



SHELL TURBO[®] OILS T Premium quality turbine and general purpose R&O inhibited circulating oils

Product Description

Shell Turbo Oils T are premium quality lubricating oils designed to provide excellent lubrication of precision turbines and many other industrial applications. These oils are made from severely hydroprocessed (API Group II) base oils, which have been carefully selected to provide satisfactory viscosity/temperature characteristics, low foaming tendencies and good water separation properties. In addition, they contain proven additives to protect equipment against rusting and to resist oxidation for long service life.

Shell Turbo Oils T are available in four ISO viscosity grades from 32 to 100. Grade nomenclature conforms to the ASTM/ISO viscosity system.

Turbine Applications

Shell Turbo Oils T have a long and successful record of providing dependable turbine lubrication with trouble-free performance. Turbo Oils T meet the requirements of major turbine builders including GE, Siemens, Westinghouse, ABB Alstom, Elliot and Demag Delaval Steam Turbines. The appropriate grade of Turbo T used in a given application should be in accordance with the viscosity recommendation of the equipment manufacturer. General recommendations for the various kinds of turbines are:

	Viscosity cSt at 40°C	Lubricant
Steam Turbines:		
• Direct Drive – ring oiled w/water cooling	54-75	Turbo Oil T 68
• Direct Drive – forced feed	30-38	Turbo Oil T 32
• Gear Drive – forced feed	54-75	Turbo Oil T 68
Hydraulic Turbines:		
• Large Vertical Machines	54-75	Turbo Oil T 68
• Small Vertical Machines	30-38	Turbo Oil T 32
• Horizontal Machines	30-38	Turbo Oil T 32

General Applications

- a wide range of lubrication applications
- general purpose plant lubrication
- non-anti-wear hydraulic and circulating oil systems
- non-EP gear oils

Shell Turbo Oils T meet the American Standards Institute (ANSI)/American Gear Manufacturers Association (AGMA) 9005-D94 requirements for R&O oils. Standards for machine tool lubrication established by the STLE include a classification for Hydraulic Fluid and General Purpose Lubricants.

Shell Turbo Oils T for Hydraulic Fluid and General Purpose Lubricants

STLE Standard No.	STLE Identifying No.	Recommended Shell Lubricant
ASLE 64-1	H-150	Turbo Oil T 32
ASLE 64-2	H-215	Turbo Oil T 46
ASLE 64-3	H-315	Turbo Oil T 68

Features/Benefits

- superior oxidation stability
- non-corrosively to metals
- fast separation of water and good de-aeration properties

Approvals and Recommendations

- Alstom Power HTGD 90 117 V0001R and NBA P5001
- Siemens TLV 9013 04/01
- General Electric GEK 28143A
- Westinghouse 21 T0591
- Solar Turbines ES 9-224U
- Mitsubishi Heavy Industries E00-87182
- Cincinnati Machine; P-38, P-55 and P-54
- ISO 8068
- ASTM D 4304, Type I (non-EP)

Typical Properties of Shell Turbo Oils T

	Test Method	ISO Viscosity Grade			
		32	46	68	100
Product Code		65602	65603	65605	65558
Gravity, °API	D 1298	32.2	31.8	31.4	30.7
Color	D 1500	1.0	1.0	1.0	1.5
Flash Point, COC, °F	D 92	420	430	440	450
Pour Point, °F	D 97	-20	-10	0	+10
Viscosity:					
@ 40°C, cSt	D 445	32	46	68	100
@ 100°C, cSt	D 445	5.45	6.90	8.95	11.5
Viscosity Index	D 2270	105	105	105	102
Acid Number, mg KOH/g	D 974	0.05	0.05	0.05	0.05
Cu Corrosion, 3 hrs @ 212°F	D 130	1b	1b	1b	1b
Rust Test	D 665B	Pass	Pass	Pass	Pass
Demulsibility, separation time, minutes	D 1401	15	15	20	20
Turbine Oil Stability Test, hrs	D 943	7000+	7000+	7000+	7000+
RBOT, minutes	D 2272	800+	800+	800+	800+

Handling & Safety Information

For information on the safe handling and use of this product, refer to its Material Safety Data Sheet <http://www.equivashellmsds.com>. For more information and availability, call **1+800-782-7852** or visit the World Wide Web: <http://www.shell-lubricants.com/>.