



SHELL TURBO[®] OILS CC

Premium quality lubricant for turbines

Product Description

Shell Turbo[®] Oils CC are highly refined paraffinic (API Group II) turbine oils with a patented additive technology that provides improved performance over conventional turbine oils. Its unique combination of excellent oxidative stability, sludge control and surface properties make **Shell Turbo[®] Oil CC** an excellent lubricant for emerging combined cycle turbine technology as well as existing gas and steam turbine plants. **Shell Turbo[®] Oil CC** exceeds the major OEM specifications for gas, steam and highly loaded geared turbines.

Applications

- combined cycle turbine systems
- large heavy-duty industrial gas turbines
- smaller gas turbines found in a variety of applications where an ISO Viscosity Grade 32 mineral oil product is recommended
- steam turbines
- thermal energy turbines with heavily loaded gears

Note: **Shell Turbo[®] Oils CC** are not recommended for use in aeroderivative (aircraft-type) gas turbines being used in industrial service. Because of extreme operating conditions and temperatures, these types of gas turbines require a special synthetic fluid; see **Aeroshell[®] Turbine Oils 500, 555 and 560**.

Features/Benefits

- unique, patented additive technology, containing a multiple antioxidant system
- extremely good thermal and oxidation stability
- excellent sludge control
- non-corrosive to metals
- fast separation of water
- good air release properties

Approvals

- Siemens TLV 9013 04
- Alstom HTGD 90 117

Turbo Oils CC Exceeds OEM Requirements

- General Electric Company GEK 32568F, GEK 101941A, GEK 28143A and GEK 46506D
- Siemens-Westinghouse 21T0591 and 55125Z3
- Siemens/Mannesmann Demag 800 037 98
- GEC Alstom NBA 50001
- Solar ES9-224U Class II
- ABB-Stal VTI-3200-3
- ABB-Stal K-110-812108
- ASTM D 4304, Type II (EP)
- DIN 51515 Parts 1 and 2

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- ISO 8068
- JIS K-2213 Type 2
- BS 489-1999

Typical Properties of Shell Turbo® Oils CC

	Test Method	ISO Viscosity Grade	
		32	46
Product Code		65627	65697
Property			
Gravity, °API	D 1298	31.8	30.8
Viscosity:			
@ 40°C, cSt	D 445	32.0	46.0
@ 100°C, cSt	D 445	5.45	6.90
Viscosity Index	D 2270	105	105
Flash, COC, °F	D 92	430	465
Pour Point, °F	D 5950	+10	+10
Acid Number, mg KOH/g	D 974	0.15	0.15
Foaming, Seq. I/II/III ml of foam after 0 minutes ml of foam after 10 minutes	D 892	10/20/10 0/0/0	10/20/10 0/0/0
Air Release, minutes	D 3427	4	4
Demulsibility, separation time, minutes	D 1401	15	15
Rust Prevention	D 665B	Pass	Pass
Copper Corrosion, 3 hrs @212° F	D 130	1a	1a
Load Carrying Capacity, FZG, Fail Stage	DIN 51354	9 min	9 min
Mod. Turbine Oil Stability Test*, hrs	Mod. D 943	20,000+	20,000+
Rotating Bomb Oxidation Test, minutes	D 2272	2,500+	2,500+

*Test allowed to run past usual end point of 10,000 hours until acid number of 1.0 mg KOH/g reached.

Handling & Safety Information

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet <http://www.shell-lubricants.com/msds/>. If you are a Shell Distributor, please call **1+800-468-6457** for all of your service needs. All other customers, please call **1+800-840-5737** for all of your service needs. Information is also available on the World Wide Web: <http://www.shell-lubricants.com/>.