



Product Data Sheet:

TURBINE OIL 46

Product Description:

TURBINE OIL 46 is a very good performance turbine oil specially designed for use in geared and non-geared steam turbines, gas turbines and combined cycle gas turbines (CCGT) including gas turbines operating at high temperatures and possesses outstanding thermal and oxidation stability, good load carrying capacity, excellent water separability, superior rust and corrosion inhibition, low foaming tendency, good air release properties and resistance to chemical degradation to provide excellent equipment protection, reliable operation, with reduced down-time and extended service life. **TURBINE OIL 46** exceeds the performance requirements of specifications of major gas and steam turbine manufacturers.

TURBINE OIL 46 has outstanding thermal and oxidation stability that prevents sludge formation, controls deposits and minimises oil degradation leading to reliable operation. Superior anti-wear property and load carrying capability provide excellent protection for geared turbines. Excellent water separation capability resists formation of emulsion and leads to easy removal of excess water from the lubrication system. Effective rust and corrosion inhibitors provide long term protection to critical system components and good air release properties and foam control avoid erratic operation and pump cavitation leading to trouble free operation.

TURBINE OIL 46 is recommended for power generation gas turbines, combined cycle gas turbines (CCGT), large heavy-duty industrial gas turbines, power generation and industrial steam turbines and turbines with heavily loaded gears and turbo compressors.

Exceeds the specifications of:

DIN 51515-1 L-TD/DIN 51515-2 L-TG, Siemens TLV 9013 04, BS 489, GEK 32568F/28143A
MIL-L-17672 D, CEGB 207001, Brown Boveri HTGD 90117, Alstom HTGD 90 117 V0001 S
Solar ES 9-224, US Steel 120, Westinghouse Electric Corp. Turbine Oil Spec.

| Property: | Test Method: | Typical Values: |
|----------------------------|--------------|------------------------------|
| ISO Viscosity Grade | ISO 3448 | 46 |
| Density @ 15°C | ASTM D4052 | 868 kg/m ³ |
| Kinematic Viscosity @ 40°C | ASTM D7042 | 41.4-50.6 mm ² /s |
| Viscosity Index | ASTM D2270 | 104 |
| Flash Point | ASTM D92 | >185°C |
| Pour Point | ASTM D97 | <-21°C |
| Total Acid Number (TAN) | ASTM D664 | 0.1 mgKOH/g |
| Rust Test | ASTM D665A/B | Pass |
| Copper Corrosion | ASTM D130 | 1b |
| Water Separability @ 54°C | ASTM D1401 | Pass |
| Air Release Value @ 50°C | ASTM D3427 | Pass |
| FZG, fail load stage | DIN 51354-2 | >10 |
| Turbine Oil Stability Test | ASTM D943 | >10000 hrs |
| Foam Test (all sequences) | ASTM D892 | Pass |

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