

## RENOLIN B HVI RANGE

### EP Lubricating and Hydraulic Oils with High Viscosity Index

#### Description

Proper function and operating safety of hydraulic systems are largely influenced by the quality of the hydraulic medium. In addition to the task of transferring forces, the operating fluid must seal, cool and lubricate. Since hydraulic oils are exposed to high stress due to the operating conditions, they have to fulfil a large number of requirements. The oils of the RENOLIN B HVI series are formulated on the basis of highly ageing-resistant solvates containing additives that increase the aging resistance. The products of the RENOLIN B HVI series are zinc-containing HVLP hydraulic and general lubricating oils according to DIN 51524-3. Mineral oil-based, demulsifying.

#### Application

RENOLIN B HVI high-quality products are used as hydraulic oil and as lubricating oil for various applications like bearings and gear boxes, even when a high viscosity index and good load carrying capacity is required. Especially recommended for applications where a low start-up viscosity at low temperatures and a higher viscosity at higher temperatures is required. Particularly suited to all applications in mobile and industrial hydraulic systems that require the use of an HVLP oil according to DIN 51524-3 with a wide service temperature range.

#### Advantages/Benefits

- Low foaming tendency
- Good air release properties
- High ageing resistance
- Good corrosion protection
- Very good viscosity-temperature-behaviour
- Very good wear protection
- High viscosity index
- Wide service temperature range
- Good shear stability

#### Specifications

The products meet or exceed the requirements according to

- DIN 51524-3, HVLP
- ISO 6743-4, HV
- ISO 11158
- Denison HF0
- Bosch Rexroth
- Vickers
- US Steel
- Cincinnati Milacron



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## CHARACTERISTICS: RENOLIN B HVI RANGE

RENOLIN B....		15 HVI	32 HVI	46 HVI	68 HVI	100 HVI	
Characteristics	Unit						Test Method
ISO VG		15	32	46	68	100	DIN 51519
Kinematic viscosity							DIN EN ISO 3104
at -20°C	mm <sup>2</sup> /s	400	1858	3486	-	-	
at 0°C	mm <sup>2</sup> /s	80.5	233.4	401.6	618.9	-	
at 40°C	mm <sup>2</sup> /s	15	32	46	68	100	
at 100°C	mm <sup>2</sup> /s	3.8	6.3	8.1	11.0	13.5	
Viscosity index	-	151	152	150	153	140	DIN ISO 2909
Density at 15°C	kg/m <sup>3</sup>	859	871	879	868	871	DIN 51757
Flash point (Cleveland open cup)	°C	180	178	186	240	240	DIN ISO 2592
Pour point	°C	-45	-48	-45	-36	-24	DIN ISO 3016
Neutralisation number	mg KOH/g	0.5	0.5	0.5	0.5	0.5	DIN 51558-2
Mechanical testing in the FZG gear test rig, FZG A/8,3/90	failure load stage	11	11	11	11	11	DIN ISO 14635-1
Brugger test - wear protection	N/mm <sup>2</sup>	30	30	30	30	30	DIN 51347-2
VKA shear stability, four ball test: relative shear loss (viscosity reduction, V <sub>40</sub> and V <sub>100</sub> ) after 20h	%	< 15	< 15	< 15	< 15	< 20	DIN 51350-6

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