

<b>Product</b>	<b>Sinopec L-HV Low Temperature Antiwear Hydraulic Oil</b>
<b>Summary</b>	<b>Product description</b> Sinopec L-HV Low Temperature Antiwear Hydraulic Oil is a line of premium quality antiwear lubricants blended using selected and highly refined high-quality mineral oils, combined with a multifunctional additive system and available in a wide viscosity range from ISO Grade 15 to 100. This line of oils, with high viscosity index and low pour point characteristics, has been designed to meet the requirements of moderate- to high-pressure hydraulic systems operating outdoors in cold regions, or where there is a wide variation in ambient temperature.

## Applications

Sinopec L-HV Low Temperature Antiwear Hydraulic Oil is suitable for use in:

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

## Features and benefits

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

# Product Data Sheet

## Typical data

<b>Sinopec L-HV Low Temperature Antiwear Hydraulic Oil</b>						
ISO viscosity grade	15	22	32	46	68	100
Kinematic viscosity, ASTM D 445						
cSt @ 40°C	15.17	21.93	33.55	47.52	68.15	101.36
cSt @ 100°C	3.66	5.06	6.91	8.77	10.79	14.41
Viscosity index, ASTM D 2270	140	173	172	166	148	146
Air release at 50°C, mins, ASTM D 3427	1.1	2.0	3.3	4.1	6.5	8.9
Foaming characteristics, sequences 1, 2 and 3, ASTM D 892	10/0 15/0 5/0	10/0 15/0 10/0	10/0 20/0 10/0	10/0 10/0 10/0	10/0 15/0 10/0	10/0 10/0 15/0
Neutralisation number, mg KOH/g, ASTM D 974	0.52	0.53	0.57	0.66	0.75	0.74
FZG test (A/8.3/90), fail load stage, DIN 51345	12	12	12	12	12	12
Rust prevention, ASTM D 665						
distilled water	pass	pass	pass	pass	pass	pass
synthetic sea water	pass	pass	pass	pass	pass	pass
Copper corrosion, 3 hours @ 100°C, ASTM D 130	1b	1b	1b	1b	1b	1b
Water separability, ASTM D 2711	5.8 (54°C)	6.0 (54°C)	10 (54°C)	15 (54°C)	16 (54°C)	15 (82°C)
Pour point, °C, ASTM D 97	-45	-42	-39	-37	-35	-34
Flash point (COC), °C, ASTM D 92	180	178	210	220	221	240

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

## Industry and OEM specifications

<b>Sinopec L-HV Low Temperature Antiwear Hydraulic Oil meets the performance requirements of the following industry specifications:</b>	
DIN	51524 Pt 3
GB <sup>1</sup>	11118.1 -2011(L-HV)
ISO	ISO 11158 (L-HV)

<sup>1</sup> Note: 'GB' standards are the National Standards of the People's Republic of China.

<b>Sinopec L-HV Low Temperature Antiwear Hydraulic Oil meets the performance requirements of the following OEM specifications:</b>	
Cincinnati	P-68 (ISO 32), P-69 (ISO 68), P-70 (ISO 46)
Eaton Vickers	Eaton 03-401-2010

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## 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.

The SINOPEC trademark is registered and protected.

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Sinopec-L-HV-Low-Temperature-Antiwear-Hydraulic-Oil