BUILDING TRUST

PRODUCT DATA SHEET

SikaBiresin® SC180

EPOXY MODEL PASTE

APPLICATIONS

- Production of models and mock ups

MAIN PROPERTIES

- Light weight
- Good surface aspect
- Time before machining shorter than 24 hours
- Good thermal resistance

DESCRIPTION

Basis	Two component epoxy system
Component A	**SikaBiresin® SC180**, epoxy resin, brown
Component B	**SikaBiresin® SC180**, amine, white
Repair solution	**SikaBiresin® SC180** (A) with **SikaBiresin® GC11** (B)

PHYSICAL PROPERTIES

		Resin (A)	Hardener (B)
Components		**SikaBiresin® SC180**	**SikaBiresin® SC180**
Viscosity, 25 °C	Pa.s	900	800
Density, 25 °C	g/cm³	0.76	0.76
Mixing ratio A : B	by weight	100	100
		Mixture	
Colour		Brown	
Viscosity, 25 °C	Pa.s	1,000	
Density, 23 °C	g/cm³	0.81	

MECHANICAL AND THERMAL PROPERTIES

(approx. values after 24 hours / 23 °C + 16 hours / 60 °C)

Shore hardness	ISO 868	Shore D	58
Flexural modulus	ISO 178	MPa	950
Flexural strength	ISO 178	MPa	17
Tensile modulus	ISO 527	MPa	1,300
Tensile strength	ISO 527	MPa	10
Elongation at break	ISO 527	%	1.3
Compressive strength	ISO 604	MPa	20
Compressive modulus	ISO 604	MPa	790
Maximal application thickness	-	mm	40

THERMAL AND SPECIFIC PROPERTIES

(approx. values after 24 hours / 23 °C + 16 hours / 60 °C)

Glass transition temperature, Tg	ISO 11359	°C	84
Coefficient of thermal expansion (+10 °C to 70 °C)	ISO 11359	10^{-6} K^{-1}	80

EXOTHERMIC PEAK AND HARDENING TIME *

Thickness (mm)	Product temperature (°C)	Exothermic peak (min)	Exothermic peak (°C)	Workability (hours)
40	22	174	63	16 – 18

* Room temperature: 22 °C – dimensions of polystyrene support: 250 x 250 mm

REPAIR SOLUTION

Repair Mixture		**SikaBiresin® SC180** (A) with **SikaBiresin® GC11** (B)
Colour		Brown
Mixing ratio A : B	by weight	100 : 13
Pot life, RT	60 g	10 – 15 minutes
Setting time, RT (workable)	3 mm thickness	270 minutes
Setting time, RT (workable)	10 mm thickness	90 minutes

PACKAGING UNITS

■ Resin (A), **SikaBiresin® SC180**	35 kg / 140 kg
■ Hardener (B), **SikaBiresin® SC180**	35 kg / 140 kg
■ Hardener (B), **SikaBiresin® GC11**	0.5 kg / 12 x 0.05 kg

PROCESSING DATA

- The material, processing and mold or master-model temperature shall be between 18 °C and 25 °C.
- During processing the dispensing nozzle must be maintained perpendicular to the surface on which the product is applied. Ensure the overlapping of the ribbons.
- On vertical areas it can be helpful to apply a thin coat of product with a spatula. This will help to reinforce the bonding on the substructure.
- For ceiling application we recommend 30 mm of maximum thickness.
- Note: Exothermic reactions mostly depend on the type of machine and on the working parameters such as: room temperature, insulating property of the substructure, the mixture's temperature (depending on the type of mixer: static or dynamic), the speed of mixing, output and on applied thickness.
- For dynamic mixing machine, please contact us for further information.
- For fast repair solution of surface defects on milled surfaces out of SikaBiresin® SC180 we recommend using A-component in mixture with SikaBiresin® GC11 (B). Pot life and setting time depend on mixture volume and applied layer thickness (see information above).
- Containers must be closed tightly immediately after use to prevent moisture ingress.
- Once opened the product shall be used up as soon as possible.
- 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

Shelf life	■ Resin (A), **SikaBiresin® SC180**	9 months
	■ Hardener (B), **SikaBiresin® SC180**	9 months
	■ Hardener (B), **SikaBiresin® GC11**	12 months
Storage temperature	■ Resin (A), **SikaBiresin® SC180**	15 °C – 25 °C
	■ Hardener (B), **SikaBiresin® SC180**	15 °C – 25 °C
	■ Hardener (B), **SikaBiresin® GC11**	15 °C – 25 °C

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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