

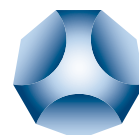


BIOLIN™ 100

A biobased resin for jointing compounds



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Polybutadienes are a versatile resin class with various application fields and are known to be the gold standard for 1K-jointing compounds with superior curing speed. Until now, biobased components such as oxidatively drying oils have been a natural alternative but exhibit a detrimental slower hardness development compared to polybutadienes. BIOLIN™ 100 combines the best out of both worlds. The newly developed hydrophobic backbone and its termination with unsaturated fatty acids provides fast curing speed and outstanding hardness development comparable to commercially available polybutadienes. With these properties, BIOLIN™ 100 is ideally suited as biobased resin for the formulation of jointing compounds with a high content of renewable raw materials.

Advantages at a glance

- High content of renewable raw materials
> 50 wt.-%, no solvents
- Good wetting properties towards a wide range of substrates
- Excellent curing properties in oxygen containing atmosphere
- High saponification resistance due to hydrophobic backbone

Specification

Oil type:	linseed oil
Oil length:	> 50 wt.-%
Solid content:	100 wt.-%
Viscosity@20°C:	3–10 Pa s
Iodine value:	250 ± 4 g I / 100g

A simple starting formulation was used to compare performance of BIOLIN™ 100 with a commercially available polybutadiene and tung oil as control.

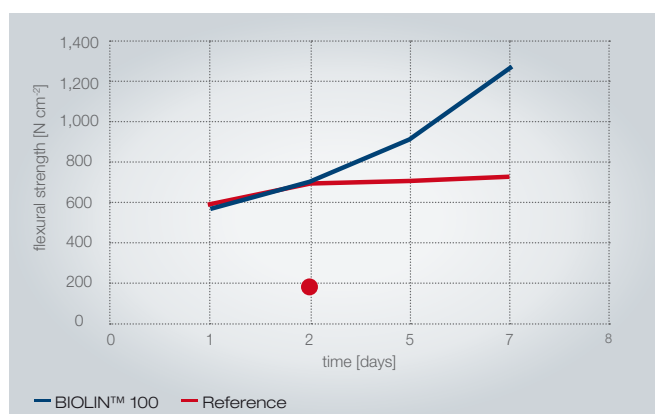
Comparative starting formulation

Resin:	98.5 wt.-%
Silane:	0.5 wt.-%
Co-octoate:	1.0 wt.-%

Sand was coated with 3.0 wt.-% of each resin formulation and compacted in a casting mould. After 24h drying at ambient conditions the cores were carefully removed from the cast. Duplicate testing was performed and the mean flexural strength was plotted after 1, 2, 5 and 7 days. Figure 1 clearly

shows that flexural strength measurements i.e. hardness developments of jointing compounds based on BIOLIN™ 100 are strongly improved compared to tung oil and comparable to those of polybutadiene alternatives.

Figure 1: Flexural strength over time



This effect is also observed after incubation in water for 3 days. Thus, BIOLIN™ 100 is ideally suited as 1K resin with excellent curing properties and weather resistance.