BUILDING TRUST

PRODUCT DATA SHEET

SikaBiresin® L80

Laminating resin for multi-purpose applications

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties		SikaBiresin® L80 (A)	SikaBiresin® CH80-1 (B)	SikaBiresin® CH80-2 (B)	SikaBiresin® GC12 (B)
Chemical base		Epoxy resin	Amine	Amine	Amine
Color		White	Yellowish-transparent	Yellowish-transparent	Amber
Mixing ratio	by weight	100	15	15	12
Density	1.38 kg/l	1.01 kg/l 1.37 kg/l	1.01 kg/l 1.37 kg/l	1.0 kg/l 1.35 kg/l	
	cured				
Viscosity (CQP538-2 / BROOKFIELD LVT)	3350 mPa·s	170 mPa·s 2200 mPa·s	85 mPa·s 1600 mPa·s	180 mPa·s 2000 mPa·s	
	mixed				
Pot life (CQP021-3 / Gel Timer TECAM)	500 g at 23 °C		45 minutes	75 minutes	60 minutes
Demolding time	depending on design / thickness	16 – 24 hours			
Shore D hardness (CQP023-1 / ISO 868)			86 [A] 87 [B]	85 [A] 86 [B]	85 [A] 88 [B]
Flexural strength (ISO 178)			85 MPa [A] 100 MPa [B]	90 MPa [A] 100 MPa [B]	75 MPa [A] 80 MPa [B]
Flexural modulus (CQP027-2 / ISO 178)			4450 MPa [A] 4500 MPa [B]	4400 MPa [A] 4450 MPa [B]	4000 MPa [A] 3950 MPa [B]
Tensile strength (CQP036-1 / ISO 527)			50 MPa [A] 60 MPa [B]	60 MPa [A, B]	55 MPa [A] 60 MPa [B]
Impact resistance (CQP038-2 / ISO 179)			12 kJ/m² [A, B]	12 kJ/m² [A] 15 kJ/m² [B]	11 kJ/m² [A] 14 kJ/m² [B]
Compressive strength (CQP028-5 / ISO 604)			110 MPa [A] 115 MPa [B]	110 MPa [A] 115 MPa [B]	115 MPa [A, B]
Heat deflection temperature (CQP030-1 / ISO 75B)			52 °C [A] 70 °C [B]	52 °C [A] 70 °C [B]	54 °C [A] 80 °C [B]
Shelf life		18 months	12 months	12 months	12 months

CQP = Corporate Quality Procedure

[A)] curing condition: 23 °C for 14 days

[B)] post curing: 80 °C for 2 hours

DESCRIPTION

SikaBiresin® L80 is a laminating resin for multi-purpose applications, e.g. manufacturing of laminates, backfilling of molds and models etc.
The Product is available with three hardeners, providing different processing times to meet various application requirements.

PRODUCT BENEFITS

- Multi-purpose applications
- Good soaking and wetting properties
- High glass fiber addition possible
- For true-to-size laminates with glass or carbon fibers

AREAS OF APPLICATION

SikaBiresin® L80 is designed for manufacturing of laminates with maximum thickness of 10 mm.
It is well suited for production of laminated foundry patterns and for backfilling of molds, models and negatives in combination with quartz sand.
The Product is also used for manufacturing of glass fiber laminates for duplicates of master models. It is also suitable for marking and copy models as well as for production of glass fiber laminates for gauges for different applications.
This product is suitable for experienced professional users only.

METHOD OF APPLICATION

Surface preparation

The material and processing temperature shall be between 18 °C and 25 °C.
Make sure the mold or master model is clean, dry, dust and grease free.
If mold or master-model surface is porous, it must be properly sealed prior applying the release agent.
Wax-based release agents are recommended.
For further information regarding Sika release agent consult the corresponding Product Data Sheet.

Mixing process

Prior to use check the material for homogeneity and crystallization.
After prolonged storage at low temperature, crystallization of components may occur. This process can be reversed by heating the affected component to a maximum of 70 °C until the crystals have disappeared. Allow to cool down to requested processing temperature before use.
Prior to mixing, component A must be stirred thoroughly.
Both components must be mixed homogeneously respecting the defined mixing ratio.
The mixing can be performed with a spatula or a machine stirrer at ≤ 300 rpm.
To ensure a homogeneous and complete mixing, pour the mixed product into a new container and mix again shortly, considering the pot life.
Containers must be closed tightly immediately after use to prevent moisture ingress.
Once opened the Product shall be used as soon as possible.

Application

The fabric must be suitable for the use of epoxy resins.
For laminates glass fibres with binding twill are better than binding cloth because of its better suppleness.
SikaBiresin® L80 is applied to the selected fiber fabric (e.g. glass fiber mats) using a brush or hand roller.
The reinforcing fibers are laid in layers "wet on wet". The fibers must be impregnated with the resin without air entrapments. Entrapped air is expelled from the inside to the outside.
If the surface needs to be further laminated or bonded, it is recommended to use a peel ply.
Ensure enough and adequate laminate to obtain the required form strength and to avoid deformation during demolding.
Further post curing of the demolded part can improve the final mechanical properties.
Depending on the geometry and weight of the part, it is recommended to use a conformer while post curing.

STORAGE CONDITIONS

Both components must be stored at temperature between 15 °C and 25 °C in original unopened containers.

FURTHER INFORMATION

The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.
Copies of the following publications are available on request:

- Safety Data Sheets

PACKAGING INFORMATION

SikaBiresin® L80 (A)

Pail	10 kg
Hobbock	60 kg

SikaBiresin® CH80-1 (B)

Canister	3 kg
Hobbock	25 kg

SikaBiresin® CH80-2 (B)

Canister	3 kg
Hobbock	25 kg

SikaBiresin® GC12 (B)

Box with bottles	9 x 0.4 kg
Canister	2.5 kg 15 kg

BASIS OF PRODUCT DATA

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

HEALTH AND SAFETY INFORMATION

For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

DISCLAIMER

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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