

PRODUCT DATA SHEET

SikaBiresin® SC390

EPOXY MODEL PASTE

APPLICATIONS

- Production of models and mock ups

MAIN PROPERTIES

- Good surface aspect
- Good behaviour on vertical substructure up to 30 mm
- Short hardening time even for 2 mm thickness
- High thermal resistance
- Low CTE: good dimensional stability

DESCRIPTION

Basis	Two component epoxy system
Component A	SikaBiresin® SC390 , epoxy resin, grey
Component B	SikaBiresin® SC390 , amine, white
Repair solution	SikaBiresin® SC390 (A) with SikaBiresin® GC11 (B)

PHYSICAL PROPERTIES

		Resin (A)	Hardener (B)
Components		SikaBiresin® SC390	SikaBiresin® SC390
Viscosity, 25 °C	Pa.s	800	800
Density, 25 °C	g/cm ³	1.06	1.06
Mixing ratio A : B	by weight	100	100
		Mixture	
Colour		Grey	
Viscosity, 25 °C	Pa.s	800	
Density, 23 °C	g/cm ³	1.08	

MECHANICAL AND THERMAL PROPERTIES

(approx. values, hardening 24 hours / 25 °C + 16 hours / 80 °C)

Applied layer			30 mm	15 mm
Shore hardness				
- 24 hours at 25 °C	ISO 868	Shore D1 / D15	73 / 71	69 / 65
- 16 hours at 80 °C			75 / 74	75 / 74
Flexural modulus	ISO 178	MPa	2,000	
Flexural strength	ISO 178	MPa	36	
Tensile modulus	ISO 527	MPa	2,400	
Tensile strength	ISO 527	MPa	21	
Elongation at break	ISO 527	%	2.2	
Compressive strength at yield	ISO 604	MPa	36	

THERMAL AND SPECIFIC PROPERTIES

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

Applied layer			30 mm	15 mm
Heat deflection temperature	ISO 75	°C	78	
Glass transition temperature (Tg)				
- 24 hours at 25 °C	ISO 11359	°C	71	54
- 16 hours at 60 °C / 80 °C			83 / 89	82 / 91
Coefficient of thermal expansion				
- 24 hours at 25 °C	ISO 11359	10 ⁻⁶ K ⁻¹	59	61
- 16 hours at 60 °C / 80 °C			53 / 55	59 / 58

EXOTHERMIC PEAK AND HARDENING TIME *

Thickness (mm)	Product temperature (°C)	Exothermic peak (min)	Exothermic peak (°C)	Workability (hours)	Linear shrinkage (mm/m)
30	29	140	82	12	< 1
15	29	140	46	16	< 1
2	29	200	35	20	-

* Room temperature: 25 °C; polystyrene support

REPAIR SOLUTION

Repair Mixture	SikaBiresin® SC390 (A) with SikaBiresin® GC11 (B)				
Colour	Grey				
Mixing ratio A : B	by weight	100 : 15			
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® SC390	45 kg / 195 kg
■ Hardener (B), SikaBiresin® SC390	45 kg / 195 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® SC390 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® SC390	9 months
	■ Hardener (B), SikaBiresin® SC390	9 months
	■ Hardener (B), SikaBiresin® GC11	12 months
Storage temperature	■ Resin (A), SikaBiresin® SC390	15 °C – 25 °C
	■ Hardener (B), SikaBiresin® SC390	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

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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