

## ADVANTAGE TURBINE OILS

### OVERVIEW

**ADVANTAGE TURBINE OILS** are highly refined premium quality, rust and oxidation (R&O) inhibited circulating oil. Developed for use in industrial steam turbines, rotary air compressors and other industrial applications, **ADVANTAGE TURBINE OILS** provide excellent rust, corrosion and deposit protection. They minimize sludge and varnish buildup due to high anti-oxidation reserves and excellent thermal stability at high temperatures. **ADVANTAGE TURBINE OILS** possess excellent water separating abilities to minimize emulsion formation and resist excess foam build up that interferes with lubrication.

### FEATURES & BENEFITS

**ADVANTAGE TURBINE OILS** are characterized by outstanding performance in preventing rust, oxidation, foaming, air entrainment and many other factors that can occur and are undesirable in sophisticated turbine systems. They exhibit excellent water demulsibility properties, low carbon and varnish-forming tendency in equipment, exceptional resilience to heat and temperature spikes, and superior protection from water and steam related corrosion and oxidative degradation.

### APPLICATIONS

**ADVANTAGE TURBINE OILS** are designed for use in direct-drive steam turbines, hydroelectric turbines, gas turbines, rotary and centrifugal air compressors, vacuum pumps, deep well water pumps, machine tools, air tools lubricated through airline lubricators, industrial gear drives not requiring extreme-pressure (EP) or compounded gear oil, and lightly loaded plain and rolling element bearings found in electric motors and blowers.

### SPECIFICATIONS

**AGMA 9005-F16 R&O • ASTM D-4304 TYPE I, TYPE II, TYPE III • BRITISH STANDARD BS 489 • CINCINNATI P-38, P-45, P-54, P-55, P-57, P-62 • DIN 51506 VDL • DIN 51515 PART 1 & 2, DIN 51524 PART 1 • GEK 101941A, 107935A\*, 27070, 28143b Type I, GEK32568J, GEK 46506E • INDIAN STANDARD IS 1012 • ISO 11158 HH, HL • ISO 8068 TSA, TGA, TGE & TSE • JIS K2213 TYPE 2 • SIEMENS N65/0027 • SIEMENS AG TLV 9013 04 • SIEMENS AG TLV 9013 05 • SOLAR TURBINES ES 9-224**

### TYPICAL PROPERTIES

PRODUCT CODES	429	431	437	442	445	446	450
ISO Viscosity Grade	22	32	46	68	100	220	320
Viscosity, cSt @40 °C	21.3	32.5	46	68	100	220.2	313.0
Viscosity, cSt @100 °C	4.3	5.4	6.6	8.9	11.4	21.2	27.5
Viscosity Index	108	104	98	104	100	114	117
Color	0.5	0.5	0.5	0.5	0.5	1.0	1.0
Flash Point, COC °F, min.	400	430	450	470	530	500	500
Pour Point °F, max.	-40	-36	-26	-18	-10	-10	-10
Oxidation Stability, TOST hrs.	-	10,000+	10,000+	10,000+	10,000+	10,000+	10,000+
RPVOT mins, minimum	1,800+	1,800+	1,800+	1,800+	1,800+	1,800+	1,800+
TAN, mgKOH/gm	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Demulsibility, mins to pass max.	20	20	20	20	25	25	25
Rust Test	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Copper Strip, min.	1A	1A	1A	1A	1A	1A	1A