading to improved gear efficiency, lower running temperatures and reduced equipment operating costs.
- Excellent extreme pressure and antiwear performance protect gears against wear and micropitting, even in severe high-load and shock-loading conditions, extending component life.
- Excellent thermal and oxidation stability ensure lubricant stability and longer life, and reduce maintenance costs associated with oil changes.
- Very high viscosity index, low pour point and the absence of wax ensure good fluidity at low temperatures – important in minimising wear at low-temperature start up – as well as a wider operating temperature range.
- Advanced protection against copper corrosion and rusting extends the life of components.
- Good antifoaming properties ensure optimum oil film thickness, protecting against wear, and minimising leakage.

# Product Data Sheet

## Typical data

Sinopec Synthetic HD Industrial Gear Oil 4406							
ISO viscosity grade	100	150	220	320	460	680	1000
Kinematic viscosity, ASTM D 445							
cSt @ 40°C	101.5	155.6	225.3	330.5	468.2	696.5	1058.6
cSt @ 100°C	17.3	24.6	36.1	49.9	68.55	95.66	136.5
Viscosity index, ASTM D 2270	188	192	210	215	225	230	240
FZG scuffing test, fail load stage	>12	>12	>12	>12	>12	>12	>12
Four ball wear, wear scar diameter, mm, ASTM D 4172	0.35	0.35	0.34	0.32	0.32	0.31	0.30
Rust prevention, distilled water, ASTM D 665	pass	pass	pass	pass	pass	pass	pass
Copper corrosion, 3 hours @ 100°C, ASTM D 130	2b	2b	2b	2b	2b	2b	2b
Pour point, °C, ASTM D 97	-41	-40	-37	-36	-35	-33	-28
Flash point (COC), °C, ASTM D 92	245	247	251	255	260	265	277

These data are given as an indication of typical values and not as exact specifications.

## Industry and OEM specifications

Sinopec Synthetic HD Industrial Gear Oil 4406 meets the performance requirements of the following industry specifications:	
Sinopec	Q/SH 303 172-2010

## Accuracy of information

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

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

## Product and environmental safety

This product should not cause any health problems when used in the applications suggested and when the guidance provided in the Material Safety Data Sheet (MSDS) is followed. Please consult the MSDS for more detailed advice on handling; MSDSs are available from your local distributor. Do not use the product in applications other than those suggested.

As with all products, please take care to avoid environmental contamination when disposing of this product. Used oil should be sent for reclamation/recycling or, if not possible, must be disposed of according to relevant government/authority regulations.

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