

RENOLIN UNISYN CLP

Fully Synthetic Industrial EP 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 excellent resistance to micropitting. Reliable lubrication of roller bearings is confirmed by the good results of the FE8 testing. These products are recommended where operational conditions require superior low temperature fluidity and/or high temperature film strength and long service life. In gearboxes and circulating systems with sump temperatures up to 90 °C, longer oil-change intervals in comparison with previous mineral oils are achieved. RENOLIN UNISYN CLP oils are miscible with mineral oil based lubricants, which simplifies the conversion process.

Application

The oils of the RENOLIN UNISYN CLP series are recommended for all industrial applications where a synthetic oil of the CLP type according to DIN 51517-3 is recommended by the manufacturer. Highly-stressed straight bevel gears, spiral bevel gears, worm gears, planetary gears and also heavily loaded bearings can be reliably lubricated and protected 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
- Miscible with mineral oil- and ester-based gear oils
- Lifetime lubrication possible
- For high and low operating temperatures

Specifications

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

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

Approvals

Siemens-Flender AG, Bocholt.

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

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

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

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Properties	Unit	RENOLIN UNISYN CLP				Test method
Product name		68	100	150	220	
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
Flash point, (COC)	°C	240	250	250	260	DIN ISO 2592
Pour point	°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 (excel- lent)	pass (excel- lent)	pass (excel- lent)	pass (excel- lent)	DIN 51819-3

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Fully Synthetic Industrial EP Gear Lubricants based on Polyalphaolefins

Properties	Unit	RENOLIN UNISYN CLP			Test method	
Product name		320	460	680		
ISO VG		320	460	680	DIN 51519	
Kinematic viscosity at 40 °C	mm ² /s	320	460	680	DIN EN ISO 3104	
at 100 °C	mm ² /s	35.0	45.6	62.2		
Viscosity index	-	155	155	160	DIN ISO 2909	
Density at 15 °C	kg/m ³	860	861	862	DIN 51757	
Color index	ASTM	1.0	1.0	1.0	DIN ISO 2049	
Flash point, (COC)	°C	260	300	300	DIN ISO 2592	
Pour point	°C	- 42	- 39	- 33	DIN ISO 3016	
Neutralization number	mgKOH/g	0.6	0.6	0.6	DIN 51558	
Scuffing and scoring test, FZG A/8.3/90	Failure load stage	> 14	> 14	> 14	DIN ISO 14635-1	
Scuffing and scoring test, FZG A/16.6/140	Failure load stage	> 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	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	FVA-Information Sheet No. 54/I-IV	
FE-8 roller bearing test, 7.5/80/80 and 7.5/100/80		pass (excel- lent)	pass (excel- lent)	pass (excel- lent)	pass (excel- lent)	DIN 51819-3

PRODUCT INFORMATION



The information contained in this brochure is based on the experience and know-how of FUCHS Lubricants Co. 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. The information given in this Product Information sheet 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 you consult a FUCHS Lubricants Co. 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. With the publication of this Product Information sheet, all previous editions cease to be valid.

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