



## **Gulf Crest EP**

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

### **Product Description**

**Gulf Crest EP** 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

Properties mentioned above are typical only and minor variations, which do not affect the product performances, are to be expected in normal manufacturing. The above information is based on past history of the grade only and must not be construed as a guarantee of performance. Follow equipment manufacturer's recommendations for performance level and viscosity grade. The Material Safety Data Sheet for this product is available from your nearest Gulf Distributor.

**Gulf Oil International**

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## Specifications, Approvals & Typical Properties

Meets the following Specifications		32	46	68	100
ASTM D 4304, Type I(non-EP) and Type II (EP)		X	X	X	X
BS 489		X	X	X	X
DIN 51515 Part 1 (TD) and Part 2 (TG)		X	X		
ISO 8086 TSE, TGE, TSA and TGA		X	X		
Alstom HTGD 90117 V 0001T		X	X	X	
GEK 32568E/F		X			
GEK 46506D		X			
GEK 28143A		X	X		
GEK 107395a		X			
GEK 101941A		X			
Siemens TLV 9013-04		X	X		
Solar ES 9-224, Class II		X	X		
Has the following Approvals					
Siemens TLV 9013-04, Alstom HTGD 90117		X			
Typical Properties					
Test Parameters	ASTM	Typical Values			
Viscosity @ 40 °C, cSt	D 445	32.2	46.3	68.3	100.5
Viscosity Index	D 2270	105	104	104	98
Flash Point, °C	D 92	212	220	222	224
Pour Point, °C	D 97	-24	-21	-15	-15
Density @ 15°C, Kg/l	D 1298	0.852	0.855	0.858	0.862
Rust Test	D 665A/B	Pass	Pass	Pass	Pass
Copper Corrosion	D 130	1b	1b	1b	1b
Acid Number, mg KOH/g	D 974	0.1	0.1	0.1	0.1
Water separability, minutes to 3 ml emulsion @ 54 °C	D 1401	Pass	Pass	Pass	Pass
Foam Test, foam after 10 minutes of settling for all sequences	D 892	Nil	Nil	Nil	Nil
Air Release, minutes	D 3427	3	4	5	6
FZG, fail load stage	DIN 51354 Part II	10	10	10	10
Turbine Oil Stability Test, hrs	D 943	10,000+	10,000+	10,000+	-
RBOT, minutes	D 2272	1,000+	1,000+	1,000+	1,000+

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