PRODUCT DATA SHEET

# SikaBiresin® L80 (Biresin® L80)

LAMINATING AND MULTI-PURPOSE RESIN

## APPLICATIONS

- 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

## MAIN PROPERTIES

- 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

## DESCRIPTION

| | |
|---|---|
| Basis | Two-component-epoxy-system |
| Component A | **SikaBiresin® L80**, epoxy resin, white, unscented |
| Component B | **SikaBiresin® CH80-1,** amine, yellowish-transparent |
| Component B | **SikaBiresin® CH80-2,** amine, yellowish-transparent |
| Component B | **SikaBiresin® GC12,** amine, amber |

## PHYSICAL PROPERTIES

| | | Resin (A) | Hardener (B) | Hardener (B) | Hardener (B) |
|---|---|---|---|---|---|
| Components | | **SikaBiresin® L80** | **SikaBiresin® CH80-1** | **SikaBiresin® CH80-2** | **SikaBiresin® GC12** |
| Viscosity, 23 °C | mPa.s | ~ 3,350 | ~ 170 | ~ 85 | ~ 180 |
| Density, 25 °C | g/ml | ~ 1.38 | ~ 1.01 | ~ 1.01 | ~ 1.0 |
| Mixing ratio | in parts by weight | 100 | 15 | 15 | 12 |
| | | | | Mixture | |
| Viscosity, 25 °C | mPa.s | | ~ 2,200 | ~ 1,600 | ~ 2,000 |
| Potlife, RT, 500 g | min | | ~ 45 | ~ 75 | ~ 60 |
| Demoulding time, RT | h | | 16 – 24 | 16 – 24 | 16 – 20 |

## MECHANICAL PROPERTIES

| approx. values | | | SikaBiresin® CH80-1 | | SIkaBiresin® CH80-2 | | SikaBiresin® GC12 | |
|---|---|---|---|---|---|---|---|---|
| Density | ISO 1183 | g/ml | 1.37 | | | | 1.35 | |
| Curing conditions | | time | 14 d | 2 h | 14 d | 2 h | 14 d | 2 h |
| | | temperature | RT | 80 °C | RT | 80 °C | RT | 80 °C |
| Shore hardness | ISO 868 | | D 86 | D 87 | D 85 | D 86 | D 85 | D 88 |
| E-Modulus | ISO 178 | MPa | 4,450 | 4,500 | 4,400 | 4,450 | 4,000 | 3,950 |
| Flexural strength | ISO 178 | MPa | 85 | 100 | 90 | 100 | 75 | 80 |
| Compressive strength | ISO 604 | MPa | 110 | 115 | 110 | 115 | 115 | 115 |
| Tensile strength | ISO 527 | MPa | 50 | 60 | 60 | 60 | 55 | 50 |
| Impact resistance | ISO 179 | kJ/m² | 12 | 12 | 12 | 15 | 11 | 14 |

## THERMAL AND SPECIFIC PROPERTIES

| approx. values | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Heat distortion temperature | ISO 75B | °C | 52 | 70 | 52 | 70 | 54 | 80 |

## PACKAGING UNITS

| | |
|---|---|
| ■ Resin (A), **SikaBiresin® L80** | 10 kg / 60 kg |
| ■ Hardener (B), **SikaBiresin® CH80-1** | 3 kg / 25 kg |
| ■ Hardener (B), **SikaBiresin® CH80-2** | 3 kg / 25 kg |
| ■ Hardener (B), **SikaBiresin® GC12** | 0.04 kg / 9 x 0.4 kg / 2.5 kg / 15 kg |

## PROCESSING DATA

- The material, processing and mould temperature must be from 18 to 25 °C.
- Component A must be stirred thoroughly before use.
- Weigh the components precisely according to the indicated ratio.
- Both components have to be mixed thoroughly with a spatula or slow-running stirrer according to mixing ratio.
- Do not forget to wipe the vessel bottom and wall and mix again.
- After mixing of component A and B it is possible to mix desired additives easily.
- SikaBiresin® 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 laminats 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 tools immediately, Sika® Reinigungsmittel 5 is recommended.

## STORAGE CONDITIONS

| | | |
|---|---|---|
| Shelf life | ■ Resin (A), **SikaBiresin® L80** | 18 Monate |
| | ■ Hardener (B), **SikaBiresin® CH80-1** | 12 Monate |
| | ■ Hardener (B), **SikaBiresin® CH80-2** | 12 Monate |
| | ■ Hardener (B), **SikaBiresin® GC12** | 12 Monate |
| Storage temperature | ■ Resin (A), **SikaBiresin® L80** | 18 – 25 °C |
| | ■ Hardener (B), **SikaBiresin® CH80-1** | 18 – 25 °C |
| | ■ Hardener (B), **SikaBiresin® CH80-2** | 18 – 25 °C |
| | ■ Hardener (B), **SikaBiresin® GC12** | 18 – 25 °C |
| Crystallization | ■ After prolonged storage at low temperature, crystallization of resin (A) may occur. This is easily removed by warming up for a sufficient time at a minimum 60 °C. | |

| | |
|---|---|
| Opened packagings | ■ Containers must be closed tightly immediately after use to prevent moisture ingress.<br>■ The residual material needs to be used up as soon as possible. |

**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 Advanced Resins. Copies of the following publications are available on request: Safety Data Sheets

**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.

**LEGAL NOTICE**
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