



## Product Data

### **BP Turbo Oil 2380** Balanced All-around Performance

#### **Description**

- BP Turbo Oil 2380 is a 5 cSt synthetic lubricant that is approved against US military specification MIL-PRF-23699 STD, and UK military specification DEF STAN 91-101 (replaced DERD 2499).
- This lubricant provides a balanced combination of thermal and oxidation stability, load carrying capacity, lower volatility and has the best low temperature flow characteristics of all 5 cSt turbine oils.

#### **Application**

BP Turbo Oil 2380 is recommended for the lubrication of most fixed wing and rotary wing aircraft gas turbines and accessories. It is also recommended for the lubrication of aero-derived gas turbines in industrial power generation, offshore and marine applications.

BP Turbo Oil 2380 has been approved by a wide range of engine and accessory manufacturers for their applicable equipment, including:

Rolls-Royce, GE, Pratt & Whitney, Pratt & Whitney Canada, Pratt & Whitney Aero Power APUs (formally Hamilton Sundstrand), United Technologies Aerospace Systems (formally Hamilton Sundstrand), Honeywell, CFMI, IAE, MTU and Turbomeca.

The wide range of approvals make it an ideal single oil solution for many aircraft.

Please contact our local representatives shown in the Air BP website for approval details.

#### **Advantages**

- BP Turbo Oil 2380 has the best low temperature viscosity properties among all 5 cSt oils.
- Minimum formation of varnish and sludge deposits over long periods of use.
- Very benign to commonly used seal materials in gas turbines.
- BP Turbo Oil 2380 is among the best of its class and provides excellent protection to bearings, gears, and other highly loaded lubricated surfaces.
- Its high degree of oxidation resistance permits a long period of operation without significant increase in viscosity and/or total acidity.

## Typical Characteristics

Name	Method	Units	Turbo Oil 2380
Density @ 15°C	ASTM D1298	Kg/l	0.9749
Kinematic Viscosity @ 100°C	ASTM D445	mm <sup>2</sup> /s	4.97
Kinematic Viscosity @ 40°C	ASTM D445	mm <sup>2</sup> /s	24.2
Kinematic Viscosity @ -40°C after 35 minutes	ASTM D2532	mm <sup>2</sup> /s	7,950
Pour Point	ASTM D97	°C	-57
Flash Point	ASTM D92	°C	265
Total Acid Number	SAE ARP5088	mgKOH/g	0.43
Evaporation Loss (6.5 hrs @ 204°C)	ASTM D972	%	3.0
<b>Foaming Characteristics</b>			
Sequence 1 @ 24°C	ASTM D892	ml/vol	9/0
Sequence 2 @ 93°C			8/0
Sequence 3 @ 24°C			8/0
<b>Load Carrying Ability. IAE Gear Machine. Ref Oil A</b>			
2000rpm	IP 166	%	99
6000rpm			86
<b>Rubber Swell</b>			
Nitrile Rubber (192 hrs @ 130°C)	DERD Test, Method 4	%	10.5
Viton Rubber (192 hrs @ 200°C)			22.5
Silicone Rubber (192 hrs @ 175°C)			10.5
Viton LCS Rubber (192 hrs @ 200°C)			14

## Storage

- The shelf life of BP Turbo Oil 2380 can extend beyond four years when stored in original, unopened quart cans under recommended storage conditions, i.e. in a well ventilated and covered area away from extreme heat and moisture etc. 55-gallon drums and 5-gallon pails have an expected shelf life of three years minimum.
- For all package styles, shelf life can be increased significantly beyond those stated above, depending upon storage conditions.

Please contact your Air BP representative if you have any questions about product usability.

BP Turbo Oil 2380  
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Air BP Lubricants/BP Lubricants USA Inc., 1500 Valley Road , Wayne , NJ 07470, USA  
+1 973 633 2200  
www.airbp.com/lubricants



