

GOLDENSTONE® Tps EP 32, EP 46

Technical Data Sheet (TDS) POWER GENERATION OILS

Description and Application

Goldenstone® Tps EP turbine oils are formulated with a special selection of highly refined hydrotreated base stocks, with very high resistance to deterioration, blended with a special, highly efficient ash-free additive package providing excellent oxidation stability, reliable corrosion protection and good anti-wear properties.

The premium quality turbine oils **Goldenstone® Tps EP** are designed to lubricate steam, water and gas turbines. These turbine oils have superior oxidation stability demonstrated by more than 1000 hours in RBOT Test, and provide good corrosion protection. They are designed specifically for application in gas turbines and compressor units with a common (combined) lubricating system, requiring lubricants with mild EP properties. They meet and exceed the stringent requirements of Alstom, Siemens, GE and ASTM for lubricants passing minimum load stage 8 of FZG test

Goldenstone® Tps EP turbine oils are also suitable for lubrication of equipment and assemblies associated with turbines, as well as for systems governing them. Baths and circulating systems, oil-lubricated bearings of different types, from moderately to medium loaded assemblies and hydraulic systems under low to moderate pressures are among the other typical applications. The improved corrosion performance in synthetic sea water makes these turbine oils suitable for application in on-board compressors and turbines of different vessels as well as in other auxiliary ship equipment.

Benefits

- Outstanding oxidation stability
- Very good water separability
- Maximum resistance to degradation
- Good antiwear properties

Specifications

| | Tps 32 EP | Tps 46 EP |
|--------------------|--|------------|
| ISO 6743-5 | ISO L-TSA, TGA | |
| ISO 8068: 2006 | L-TGB, L-TGSB | |
| ISO 8068 | Type AR | |
| DIN 51515 | Part 1 (L-TD), Part 2 (L-TG) | |
| British Standard | 489 (CIGRE) | |
| ASTM D 4304 | Type II (EP) | |
| MIL-L | 17672 D | |
| Siemens TLV | 9013 05 with EP properties | |
| ABB | HTGD 90117 V0001R117 | |
| Skoda Power | Tp0010P/97 | |
| Solar | ES9-224U | |
| CEGB Standard | 207001 | |
| Cincinnati Machine | P-38 | P-55 |
| General Electric | GEK 28143A, GEK 32568 F, GEK 46506D, | GEK 28143A |

Typical Characteristics

| Parameter | Test Method | Typical Values | |
|--|-------------|----------------|-----------|
| | | Tps 32 EP | Tps 46 EP |
| Density at 20°C, g/ml | EN ISO 3675 | 0.860 | 0.862 |
| Kinematic Viscosity at 40°C, mm ² /s | EN ISO 3104 | 32 | 46 |
| Kinematic Viscosity at 100°C, mm ² /s | EN ISO 3104 | 5.55 | 6.95 |
| Viscosity Index | ISO 2909 | 110 | 107 |
| Flash point COC, °C | EN ISO 2592 | 220 | 226 |
| Pour point, °C | ISO 3016 | -12 | -9 |

| | | | |
|--|----------------------|--------------------|--------------------|
| Copper strip corrosion, 3h at 100°C, rating | EN ISO 2160 | 1a | 1a |
| Air release properties, 50°C, min | ISO 9120 | 4 | 4 |
| Water separability, sec | DIN 51589-1 | 30 | 40 |
| Foaming characteristics, Tendency/ Stability, ml Seq I Seq II Seq III | ISO 6247 | 0/0 20/0 0/0 | 0/0 20/0 0/0 |
| Oxidation stability test, - time to acid number of 2.0 mg KOH/g | ISO 4263 | 10 000 | 10 000 |
| Oxidation stability test, - RBOT, min | ASTM D 2272 | 1100 | 1000 |
| FZG test - fail load stage | DIN 51534- part 2 | 10 | 10 |

Important note: typical data values do not constitute a specification but are an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved.

Health, Safety and Handling

Based on currently available information, this product is not expected to produce adverse effects on health when used for the intended application.

For more information about product MSDS, terms and conditions for storage and shelf life please visit:

www.goldenstoneoils.com

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