



### Product Data Sheet (PDS)



# GP MARGEN MARINE TURBINE OIL SERIES

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Supreme performance turbine oils for geared and non-geared turbines.

#### **Product Description:**

GP MARGEN Turbine Oil series are supreme performance turbine oils specially designed for use in geared and non geared steam turbines, gas turbines and combined cycle gas turbines (CCGT) including the gas turbines operating at high temperatures. These oils are formulated with high quality severely hydroprocessed API Group II base oils and a proprietary ashless additive package containing anti-oxidants, FZG booster, corrosion inhibitors and metal deactivators. These oils possess 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. These oils exceed the performance requirements of major gas and steam turbine manufacturers.

#### **Features & Benefits:**

- Outstanding thermal and oxidation stability 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
- Good air release properties and foam control avoid erratic operation and pump cavitation leading to trouble free operation

### **Applications:**

- Power generation gas turbines
- Combined cycle gas turbines (CCGT)
- Large heavy-duty industrial gas turbines
- Power generation and industrial steam turbines
- Turbines with heavily loaded gears
- Turbo compressors



#### **TECHNICAL DATA:**

| TECHNICAL DATA.                              |             |       |       |       |
|--|-------------|-------|-------|-------|
| GP MARGEN TURBINE OIL Series                 |             |       |       |       |
| ISO Viscosity grades                         | 32          | 46    | 68    | 100   |
| Meets the following Specifications           |             |       |       |       |
| ASTM D 4304, Type I(non-EP) and Type II (EP) | Х           | Х     | Х     | Х     |
| BS 489                                       | Х           | Х     | Х     | X     |
| DIN 51515 Part 1 (TD) and Part 2 (TG)        | Х           | Х     |       |       |
| ISO 8086 TSE, TGE, TSA and TGA               | Х           | Х     |       |       |
| Alstom HTGD 90117 V 0001T                    | Х           | X     | Х     |       |
| GEK 32568E/F                                 | Х           |       |       |       |
| GEK 46506D                                   | Х           |       |       |       |
| GEK 28143A                                   | Х           | Х     |       |       |
| GEK 107395a                                  | Х           |       |       |       |
| Siemens TLV 9013-04                          | Х           | Х     |       |       |
| Solar ES 9-224, Class II                     | Х           | Х     |       |       |
| TYPICAL PROPERTIES                           |             |       |       |       |
| Test Parameters                              | TEST VALUES |       |       |       |
| Viscosity @ 40 ºC, cSt                       | 32.3        | 46.2  | 68.1  | 100.4 |
| Viscosity Index                              | 105         | 104   | 104   | 100   |
| Flash Point, <sup>o</sup> C                  | 212         | 214   | 216   | 222   |
| Pour Point, ºC                               | -24         | -21   | -18   | -18   |
| Density @ 15°C, Kg/l                         | 0.851       | 0.854 | 0.858 | 0.861 |
| Rust Test                                    | Pass        | Pass  | Pass  | Pass  |
| Copper Corrosion                             | 1b          | 1b    | 1b    | 1b    |
| Acid Number, mg KOH/g                        | 0.1         | 0.1   | 0.1   | 0.1   |
| Air Release, minutes                         | 3           | 4     | 5     | 6     |
| Turbine Oil Stability Test, hrs              | 10000+      |       |       |       |
| RBOT, minutes                                | 1000+       | 1000+ | 1000+ | 1000+ |
|  | •           |       |       |       |





#### **Health and Safety**:

Based on available information, this product is not expected to produce adverse effects on health when used for the intended application, following the recommendations provided in the Material Safety Data Sheet (MSDS). MSDSs are available upon request. This product should not be used for purposes other than its intended use. If disposing of used product, take care to protect the environment.

Due to continual product research and development, the information contained herein is subject to change without notification. Typical Properties may vary slightly.

