

RENOLIN UNISYN CLP

Fully-synthetic industrial gear lubricants based on polyalphaolefins

Description

Demulsifying, fully-synthetic industrial gear oils with elevated aging resistance, excellent load-carrying capacity and wear protection. RENOLIN UNISYN CLP oils have good resistance to micropitting. Reliable lubrication of roller bearings is confirmed by the good results of the FE8 testing. The products are preferably used when increased requirements are set for high and low temperature usage limits. In gearboxes and circulating systems with sump temperatures up to 90 °C, longer oil-change intervals in comparison with previous mineral oils are achieved. Miscibility with gearbox oils based on mineral oil is generally given, which means that simplified conversion is possible.

Application

The oils of the RENOLIN UNISYN CLP series are used for all applications in industry where a synthetic oil of the CLP type according to DIN 51517-3 is recommended by the manufacturer. Highly-stressed bearings, joints, pressure screws, spur gears, worm gears and planetary gears can be reliably, safely and economically supplied even at short-term peak temperatures up to 150 °C.

Advantages

- Low foaming
- Good air release capacity
- Very good aging resistance
- Excellent corrosion protection
- Excellent viscosity-temperature behavior
- High natural VI (viscosity index)
- Multigrade character
- Excellent wear protection, high EP performance
- Miscible with mineral oil- and ester-based gear oils
- Lifetime lubrication possible
- For high and low operating temperatures

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FUCHS LUBRICANTS (UK) PLC
New Century Street, Hanley
GB-Stoke-on-Trent, Staffordshire, ST1 5HU

Tel +44-1782 -20 37 00
Fax +44-1782 -20 20 73
contact-uk@fuchs-oil.com



Health, Safety and Environment - information is provided for products in the relevant Safety Data Sheet. This provides guidance on potential hazards, precautions and first-aid measures, together with environmental effects and disposal of used products.

While the information and figures given here are typical of current production and conform to specification, minor variations may occur. No warranty expressed or implied is given concerning the accuracy of the information or the suitability of the products

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Specifications

The products meet and in many cases exceed the requirements according to:

- DIN 51517-3: CLP
- ISO 6743-6 and ISO 12925-1: CKC / CKD / CKE
- AGMA 9005/E02: EP
- AIST 224
- David Brown S1 53.101
- FAG requirements: FAG-FE8-Test: stage 1-4 pass (test report is available for ISO VG 320)
- SKF requirements: pass (100 °C-test)

The RENOLIN UNISYN CLP series is approved for example by Siemens-Flender AG, Bocholt, Flender BA 7300, table A.

RENOLIN UNISYN CLP 680 is approved by GE for use in GEB25 / GDY106 Motorized Wheels (2016).

RENOLIN UNISYN CLP 320 is approved by Bucyrus/Caterpillar Inc. (Enclosed Gearcase Lubricants for Bucyrus, Marion and Ransomes-Rapier Draglines).

RENOLIN UNISYN CLP 320 is approved by CAT for Electric Rope Shovels (Enclosed Gearcase Lubricants).

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Typical technical data:

Product name	RENOLIN UNISYN CLP					
		68	100	150	220	
Properties	Unit					Test method
ISO VG		68	100	150	220	DIN 51519
Kinematic viscosity at 40 °C	mm ² /s	68	100	150	220	DIN EN ISO 3104
at 100 °C	mm ² /s	10.7	14.5	19.6	26.7	
Viscosity index	-	147	150	150	155	DIN ISO 2909
Density at 15 °C	kg/m ³	848	851	853	854	DIN 51757
Color index	ASTM	0.5	0.5	0.5	1.0	DIN ISO 2049
Flashpoint, Cleveland open cup	°C	240	250	250	260	DIN ISO 2592
Pourpoint	°C	- 56	- 53	- 45	- 42	DIN ISO 3016
Neutralization number	mgKOH/g	0.6	0.6	0.6	0.6	DIN 51558
Scuffing and scoring test, FZG A/8.3/90	Failure load stage	> 12	> 12	> 12	> 12	DIN ISO 14635-1
Scuffing and scoring test, FZG A/16.6/140	Failure load stage	12	12	12	12	DIN ISO 14635-1
Micropitting test, FZG-GFT Test GT-C/8.3/90 °C Load stage test / endurance test	GF Class	GFT high	GFT high	GFT high	GFT high	FVA-Information Sheet No. 54/I-IV
Micropitting test, FZG-GFT Test GT-C/8.3/60 °C Load stage test / endurance test	GF Class	GFT high	GFT high	GFT high	GFT high	FVA-Information Sheet No. 54/I-IV
FE-8 roller bearing test, 7.5/80/80 and 7.5/100/80		pass (excellent)				DIN 51819-3

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Typical technical data:

Product name	RENOLIN UNISYN CLP					
		320	460	680	1000	
Properties	Unit					Test method
ISO VG		320	460	680	1000	DIN 51519
Kinematic viscosity at 40 °C	mm ² /s	320	460	680	1000	DIN EN ISO 3104
at 100 °C	mm ² /s	35.0	45.6	62.2	84.0	
Viscosity index	-	155	155	160	165	DIN ISO 2909
Density at 15 °C	kg/m ³	860	861	862	864	DIN 51757
Color index	ASTM	1.0	1.0	1.0	1.0	DIN ISO 2049
Flashpoint, Cleveland open cup	°C	260	300	300	300	DIN ISO 2592
Pourpoint	°C	- 42	- 39	- 33	- 27	DIN ISO 3016
Neutralization number	mgKOH/g	0.6	0.6	0.6	0.55	DIN 51558
Scuffing and scoring test, FZG A/8.3/90	Failure load stage	> 14	> 14	> 14	> 14	DIN ISO 14635-1
Scuffing and scoring test, FZG A/16.6/140	Failure load stage	> 12	> 12	> 12	> 12	DIN ISO 14635-1
Micropitting test, FZG-GFT Test GT-C/8.3/90 °C Load stage test / endurance test	GF Class	GFT high	GFT high	GFT high	GFT high	FVA-Information Sheet No. 54/I-IV
Micropitting test, FZG-GFT Test GT-C/8.3/60 °C Load stage test / endurance test	GF Class	GFT high	GFT high	GFT high	GFT high	FVA-Information Sheet No. 54/I-IV
FE-8 roller bearing test, 7.5/80/80 and 7.5/100/80	-	pass (excellent)				DIN 51819-3

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