Tooling & Composites

Product Data Sheet
Version 01 / 2017

Biresin® L80

Laminating and Multi-purpose resin

Areas of Application

- Manufacture of laminates with thickness of max. 10 mm
- Backfilling of moulds, models and negatives
- Manufacture of laminated foundry patterns
- Manufacture of glass fibre laminates for duplicates of master models, for marking and copy models
- Manufacture of glass fibre laminates for gauges for different applications

Product Benefits

- Multi-purpose application with different hardeners
- Good soaking and wetting properties
- High glass fibre addition possible
- For true-to-size laminates with glass or carbon fibres
- With component B **Biresin® S12** for extended potlife, but with increased curing rate and earlier demoulding

Description

Basis	Two-component-epoxy-system
Component A	**Biresin® L80**, epoxy resin, white, unscented
Component B	**Biresin® CH80-1**, amine, yellowish-transparent
Component B	**Biresin® CH80-2**, amine, yellowish-transparent
Component B	**Biresin® S12**, amine, amber

Processing Data		Component A	Component B		
Individual components		**Biresin® L80**	**Biresin® CH80-1**	**Biresin® CH80-2**	**Biresin® S12**
Viscosity, 23°C	mPa.s	~ 3,350	~ 50	~ 30	~ 180
Density, 25°C	g/ml	1.38	0.95	0.96	1.0
Mixing ratio resin A : B	in pbw	100	16	16	12
		Mixtures			
Mixed viscosity, 23°C	mPa.s		~ 1,600	~ 1,100	~ 2,000
Potlife, 500 g, RT	min		45	90	60
Demoulding time, RT	h		20 - 24	20 - 24	16 - 20

Physical Data (approx. values)

Biresin® L80 (A) with component B			**Biresin® CH80-1**		**Biresin® CH80-2**		**Biresin® S12**	
Density	ISO 1183	g/cm³	1.35					
Curing conditions		time temperature	14 d RT	2 h 80°C	14 d RT	2 h 80°C	14 d RT	2 h 80°C
Shore hardness	ISO 868	-	D 86	D 87	D 86	D 86	D 85	D 88
E-Modulus	ISO 178	MPa	4,200	4,600	4,450	4,550	4,000	3,950
Flexural strength	ISO 178	MPa	71	96	72	96	78	83
Compressive strength	ISO 604	MPa	115	128	109	118	117	118
Tensile strength	ISO 527	MPa	44	56	48	60	57	50
Impact resistance	ISO 179	kJ/m²	8	12	9	13	11	14
Heat distortion temperature	ISO 75B	°C	53	78	52	69	54	80

Packaging

Individual components	**Biresin® L80** (A)	240 kg; 60 kg; 10 kg net
	Biresin® CH80-1 (B)	3 kg; 25 kg; 180 kg net
	Biresin® CH80-2 (B)	3 kg; 25 kg; 180 kg net
	Biresin® S12 (B)	15 kg; 2.5 kg; 9 x 0.4 kg net in a box

Processing

- The material, processing and mould temperature must be from 18 to 25°C.
- The A component must be mixed thoroughly before use .
- After mixing of component A and the B component it is easily possible to incorporate additives if
- necessary. Biresin® L80 is applied quickly and easily due to its low viscosity. It will easily wet out fibres and incorporate high levels of fillers and powders with high binding force.
- The ratio between resin and selected fibre must be determined and reliably controlled.
- For laminates glass fibres with binding twill are better than binding cloth because of its better suppleness.
- It is adviced to lay up a balanced laminate to avoid distortion when de-moulding.
- To clean brushes or tools immediately Sika® Reinigungsmittel 5 is recommended.

Storage

- Minimum shelf life of Biresin® L80 (A) is 18 months, Biresin® CH80-1 and CH80-2 is 12 months and of Biresin® S12 (B) is 24 months under room condition (18 - 25°C), when stored in original un-opened containers.
- After prolonged storage at low temperature, crystallisation of resin (A) may occur. This is easily removed by warming up for a sufficient time at a minimum 60°C.
- Containers must be closed tightly immediately after use. The residual material needs to be used up as soon as possible.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety related data.

Disposal considerations

Product Recommendations: Must be disposed of in a special waste disposal unit in accordance with the corresponding regulations.
Packaging Recommendations: Completely emptied packagings can be given for recycling. Packaging that cannot be cleaned should be disposed of as product waste.

Value Bases

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Legal Notice

Further information available at:

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