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### RENOLIN ZAF B RANGE

Zinc and ash free hydraulic fluids, demulsifying with excellent wear protection

#### **Description**

In the past few years, zinc-free hydraulic oils have become more and more important.

In many cases, the use of zinc-free hydraulic oils is required for use in machine tools where a contamination of the hydraulic oil with the metalworking fluid is possible.

The oils of the RENOLIN ZAF B RANGE are zinc and ash free hydraulic oils HLP according to DIN 51524, Part 2 with very good wear protection and load carrying capacity.

### **Application**

The oils of the RENOLIN ZAF B RANGE are high quality products that can be used both as hydraulic oils and also as lubricating oils for various applications, e.g. in bearings and recirculation RENOLIN ZAF B RANGE grades are recommended for use in hydraulic systems in machine tools where a contamination with the metalworking emulsion may occur.

#### Advantages/Benefits

- · High oxidation stability
- · Good ageing resistance
- Very good wear protection and load carrying capacity
- Excellent corrosion protection
- · Good air release properties
- Low foaming tendency
- Excellent elastomer compatibility

#### **Specifications**

The RENOLIN ZAF B RANGE meet, and in many cases exceed the requirements:

• DIN 51524-2: HLP

• ISO 6743-4: HM

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# **Product Information**

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#### **CHARACTERISTICS: RENOLIN ZAF B RANGE**

RENOLIN ZAF		10 B	22 B	32 B	46 B	
Characteristics	Unit					Test Method
ISO VG		10	2		46	
Kinematic viscosity at 40°C at 100°C	mm²/s mm²/s	10 2.6	22 4.3	32 5.4	46 6.8	DIN EN ISO 3104
Viscosity index		94	100	102	101	DIN ISO 2909
Density at 15°C	kg/m <sup>3</sup>	851	8		875	DIN 51757
Colour index	ASTM	0.5	1.0	1.0	1.0	DIN ISO 2049
Flash point, Cleveland (COC)	°C	170	212	215	234	DIN ISO 2592
Pour point	°C	-3	-3	-3	-27	DIN ISO 3016
Neutralisation number	mg KOH/g	0.3	0.3	0.3	0.3	DIN 51558
Air release properties at 50°C	min.	1	2	3	8	DIN ISO 9120
FZG A/8.3/90	failure load stage	-	-	-	>1	DIN ISO 14635-1

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# **Product Information**

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#### **CHARACTERISTICS: RENOLIN ZAF B RANGE**

RENOLIN ZAF		68 B	100 B	150 B	
Characteristics	Unit				Test Method
ISO VG		68	100	150	
Kinematic viscosity at 40°C at 100°C	mm²/s mm²/s	68 8.7	100 11.3	150.0 14.7	DIN EN ISO 3104
Viscosity index		102	99	97	DIN ISO 2909
Density at 15°C	kg/m <sup>3</sup>	8 <b>79</b>	8		DIN 51757
Colour index	ASTM	1.0	1.0	>	DIN ISO 2049
Flash point, Cleveland (COC)	°С	230	240	>20	DIN ISO 2592
Pour point	°C	-2	-1	-2	DIN ISO 3016
Neutralisation number	mg KOH/g	0.3	0.3	-	DIN 51558
Air release properties at 50°C	min.	8	9	-	DIN ISO 9120
FZG A/8.3/90	failure load stage	>1	>1	-	DIN ISO 14635-1

WARNING: Never mix zinc-free hydraulic fluids with those containing zinc-based additives.

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## **Product Information**

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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 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.

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 previous editions cease to be valid. Any form of reproduction requires express prior written permission from FUCHS LUBRICANTS (UK) plc.

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