



## Perfecto X Range

Premium turbine lubricant

### Description

The Castrol Perfecto X turbine oil range of lubricants is based upon premium quality mineral oils enhanced with rust and oxidation inhibitors to give maximum protection at high temperatures.

### Application

Castrol Perfecto X grades are recommended for industrial gas turbines where the lubricant is likely to be exposed to very high localised temperatures. They are also suitable for the lubrication of steam turbines and Combined Cycle generating systems where the steam and gas turbines share a common supply.

Castrol Perfecto X grades possess excellent air release performance, a high resistance to foaming and excellent water separation properties.

Specific grades within the Perfecto X range meet or exceed the requirements of:

- BS 489: 1999
- DIN 51515 Part 1 (L-TD)
- DIN 51515 Part 2 (L-TG)
- General Electric
  - GEK 28143b
  - GEK 32568k
  - GEK 46506E
  - GEK 107395A
- Alstom HTGD 90117
- Siemens TLV 9013 04
- Siemens TLV 9013 05

### Advantages

- High resistance to oxidation and thermal degradation provides a very long life lubricant because of low deposit/lacquer formation.
- Excellent water separation and corrosion inhibition mean reduced down time through prolonged lubricant life and increased equipment reliability.
- Excellent air release properties mean they meet the requirements of all turbine manufacturers.
- Suitable for the lubrication of both gas and steam turbines makes them applicable for Combined Cycle generating stations.

## Typical Characteristics

Name	Method	Units	Perfecto X 32	Perfecto X 46	Perfecto X 68	Perfecto X 100
ISO Viscosity Grade	-	-	32	46	68	100
Density @ 15°C / 59°F	ISO 12185 / ASTM D4052	kg/m <sup>3</sup>	859	863	867	865
Kinematic Viscosity @ 40°C / 104°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	32	46	68	100
Kinematic Viscosity @ 100°C / 212°F	ISO 3104 / ASTM D445	mm <sup>2</sup> /s	5.5	7.0	9.0	11.6
Viscosity Index	ISO 2909 / ASTM D2270	-	111	108	104	105
Foam Sequence I - tendency / stability	ISO 6247 / ASTM D892	ml/ml	10/0	10/0	10/0	0/0
Air Release @ 50°C / 122°F	ISO 9120 / ASTM D3427	minutes	2	3	5	6
Demulsification - Steam method	IP 19	seconds	75	100	100	120
Water Separation @ 54°C / 129°F (40/37/3)	ISO 6614 / ASTM D1401	minutes	10	10	10	5
Pour Point	ASTM D5950	°C (°F)	-15 (5)	-12 (10)	-12 (10)	-18 (0)
Flash Point - open cup method	ISO 2592 / ASTM D92	°C (°F)	>215 (>419)	>220 (>428)	>220 (>428)	>220 (>428)
Acid Number	ISO 6619 / ASTM D664	mgKOH/g	0.1	0.1	0.1	0.1
Rust test - synthetic seawater (24 hrs)	ISO 7120 / ASTM D665B	rating	Pass	Pass	Pass	Pass
Copper corrosion (3 hrs @ 100°C / 212°F)	ISO 2160 / ASTM D130	rating	1b	1b	1b	1b
Oxidation Stability - Rotating Pressure Vessel test	ASTM D2272	minutes	1300	1300	1300	1700

The above figures are typical of those obtained with normal production tolerance and do not constitute a specification.

## Storage

All packages should be stored under cover. Where outside storage is unavoidable drums should be laid horizontally to avoid the possible ingress of water and the obliteration of drum markings. Products should not be stored above 60°C, exposed to hot sun or freezing conditions.

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