

RENOLIN ETERNA

High quality turbine oils – new generation

Description

RENOLIN ETERNA turbine oils were developed for gas, steam, and expansion turbines as well as for turbo compressors with and without gearboxes based on the latest lubrication technology.

The excellent properties of the base oils produced in a special process are enhanced using a carefully selected additive system. RENOLIN ETERNA oils contain no organo-metallic compounds and are therefore ash-less. They provide a zinc-free wear protection.

Application

RENOLIN ETERNA is especially suited for use in turbine systems with a common control and lubricating oil circuit. It can also be used as a bearing and sealing oil in hydrogen-cooled generators.

RENOLIN ETERNA has excellent anti wear properties and excellent Vickers Vane Pump results, V104C.

RENOLIN ETERNA has excellent wear protection properties. The failure load stage is 12 according to FZG test DIN ISO 14635-1.

RENOLIN ETERNA shows excellent roller bearing wear protection. FE8 test is passed with excellent result.

RENOLIN ETERNA can be used as CLP (EP) gear oil according to DIN 51517-3.

Advantages

- High thermal stability
- Good viscosity-temperature behaviour
- Rapid air release
- No foaming
- Low pourpoint
- Good wear protection
- Excellent corrosion protection
- Good water separation behaviour

Specifications

RENOLIN ETERNA 32/46 are approved by:
Siemens Power Generation

The RENOLIN ETERNA range also meets and in many cases exceeds the requirements of:

- DIN 51515-1 (TD) with and without gearbox
- DIN 51515-2 (TG) with and without gearbox
- DIN 51524-2: HLP
- (DIN 51524-3: HVLP – with exception of the VI)
- GE GEK 28568 A
- GE GEK 32568 F
- GE GEK 32568 H
- GE GEK 101941 A
- GE GEK 107395 A
- Siemens TLV 901304
- Siemens TLV 901305
- Siemens MAT 812109
- MAN Turbo AG – SP10000494596, Germany
- Solar ES 9-224 (Class I / Class II)
- MIL-PRF-17331 J
- DIN 51517-3 (CLP gear oil)
- ISO 7624: pass > 4,000 h



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Typical data:

| Product name | | 32 | 46 | 68 | |
|--|-----------------------|------------|------------|------------|-------------------------|
| Properties | Unit | | | | Test method |
| ISO VG | | 32 | 46 | 68 | DIN 51519 |
| Colour | - | 0.5 | 1.0 | 0.5 | DIN ISO 2049 |
| Density at 15 °C | g/ml | 0.842 | 0.846 | 0.851 | DIN 51757 |
| Kinematic viscosity at 40 °C | mm ² /s | 32 | 46 | 68 | DIN EN ISO 3104 |
| at 100 °C | mm ² /s | 5.8 | 7.6 | 9.9 | |
| Viscosity index | - | 126 | 132 | 120 | DIN ISO 2909 |
| Flashpoint | °C | 220 | 220 | 230 | DIN ISO 2592 |
| Pourpoint | °C | -15 | -15 | -15 | DIN ISO 3016 |
| Foaming | | | | | ASTM D 892 |
| Sequ. I | ml | 10/0 | 20/0 | 20/0 | |
| Sequ. II | ml | 10/0 | 10/0 | 10/0 | |
| Sequ. III | ml | 10/0 | 10/0 | 10/0 | |
| Neutralisation number | mgKOH/g | 0.12 | 0.12 | 0.12 | DIN 51558-2 |
| FZG mechanical gear test rig FZG A/8.3/90 | Failure load stage | 12 | 12 | 12 | DIN ISO 14635-1 |
| Air release at 50 °C | min | ≤ 4 | ≤ 4 | ≤ 6 | DIN ISO 9120 |
| Water separation behaviour | s | < 50 | < 60 | < 150 | DIN 51589 |
| Demulsifying power at 54 °C | min | 10 | 10 | 15 | DIN ISO 6614 |
| Steel corrosion (corrosion protection) | Degree of corr. | 0-A 0-B | 0-A 0-B | 0-A 0-B | DIN ISO 7120 |
| Corrosion effect with Cu | Degree of corr. | | 1-100 A24 | | DIN EN ISO 2160 |
| RPVOT 150 °C | min | > 1,000 | > 1,000 | > 1,000 | ASTM D2272 |
| TOST Lifetime | h | > 20,000 | > 20,000 | > 20,000 | ISO 4263/ ASTM D 943 |
| FE8 roller bearing test, D 7.5/80-80 | | | | | DIN 51819-3 |
| - roller bearing wear | mg | < 5 | < 5 | < 5 | |
| - cage wear | mg | < 200 | < 200 | < 200 | |

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We therefore recommend that you consult a FUCHS SCHMIERSTOFFE GMBH application engineer to discuss application conditions and the performance criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care.

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