



# Ocean Turbo T series

## High Quality Industrial Steam and Gas – Zinc Free Turbine Oils Product Data Sheet

### Product Description

Ocean Turbo T series are high performance zinc free turbine oils formulated with high quality hydro treated base stocks and advanced additive technology, to provide exceptional equipment protection and reliability in most non-g geared steam turbine systems and low to moderate duty gas turbines. They are designed to demonstrate excellent oxidation stability, resistance to sludge & varnish formation, protection against rust & corrosion, low foaming and excellent demulsibility.

### Features & Benefits

Excellent hydrolytic, thermal & oxidation stability prevents varnish & sludge formation and helps

in extending life of oil and filter.

Excellent water shedding property reduces sludge build up and improves efficiency of timing valves.

Excellent air release & anti-foaming characteristics, avoids cavitation, noise and erratic operations.

Excellent load carrying properties reduces wear in bearings and gears.

Excellent protection from rust and corrosion of multi-metallurgy turbine components.

### Specifications

**Ocean Turbo T series meets or exceeds following International and Builder specifications:**

- |                               |                                  |
|-------------------------------|----------------------------------|
| DIN 51515 Part-1              | • GE GEK 28413A                  |
| DIN 51517 Part-2              | • JIS K-2213 Type-2 w/additives  |
| Siemens Power Gen TLV 9013 04 | • Alstom Power Turbo HTGD 90-117 |

### Application

Ocean Turbo T series are suitable for use in Non-g geared industrial steam and gas turbines operating under low to medium severity conditions.

Suitable for use in heavy duty industrial compressor applications lubricated by centralized systems.

### Typical Characteristics

Ocean Turbo T series	Test Method	Units	22	32	46	68	100
ISO Viscosity Grade	ISO 3448	-	22	32	46	68	100
Density @ 15 °C	ASTM D 4052	gm/cc	0.870	0.870	0.878	0.880	0.887
Viscosity @ 40 °C	ASTM D 445	cSt	22.1	32.4	46.8	68.9	100.8
Viscosity @ 100 °C	ASTM D 445	cSt	4.50	5.38	6.78	8.72	11.15
Viscosity Index	ASTM D 2270	-	118	98	98	98	95
Pour Point	ASTM D 97	°C	-24	-18	-18	-15	-15
Flash Point (COC)	ASTM D 92	°C	224	224	230	234	246
TOST, Hours to 2 NN	ASTM D 943	Hours	>10,000	>10,000	>10,000	>10,000	>10,000
Copper Strip Corrosion	ASTM D 130	-	1A	1A	1A	1A	1A
Rust Characteristics Proc B	ASTM D 665	-	Pass	Pass	Pass	Pass	Pass
Foam Seq I,II,III	ASTM D 892	ml/ml	0/0	10/0	10/0	10/0	10/0
Demulsibility, 40/40/0	ASTM D 1401	min	5	10	10	10	15

*The above figures are typical of blends with normal production tolerance and do not constitute a specification.*