

<b>Product</b>	<b>Sinopec L-TSA Turbine Oil</b>
<b>Summary</b>	<b>Product description</b> Sinopec L-TSA Turbine Oil is available in ISO viscosity grades 32, 46 and 68. Formulated with high-quality base oil and selected additives, it offers good oxidation stability and corrosion protection along with good demulsibility, antifoaming and air release properties.

## Applications

Sinopec L-TSA Turbine Oil is suitable for use in:

- Steam turbines used in industrial power generation.
- Large to moderate marine steam turbine propulsion machinery and associated auxiliary equipment.
- Industrial steam turbines, gas turbines and water turbines.
- Circulating systems, anti-friction bearings, enclosed gears, hydraulic units and other industrial applications, providing there is no requirement for antiwear additives.

## Features and benefits

- Good oxidation stability prolongs the service life of the oil and increases service intervals.
- Good air release properties protect against air entrainment and ensure optimum oil film thickness, protecting equipment components.
- Good antifoaming properties avoid the build up of foam, and reduce oil leakage from the system.
- Good water separation properties ensure that any water contamination can be easily separated from the oil, protecting equipment against rusting and corrosion and extending oil life.
- Anti-rust and corrosion prevention properties further protect equipment from rusting and corrosion, and extend equipment life.

# Product Data Sheet

## Typical data

<b>Sinopec L-TSA Turbine Oil</b>			
ISO viscosity grade	32	46	68
Kinematic viscosity of base oil, ASTM D 445			
cSt @ 40°C	31.27	44.42	66.4
cSt @ 100°C	5.192	6.386	8.182
Viscosity index of base oil, ASTM D 2270	93	92	92
Air release at 50°C, min, ASTM D 3427	2.1	2.7	5
Foaming characteristics, sequences 1, 2 and 3, ASTM D 892	10/0 20/0 10/0	10/0 20/0 10/0	10/0 20/0 10/0
Demulsibility @ 54°C, time to 3 ml emulsion, min, ASTM D 1401	8	10	15
Neutralisation number, mg KOH/g, ASTM D 974	0.07	0.08	0.09
Oxidation stability, time to 2 mg KOH/g, hours, ASTM D 943	>2,500	>2,000	>1,500
Oxidation stability, RPVOT @ 150°C, min, ASTM D 2772	400+	400+	400+
Rust prevention, ASTM D 665			
distilled water	pass	pass	pass
synthetic sea water	pass	pass	pass
Copper corrosion, 3 hours @ 100°C, ASTM D 130	1b	1b	1b
Pour point, °C, ASTM D 97	-12	-12	-12
Flash point (COC), °C, ASTM D 92	200	210	222
Density @ 15°C, kg/l, ASTM D 4052	0.8653	0.8687	0.8705

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

## Industry and OEM specifications

<b>Sinopec L-TSA Turbine Oil meets the performance requirements of the following industry specifications:</b>	
ASTM	4304 Rev A Type I
DIN	51515 L-TD
DIN	51524 Part 1
GB <sup>1</sup>	11120-89 (L-TSA)
JIS	K-2213 Type 2 w/add

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

<b>Sinopec L-TSA Turbine Oil meets the performance requirements of the following OEM specifications:</b>	
Alstom Power	HTGD 90117
GE	GEK-28143A
GE	GEK-46506D
Siemens Power Generation	TLV 9013 04

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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.

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