

Product	Sinopec Transformer Oil
Summary	Product description <p>Sinopec Transformer Oil is a series of products blended using highly refined mineral oil and a selected antioxidant. It is designed for insulating and cooling transformers, oil-immersed switch-gear and other electrical insulating applications. There are four grades, 10, 25, 40 and 45, which are selected on the basis of their low-temperature performance. None of the grades contain harmful polychlorinated biphenyls (PCBs).</p>

Applications

Sinopec Transformer Oil is suitable for use in:

- Oil-filled transformers, operating at 330 kV or less, where it acts as a non-conducting insulating and cooling medium.
- Oil-immersed switch-gear.
- Other electrical insulating applications.

Features and benefits

- Excellent dielectric (insulating) properties, effectively prevent discharge in an electric field.
- Low viscosity and low density lead to the oils having good cooling properties and good heat transfer characteristics at room temperature and below, and so ensure effective cooling of transformer core and coils.
- Even at very low temperatures the oil viscosity remains low, and therefore allows the transformer to be started up under very cold conditions without problem.
- Excellent oxidation stability characteristics are provided by the stable base oil together with the high-performance oxidation inhibitor system, and prevent the formation of acidic material and sludge in service, extending the life of the oil.
- All four grades meet the requirements of IEC 60296:2003 for transformer oils.

Product Data Sheet

Typical data

Sinopec Transformer Oil				
Grade	10	25	40	45
Kinematic viscosity, ASTM D 445				
cSt @ 40°C	8.93	9.34	9.91	9.25
cSt @ -10°C	–	116.0	–	–
cSt @ -30°C	–	–	423.4	753.0
Neutralisation number, mg KOH/g, ASTM D 664	0.46	0.22	0.59	0.63
Oxidation stability, 164 h @ 120°C, IEC 61 125C				
total acidity, mg KOH/g	0.04	0.02	0.0822	0.0218
sludge, wt%	0.01	0.008	0.0075	0.0175
Corrosive sulfur, ASTM D 1275 B	not corrosive	not corrosive	not corrosive	not corrosive
Breakdown voltage, kV, IEC 60156	50	47	50	53
Dielectric dissipation factor @ 90°C, IEC 60247	0.0009	0.0007	0.008	0.0001
Interfacial tension, mN/m	49.1	47.3	47.1	48.7
Pour point, °C, ASTM D 97	-12	-27	-45	-51
Flash point (PMCC), °C, ISO 2719	162	153	158	154
Density @ 20°C, kg/l, ASTM D 4052	0.8486	0.8330	0.8378	0.8354

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

Industry and OEM specifications

Sinopec Transformer Oil meets the performance requirements of the following industry specifications:	
GB ¹	2536-90 (Sinopec 10, 25 and 45 Transformer Oil)
IEC	60296-2003 (Sinopec 10, 25, 40 and 45 Transformer Oil)
Sinopec	Q/SH 303 525-2009

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

Sinopec Transformer Oil holds the following formal OEM approvals:	
ABB	Specification 1ZBA117001-1: HI-B (Sinopec 25 Transformer Oil) HI-A (Sinopec 45 Transformer Oil)
Siemens	TUN 901 293 (2007) (Sinopec 25 and 45 Transformer Oil)

Product Data Sheet

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.