

## ConocoPhillips Hydroclear Diamond Class® 68 AW Turbine Oil

Category : Fluid , Lubricant

**Material Notes:**

Diamond Class AW Turbine Oil is a premium quality, rust and oxidation (R&O)-inhibited, antiwear turbine oil developed for use in geared and direct-drive gas turbines and steam turbines in severe service. Diamond Class AW Turbine Oil is formulated with premium hydrocracked base oils and select additives to provide outstanding oxidation resistance, excellent wear protection, protection against rust and corrosion, and resistance to foaming. It has outstanding oxidation resistance and thermal stability at high temperatures to minimize deposit 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. An ashless (non-zinc) antiwear additive provides wear protection for gears and bearings. Diamond Class AW Turbine Oil is filtered to an ISO Cleanliness Code of 18/16/13 for use in circulating systems with tight tolerances where particle contamination can cause operational problems. The bulk oil is filtered at the blending terminal prior to filling any package containers, and is filtered again upon delivery in bulk to the customer's bulk tank.

**Applications:** Combined-cycle and co-generation gas turbines Gas turbines and steam turbines with gear drives

Diamond Class AW Turbine Oil meets the requirements of the following industry and OEM specifications: ABB G12106Alstom Power HTGD 90 117, for turbines with gear drives ASTM D4304-06a, Type II Turbine Oil British Standard 489DIN 51515 Part 1, Lubricating Oils, Type L-TD DIN 51515 Part 2, Lubricating Oils, Type L-TG DIN 51517 Part 1, Lubricating Oils, Type CLDIN 51524 Part 1, Hydraulic Oils, Type HL DIN 51524 Part 2, Antiwear Hydraulic Oils, Type HLP Elliott ring-oiled turbines, where mineral-based turbine oil is Specified General Electric GEK 101941A, GEK 107395A, GEK 32568F, GEK 46506e, GEK 27070 (obsolete), GEK 28143A (obsolete) Siemens Power Generation TLV 9013 04, TLV 9013 05 Siemens Westinghouse 21T0591 (obsolete), 55125Z3 (obsolete) Solar Turbines ES9-224, Rev. W, Class II Turbine Oil U.S. Military MIL-PRF-17672D, Symbol 2075 T-H (ISO VG 32), 2110 T-H (ISO VG 46), 2135 T-H (ISO VG 68) U.S. Steel 126

**Features/Benefit:**  
 Outstanding oxidation resistance and thermal stability for long service life  
 Protects against sludge and varnish formation  
 Excellent wear protection for gears and bearings  
 Protects against rust and corrosion  
 Excellent water-separating properties  
 Resists the formation of emulsions and bacteria buildup  
 Good foam resistance  
 Meets ISO Cleanliness Code rating of 18/16/13

Information provided by ConocoPhillips.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_ConocoPhillips-Hydroclear-Diamond-Class-68-AW-Turbine-Oil.php](http://www.lookpolymers.com/polymer_ConocoPhillips-Hydroclear-Diamond-Class-68-AW-Turbine-Oil.php)

Physical Properties	Metric	English	Comments
Specific Gravity	0.872 g/cc	0.872 g/cc	
Density	0.870 g/cc	0.0314 lb/in <sup>3</sup>	
Viscosity Measurement	102	102	Viscosity Index
Saybolt Viscosity at 100°F	352 SUS	352 SUS	
Saybolt Viscosity at 210°F	56 SUS	56 SUS	
Kinematic Viscosity at 40°C (104°F)	68 cSt	68 cSt	
Kinematic Viscosity at 100°C (212°F)	8.8 cSt	8.8 cSt	
Oxidative Stability	>= 24000 hour	>= 24000 hour	TOST; ASTM D943-04a

Physical Properties	Metric	English	Comments
ASTM Color	U.S.U	U.S.U	ASTM D1500

Mechanical Properties	Metric	English	Comments
Four Ball Wear	0.500 mm	0.0197 in	Scar Diameter; ASTM D4172

Thermal Properties	Metric	English	Comments
Pour Point	-34.4 °C	-30.0 °F	
Rotating Bomb Oxidation Test (RBOT)	>= 1700 min	>= 1700 min	ASTM D 2272
Flash Point	243 °C	469 °F	COC

Chemical Properties	Metric	English	Comments
Total Acid Number	0.10	0.10	[mg KOH/g]; ASTM D974

Descriptive Properties	Value	Comments
Air Release	2.2 mins	ASTM D3427
Corrosion, Copper Strip	1A	ASTM D130
Emulsion Characteristics (40-40-0)	10 minutes	Water Separation
FZG	Pass 9 Stages	

## Contact Songhan Plastic Technology Co.,Ltd.

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