

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

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 are approved for example by Siemens-Flender AG, Bocholt.



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Typical technical data:

| Product name | | 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 | | 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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We therefore recommend that you consult a FUCHS EUROPE 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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