

S.B.H. 11 / 23

Synthetic biodegradable hydraulic oils

The benefits at a glance

- Outstanding eco-friendliness
- Minimal friction and wear
- Wide operative temperature range
- High viscosity index
- Ageing and oxidation stable
- Good compatibility with seals
- High percentage of renewable commodities



Properties

Rivolta S.B.H. 11 and **S.B.H. 23** are fully synthetic readily biodegradable high performance hydraulic oils. The combination of extremely biodegradable, fully synthetic base oils with a new additive technology gives a performance spectrum to our products which is far superior to conventional HLP- or HVLP-hydraulic oils. Our additive package improves the anyhow excellent ageing, corrosion and wear characteristics of our base oils. Especially the wear protection is of outstanding importance. Because of a lack of wear protection of conventional oils increased wear occurs at the contact area "sealing element – metal surface". This leads to leakages and oil loss.

Rivolta S.B.H.-series with their special additive package avoid wear in an effective way and with this leakages of the system.

Fields of application

• **Hydraulics:**

For all kinds of hydraulic systems as well as hydraulic motors. **S.B.H.**-series tops the demands of DIN 51524 for hydraulic oils with specifications HLP and HVLP, except DIN EN ISO 4263 (tost-test). Moreover, **S.B.H.**-series tops the demands of DIN 15380 for HEES-oils.

Form	liquid
Colour	transparent-yellowish
Odour	neutral

Material compatibility

- Compatible with sealing materials which are resistant to mineral oils.
- Miscible with mineral and ester oils. Do not mix with polyalkylene glycol. Consider the change guidelines of DIN ISO 15380

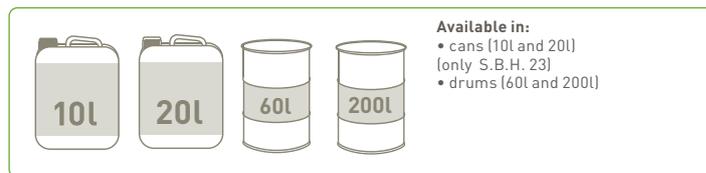
Preparation of the lubricating point

Before a new filling with **Rivolta S.B.H. 11** or **S.B.H. 23** the following steps have to be carried out:

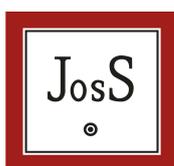
- First drain the old product. If the system was filled with a miscible product, no particular flushing is necessary before the new filling with **S.B.H. 11** or **S.B.H. 23**. The full performance only results from an unmixed use.
- If the system was filled with an oil which is not miscible, a flushing with **S.B.H. 11** or **S.B.H. 23** has to be carried out before the new filling.

Instructions for use

Suitable application devices and accessories in our [accessories brochure](#).



	Value		Norm
	S.B.H. 11	S.B.H. 23	
Density at +15 °C	0,91 g/ml	0,92 g/ml	DIN 51757
ISO viscosity grade	22	46	DIN ISO 3448
Viscosity index	> 190		DIN ISO 2909
Kine. Viscosity at +20 °C	37 mm ² /s	105 mm ² /s	DIN 51562-1
Kine. Viscosity at +40 °C	22 mm ² /s	46 mm ² /s	DIN 51562-1
Kine. Viscosity at +100 °C	5 mm ² /s	9,5 mm ² /s	DIN 51562-1
Flash Point	+180 °C	+240 °C	DIN EN ISO 2592
Operative temperature range	-30 °C up to +90 °C	-35 °C up to +100 °C	-
Corrosion protection to steel	0 – A		(DIN 51355)
Corrosion protection to copper	1		DIN EN ISO 2160
Ecological data			
Biodegradability	> 84 %	> 73 %	OECD 301 B
Percentage of renewable commodities	> 50 %		-



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