Turbine Oil

Long-Life, Rust & Oxidation-Inhibited Circulating Oil

Turbine Oil is a very high quality, rust and oxidation (R&O)-inhibited circulating oil developed for use in industrial steam turbines, rotary air compressors and many other industrial applications. It is specially formulated to provide a very high level of oxidation resistance for long service life.

Turbine Oil is formulated to provide excellent protection against rust, corrosion and deposit formation. It has excellent oxidation resistance and thermal stability at high temperatures to minimize sludge and varnish formation, and provide long service life. It protects system components against rust and corrosion. It has excellent water-separating properties to minimize the formation of emulsions, and is resistant to excessive foam buildup that can interfere with proper lubrication.

Applications

- Direct-drive steam turbines and hydroelectric turbines
- Air tools and other pneumatic equipment lubricated through air line lubricators
- Centrifugal and rotary air compressors
- Closed heat transfer systems
- Lightly loaded enclosed industrial gearboxes that do not require a compounded or extreme-pressure (EP) gear oil (ISO VG 68, 100)
- Lightly loaded plain and rolling-element bearings, such as those in electric motors and blowers
- Vacuum pumps, deep-well water pumps and machine tools

Turbine Oil meets the requirements of the following industry and OEM specifications:

- ABB G12106
- AGMA Grades 0 through 3 (non-EP)
- Alstom Power HTGD 90 117 for non-geared turbines
- ASTM D4304 Type I Turbine Oil
- British Standard 489
- Cincinnati Machine P-38 (ISO VG 32) (approved)
- Denison Hydraulics HF-1
- DIN 51517 Part 1, Lubricating Oils, Type CL
- DIN 51524 Part 1, Hydraulic Oils, Type HL
- General Electric GEK 46506e, GEK 27070 (obsolete), GEK 28143A (obsolete)
- Siemens Power Generation TLV 9013 04
- U.S. Military MIL-L-17672D

Contact Information

U.S. Customer Service:
1-800-822-6457

Technical Hot Line:
1-800-766-0050

International Customer Service:
+1-832-486-3363
+1-832-486-3870

E-mail address:
lubricants@conocophillips.com

- U.S. Steel 126

Features/Benefits

- Excellent oxidation resistance and thermal stability for long service life
- Protects against sludge and varnish formation
- Protects against rust and corrosion
- Excellent water-separating properties
- Low carbon-forming tendency for use in air compressors
- Good foam resistance
- Compatible with electrostatic oil cleaners[1]

[1] ***Caution:*** *When used in turbines equipped with electrostatic oil cleaners, please consult with the respective manufacturers for proper filter selection.*

Turbine Oil

Typical Properties

ISO Grade	32	46	68	100
AGMA Grade	**0**	**1**	**2**	**3**
Specific Gravity @ 60°F	0.861	0.866	0.871	0.875
Density, lbs/gal @ 60°F	7.17	7.21	7.25	7.29
Color, ASTM D1500	0.5	0.5	0.5	0.5
Flash Point (COC), °C (°F)	220 (428)	232 (450)	243 (469)	277 (531)
Pour Point, °C (°F)	-37 (-35)	-33 (-27)	-27 (-17)	-24 (-11)
Viscosity,				
cSt @ 40°C	31.8	46.0	68.0	100
cSt @ 100°C	5.4	6.7	8.8	11.3
SUS @ 100°F	164	238	352	522
SUS @ 210°F	44.4	48.7	55.9	65.0
Viscosity Index	102	102	100	100
Acid Number, ASTM D974, mg KOH/g	0.08	0.08	0.08	0.08
Copper Corrosion, ASTM D130	1a	1a	1a	1a
Demulsibility, ASTM D1401, minutes to pass	20	20	20	25
Foam Test, ASTM D892	Pass	Pass	Pass	Pass
Oxidation Stability,				
TOST, ASTM D943-04a, hours	>15,000	>15,000	>15,000	>15,000
RPVOT, ASTM D2272, minutes	>1,200	>1,200	>1,200	>1,200
Rust Test, ASTM D665 A&B	Pass	Pass	Pass	Pass

Health and Safety Information

For recommendations on safe handling and use of this product, please refer to the Material Safety Data Sheet via *http://w3.conocophillips.com/NetMSDS*.

Typical properties are average values only and do not constitute a specification. Minor variations that do not affect product performance are to be expected during normal manufacture, and at different blending locations. Product formulations are subject to change without notification.

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