Product Information

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RENOLIN B PLUS

High-quality AW/EP hydraulic fluids and lubricating oils formulated on hydrotreated base oils

Description

RENOLIN B PLUS is based on selected, so-called hydrotreated base oils (group II) of the latest generation. Defined additives and additive systems improve the ageing and oxidation stability. They also guarantee excellent corrosion protection for steel and iron materials. Synergistically acting copper inhibitors protect copper and yellow metal materials against corrosion. Selected AW (antiwear) and highly resistant EP (extreme pressure) additives based on zinc containing additive systems protect hydraulic pumps, motors and components and machine elements reliably from wear. This excellent wear protection is guaranteed at high load, high and low temperature and rough environmental conditions.

RENOLIN B PLUS is a premium hydraulic fluid which fulfills and surpasses the requirements defined in DIN 51524-2 (HLP/HM, demulsifying, zinc-containing). RENOLIN B PLUS can also be used as lubrication and circulating oil.

By using these new high-quality base oils, the lifetime extension compared to conventional hydraulic fluids is extraordinary. Lifetime can be doubled – compared to group I (standard mineral oil) based hydraulic fluids.

Due to the excellent thermal oxidation stability the product shows extremely low deposit tendency (Low Varnish Fluid). RENOLIN B PLUS series shows excellent air release properties – low air enrichment and rapid dynamic air separation.

Advantages

- **High-quality base oils of the latest generation**
- **Excellent demulsifying properties**
- **Very good corrosion protection - steel**
- **Excellent corrosion protection - copper**
- **High ageing and oxidation stability (extended lifetime)**
- **Good AW/EP wear protection**
- **Very good hydrolytic stability**
- **Excellent filtration behaviour (dry and under influence of water)**
- **Excellent foaming behaviour – no surface foam**
- **Excellent air release (ISO VG 46: 4 minutes!)**
- **Premium hydraulic fluid**

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Application

Universally applicable demulsifying hydraulic fluid and lubrication oil (for circulating and bearing lubrication). Suitable for all applications in mobile and stationary hydraulic equipment / hydraulic components, for which the use of a demulsifying hydraulic oil (good water separation), type HLP/HM, is mandatory. Synergistically acting additives guarantee a long life time and highest hydraulic performance and good power transfer. Also at high temperature and high pressures the synergistically acting properties of base oils and additive technology guarantee a reliable operation of the equipment components and machines, long lifetime, increased service interval, double to triple life.

RENOLIN B PLUS has excellent thermal, oxidative and hydrolytic stability. The formation of hydrolysis products under water contamination is avoided.

RENOLIN B PLUS shows excellent filtration behaviour in the dry and wet filtration procedure.

RENOLIN B PLUS shows excellent wear protection properties also at high load and high temperature.

RENOLIN B PLUS guarantees rapid air release properties – also at high circulation rate.

Specifications

RENOLIN B PLUS fulfils and surpasses the requirements according to:

- DIN 51524-2: HLP
- ISO 6743-4: HM
- Vickers vane pump

Approvals

- Bosch Rexroth RDE 90245
  (ISO VG 32 / 46 / 68)
- DENISON HF-0
  (ISO VG 32 / 46 / 68)

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Typical data:

Product name		RENOLIN B PLUS				
		10	15	22	32	
Properties	**Unit**					**Test method**
ISO VG		10	15	22	32	DIN 51519
Kinematic viscosity at 40 °C at 100 °C	 mm²/s mm²/s	 10 2.7	 15 3.5	 22 4.4	 32 5.5	DIN EN ISO 3104
Viscosity index	-	104	108	108	108	DIN ISO 2909
Density at 15 °C	kg/m³	840	840	845	862	DIN 51757
Color	ASTM	0.5	0.5	0.5	0.5	DIN ISO 2049
Flash point in open cup acc. to Cleveland	°C	170	195	220	220	DIN ISO 2592
Pourpoint	°C	-54	-48	-45	-39	DIN ISO 3016
Neutralization number	mgKOH/g	0.5	0.5	0.5	0.5	DIN 51558-3
Air release properties	min	1	1	2	3	DIN ISO 9120
Copper corrosion (type value)	degree of corrosion	1-100A3				DIN EN ISO 2160
Steel corrosion (type value) - 0-A: distilled water - 0-B: salt water	 - -	 no rust no rust				DIN ISO 7120
Scuffing and scoring test, FZG A/8.3/90	failure load stage	-	-	10	11	DIN ISO 14635-1
Vickers V104C vane pump - Wear of pump ring - Wear of vanes	 mg mg	 - -	 - -	 - -	 30 2	DIN EN ISO 20763
Brugger-Test (type value)	N/mm²	25				DIN 51347-2
TOST Lifetime (type value)	h	> 5,000				ASTM D 943
Electric conductivity at 75 °C		conductivity high				ASTM D 2624

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Typical data:

Product name		RENOLIN B PLUS			
		46	68	100	
Properties	**Unit**				**Test method**
ISO VG		46	68	100	DIN 51519
Kinematic viscosity at 40 °C at 100 °C	 mm²/s mm²/s	 46 6.94	 68 9.0	 100 11.6	DIN EN ISO 3104
Viscosity index	-	107	108	104	DIN ISO 2909
Density at 15 °C	kg/m³	865	867	870	DIN 51757
Color	ASTM	0.5	0.5	0.5	DIN ISO 2049
Flash point in open cup acc. to Cleveland	°C	230	230	270	DIN ISO 2592
Pourpoint	°C	-36	-33	-33	DIN ISO 3016
Neutralization number	mg/KOH/g	0.5	0.5	0.5	DIN 51558-3
Air release properties	min	4	6	7	DIN ISO 9120
Copper corrosion (type value)	degree of corrosion		1-100A3		DIN EN ISO 2160
Steel corrosion (type value) - 0-A: distilled water - 0-B: salt water	 - -		 no rust no rust		DIN ISO 7120
Scuffing and scoring test, FZG A/8.3/90	failure load stage		11		DIN ISO 14635-1
Vickers V104C vane pump - Wear of pump ring - Wear of vanes	 mg mg	 30 2	 30 2	 30 2	DIN 51389-2
Brugger-Test (type value)	N/mm²		25		DIN 51347-2
TOST Lifetime (type value)	h		> 5,000		ASTM D 943
Electric conductivity at 75 °C			conductivity high		ASTM D 2624

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Notes

The information contained in this product information is based on the experience and know-how of FUCHS LUBRICANTS (UK) plc 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 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 (UK) plc 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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