

## ConocoPhillips Hydroclear Diamond Class® 46 Turbine Oil

Category : Fluid , Lubricant

**Material Notes:**

Diamond Class Turbine Oil is a premium quality, rust and oxidation (R&O)-inhibited turbine oil developed for use in gas turbines and steam turbines in severe service. It is specially formulated to protect against sludge and varnish formation in new-generation gas turbines.

Diamond Class Turbine Oil is formulated with premium hydrocracked base oils and specially tailored additives to provide outstanding oxidation resistance and deposit control, resulting in long service life and significant cost savings to power generation customers. It minimizes the formation of harmful sludge and varnish deposits, especially in servo valves and IGV valves where oil flow rate is low and the oil is subjected to cyclic temperatures common in peaking gas turbines. It protects system components against rust and corrosion. It has excellent water-separating properties to minimize the formation of emulsions and bacteria buildup, and is resistant to excessive foam buildup that can interfere with proper lubrication and lead to premature bearing wear. Diamond Class 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:** Direct-drive, combined-cycle and co-generation gas turbines Direct-drive steam turbines

Diamond Class Turbine Oil meets the requirements of the following industry and OEM specifications: ABB G12106 Alstom Power HTGD 90 117, for turbines without gear drives ASTM D4304-06a, Type I Turbine Oil ASTM D4304-06a, Type III Turbine Oil British Standard 489 Cincinnati Machine P-38 (ISO VG 32) (approved) DIN 51515 Part 1, Lubricating Oils, Type L-TD DIN 51515 Part 2, Lubricating Oils, Type L-TG DIN 51517 Part 1, Lubricating Oils, Type CL DIN 51524 Part 1, Hydraulic Oils, Type HL 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) ISO 8068, Type L-TGB, Type L-TGSB Siemens Power Generation TLV 9013 04 (approved), TLV 9013 05 Siemens Westinghouse 21T0591 (obsolete), 55125Z3 (obsolete) 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/Benefits:** Outstanding oxidation resistance and thermal stability for long service life Outstanding control of sludge and varnish formation in base-loaded and peaking turbines 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-46-Turbine-Oil.php](http://www.lookpolymers.com/polymer_ConocoPhillips-Hydroclear-Diamond-Class-46-Turbine-Oil.php)

| Physical Properties                  | Metric     | English                   | Comments        |
|--------------------------------------|------------|---------------------------|-----------------|
| Specific Gravity                     | 0.868 g/cc | 0.868 g/cc                |                 |
| Density                              | 0.866 g/cc | 0.0313 lb/in <sup>3</sup> |                 |
| Viscosity Measurement                | 102        | 102                       | Viscosity Index |
| Saybolt Viscosity at 100°F           | 237 SUS    | 237 SUS                   |                 |
| Saybolt Viscosity at 210°F           | 49 SUS     | 49 SUS                    |                 |
| Kinematic Viscosity at 40°C (104°F)  | 46 cSt     | 46 cSt                    |                 |
| Kinematic Viscosity at 100°C (212°F) | 6.8 cSt    | 6.8 cSt                   |                 |

| Physical Properties | Metric | English | Comments   |
|---------------------|--------|---------|------------|
| ASTM Color          | 0.50   | 0.50    | ASTM D1500 |

| Thermal Properties                  | Metric      | English     | Comments   |
|-------------------------------------|-------------|-------------|------------|
| Pour Point                          | -37.8 °C    | -36.0 °F    |            |
| Rotating Bomb Oxidation Test (RBOT) | >= 1700 min | >= 1700 min | ASTM D2272 |
| Flash Point                         | 234 °C      | 453 °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                        | 1.7 minutes | ASTM D3427       |
| Corrosion, Copper Strip            | 1A          | ASTM D130        |
| Emulsion Characteristics (40-40-0) | 20 minutes  | Water Separation |

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China