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 $\geq$ 10 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 EP gear oil according to DIN 51517.

RENOLIN ETERNA can also be used as lubricating oil in Hydropower turbines (water turbines).

Advantages

- High thermal stability
- Good viscosity-temperature behaviour
- Rapid air release
- No foaming
- Low pourpoint
- Good wear protection, FE8 test pass - excellent
- 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 (TDP) with and without gearbox
- DIN 51515-2 (TGP) with and without gearbox
- DIN 51524-2: HLP
- GE GEK 28568 A
- GE GEK 32568 J
- GE GEK 101941 A
- GE GEK 107395 A
- Siemens TLV 901304 / 901305
- Alstom HTGD 90117 V0001W
- Siemens MAT 812109
- MAN Turbo AG – SP10000494596, Germany
- Solar ES 9-224 (Class I / Class II)
- MIL-PRF-17331 J
- DIN 51517-2 (CL oils: FZG ≥ 10)
- ISO 7624: pass > 4,000 h

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Certifications:
ISO 9001, IATF 16949, ISO 14001,
ISO 45001, ISO 50001

(detailed certifications at
www.fuchs.com/de/en)

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Typical data:

Product name		RENOLIN ETERNA			
		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	kg/m³	842	846	851	DIN 51757
Kinematic viscosity at 40 °C at 100 °C	 mm²/s mm²/s	 32 5.8	 46 7.6	 68 9.5	DIN EN ISO 3104
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 Sequ. I Sequ. II Sequ. III	 ml ml ml	 10/0 10/0 10/0	 20/0 10/0 10/0	 20/0 10/0 10/0	ASTM D 892
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	 ≥ 10	 ≥ 10	 ≥ 10	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. 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 - roller bearing wear - cage wear	 mg mg	 < 5 < 200	 < 5 < 200	 < 5 < 200	DIN 51819-3

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Product Information

MOVING YOUR WORLD

LUBRICANTS. TECHNOLOGY. PEOPLE. FUCHS

Note

The information contained in this product information is based on the experience and know-how of FUCHS LUBRICANTS GERMANY GmbH in the development and manufacturing of lubricants and represents the current state-of-the-art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pre-treatment, possible external contamination, etc. For this reason, universally-valid statements about the function of our products are not possible.

Our products must not be used in aircraft or spacecraft. Our products may be used in the manufacture of components for aircraft or spacecraft if they are removed without residue from the components prior to assembly into the aircraft or spacecraft.

The information given in this product information represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application. We therefore recommend that you consult a FUCHS LUBRICANTS GERMANY 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.

Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without warning, unless otherwise provided in customer-specific agreements. With the publication of this product information, all previous editions cease to be valid. Any form of reproduction requires express prior written permission from FUCHS LUBRICANTS GERMANY GmbH.

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