



Regal[®] Premium EP

Efficient performance high temperature
gas turbine lubricant

Product Data Sheet

Product description

Regal Premium EP is an efficient performance high temperature gas turbine lubricant, which is also suitable for use in steam turbines. This means Regal Premium EP is also suitable for use in combined cycle units, with single lubrication systems.

Regal Premium EP is formulated with severely hydro-treated base oils combined with an ashless additive system designed to offer oxidation stability and protection against corrosion and wear.

Customer benefits

- High temperature oxidation stability promotes increased oil service life under high thermal and mechanical stress
- Robust resistance to sludge and acidic oxidation product formation helps avoid valve sticking and bearing corrosion
- Rapid water separation contributes to constant system lubrication and component protection
- Foam resistance and rapid air release provide uninterrupted lubrication and system protection

Applications

- Regal Premium EP is recommended for steam and gas turbines, with and without gearboxes
- Regal Premium EP is primarily recommended for use in heavy duty industrial gas turbines where reservoir oil temperatures are up to +100 °C and where gas temperatures in the bearing housings exceeds +400 °C
- The suitability for steam and gas turbine applications makes Regal Premium EP the preferred lubricant for combined cycle units with single lubrication systems
- Regal Premium EP is suitable for the lubrication of a wide range of equipment associated with the turbines for which it is recommended.

Product highlights:

- Oxidation stability promotes increased oil service life
- Valve sticking resistance and bearing corrosion protection
- Rapid water and air separation
- Selected specification standards include:
 - ASTM
 - Atlas Copco
 - BS
 - DIN
 - Fiat Avio
 - GEC Alstom
 - General Electric
 - ISO
 - KEMA
 - Laborelec
 - MAN Turbo
 - Siemens
 - Solar

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Typical applications include air compressors, bath and circulating systems supplying bearings of many types, lightly to moderately loaded gear sets, pumps, electric motors and low to moderate pressure hydraulic systems.

This product is not recommended for aviation gas turbines in either aircraft or non-aviation service.

Approvals, performance and recommendations

Approvals

Regal Premium EP 32/46 is approved against:

- Siemens TLV 9013 04 for use in turbosets with and without gearboxes
- Siemens gas turbine type SGT 200
- Alstom HTGD 90117
- Skoda Power TP 0010P

Performance

- DIN 51515/T1 L-TD and L-TG (ISO VG 32, VG 46, VG 68)
- ISO 8068 (type L-TSE and L-TGE) (ISO VG 32, VG 46, VG 68)
- BS 489 (ISO VG 32, VG 46, VG 68)
- ASTM D4304 (ISO VG 32, VG 46, VG 68)
- GEC Alstom NBA P50001 A / NBA P50003 A (ISO VG 32, VG 46)
- General Electrics GEK 27070 / GEK 46506 E (ISO VG 32)
for use in steam turbines
- General Electrics GEK 28143A for use in (ISO VG 32)
moderate gas turbines (GT 5000 or 6B)
- General Electrics GEK 32568F for use in heavy (ISO VG 32)
duty gas turbines with bearings (frame 9E and 9FA)
- General Electrics GEK 101941A gas turbines with (ISO VG 32)
anti wear additives with bearings (Frame 6FA)
- Fiat Avio TS 5001 spec. (lubricating & cooling oil (ISO VG 32)
specification for gas turbines)



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continued

- Siemens gas turbine type SGT 200 (ISO VG 46)
AR-M350_20111017_135639
P= 6750 KW, 11053 RPM
- Siemens (former ABB-stal) MAT81 21 01 and (ISO VG 32, VG 46)
81 21 02 specifications. Also known as Demag
Delaval Turbomachinery spec.
- Atlas Copco 790.21.2E spec. for use in (ISO VG 32, VG 46)
expansion turbines and turbo compressors
- MAN TURBO TQL-T2 (ISO VG 46)
- Solar ES9-224 (Class II) spec. (ISO VG 32, VG 46)
- KEMA keuringseisen M23b (ISO VG 32, VG 46, VG 68)
- Laborelec requirements (ISO VG 32, VG 46)

Typical test data

REGAL PREMIUM EP				
TEST	TEST METHODS	RESULTS		
Viscosity Grade		32	46	68
Product Code		520046	560511	520048
Kinematic viscosity, 40°C, mm ² /s	ASTM D445	32	46	68
Kinematic viscosity, 100°C, mm ² /s	ASTM D445	5.6	6.9	8.8
Viscosity Index	ASTM D2270	112	112	109
Flash Point COC, °C	ASTM D92	226	230	244
Pour Point, °C	ASTM D97	-9	-9	-12
Density at 15°C, kg/l	ASTM D4052	0.862	0.867	0.870
Copper corrosion (3 h, 100 °C)	ASTM D130	1A	1A	1A
Foam Seq. II (after blowing), ml	ASTM D892	20	20	30
Foam Seq. II (after 10' standing), ml	ASTM D892	0	0	0
Oxidation stability				
- RPVOT, min.	ASTM D2272	+1000	+1000	+1000
- TOST life, hrs. to 2 mg KOH/g	ASTM D943	+10000	+10000	+10000
FZG load stage	DIN 51354	12	12	12

The information given in the typical data does not constitute a specification but is an indication based on current production and can be affected by allowable production tolerances. The right to make modifications is reserved. This supersedes all previous editions and information contained in them.

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Health, safety, storage and environmental Based on current available information, this product is not expected to produce adverse effects on health when used for the intended application and in accordance with the recommendations provided in the Material Safety Data Sheet (MSDS). MSDS's are available upon request through your local sales office, or via the Internet. This product should not be used for purposes other than its intended use. When disposing of used product, take care to protect the environment and follow local legislation.

For more information, go to www.chevronlubricants.com