

## PRODUCT DATA SHEET

# SikaBiresin<sup>®</sup> G32 (Biresin<sup>®</sup> G32)

EPOXY CASTING RESIN FOR BACKFILLING APPLICATIONS – CASTING THICKNESS UP TO 100 MM DEPENDING ON HARDENER

## APPLICATIONS

- Backfilling applications for foundry patterns and moulds

## MAIN PROPERTIES

- Good flowability and good mechanical properties
- Long pot life
- High casting thickness, unfilled up to 40 mm, dependent on thermal conductivity of the mould material
- Applicable with high admixture of filler, e.g. with aluminum grid up to 100:100 parts per weight on component A
- With component B **SikaBiresin<sup>®</sup> F02** for casting thickness of more than 100 mm, filled with aluminum grid
- With component B **SikaBiresin<sup>®</sup> F04** for low viscosity and better flowability properties
- With component B **SikaBiresin<sup>®</sup> GC11** for shorter pot life and good spreading properties

## DESCRIPTION

Basis	Two component epoxy system
Component A	<b>SikaBiresin<sup>®</sup> G32</b> , epoxy resin, filled, green
Component B	<b>SikaBiresin<sup>®</sup> F02</b> , amine, unfilled, yellowish
Component B	<b>SikaBiresin<sup>®</sup> F04</b> , amine, unfilled, colourless
Component B	<b>SikaBiresin<sup>®</sup> GC11</b> , amine, unfilled, amber

## PHYSICAL PROPERTIES

		Resin (A)	Hardener (B)	Hardener (B)	Hardener (B)
Components		SikaBiresin® G32	SikaBiresin® F02	SikaBiresin® F04	SikaBiresin® GC11
Viscosity, 23 °C	mPa.s	~ 14,000	~ 330	~ 10	~ 1,400
Density	g/cm <sup>3</sup>	1.7	0.95	0.87	1.08
Mixing ratio A:B	in parts by weight	100	17	7	8
Mixture					
Colour		green		green	green
Viscosity, 23 °C	mPa.s	~ 2,600		~ 2,100	~ 13,000
Pot life, room temperature	min	~ 180		~ 70	~ 36
Demoulding time, room temperature	h	~ 48		~ 24	~ 24

## MECHANICAL PROPERTIES

approx. values

			SikaBiresin® F02	SikaBiresin® F04	SikaBiresin® GC11
Density	ISO 1183	g/cm <sup>3</sup>	1.6	1.6	1.6
Shore hardness	ISO 868	-	D 86	D 90	D 91
Flexural modulus	ISO 178	MPa	3,100	6,100	7,350
Flexural strength	ISO 178	MPa	51	70	85
Impact resistance	ISO 179	kJ/m <sup>2</sup>	10	8	10
Compressive strength	ISO 604	MPa	71	112	130
Linear shrinkage	Internal test	%	0.26	0.12	not measured

## THERMAL AND SPECIFIC PROPERTIES

approx. values

			SikaBiresin® F02	SikaBiresin® F04	SikaBiresin® GC11
Heat deflection temperature	ISO 75B	°C	48	51	69

## PACKAGING UNITS

- Resin (A), SikaBiresin® G32 5 kg
- Hardener (B), SikaBiresin® F02 2.5 kg / 15 kg
- Hardener (B), SikaBiresin® F04 2.5 kg
- Hardener (B), SikaBiresin® GC11 0.5 kg / 12 x 0.05 kg / 1 kg

## PROCESSING DATA

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- The material, processing and mould temperature should be at least 18 – 25 °C.
- Component A must be stirred thoroughly before use.
- Recommended release agents are Sika® Liquid Wax-815 or Sika® Pasty Wax-818. For more information, see Product Data Sheets of the release agents.
- Pay attention to dry conditions and dry mould surfaces while processing.
- Both components have to be mixed thoroughly according to mixing ratio and poured immediately into the released mould with beginning at the lowest point.
- Further post curing of the demoulded 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.
- For cleaning the final part from release agent residues, we recommend Sika® Reinigungsmittel-5. Before use of other cleaners, compatibility must be tested.

## STORAGE CONDITIONS

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Shelf life	<ul style="list-style-type: none"><li>■ Resin (A), <b>SikaBiresin® G32</b> 12 months</li><li>■ Hardener (B), <b>SikaBiresin® F02</b> 12 months</li><li>■ Hardener (B), <b>SikaBiresin® F04</b> 12 months</li><li>■ Hardener (B), <b>SikaBiresin® GC11</b> 24 months</li></ul>
Storage temperature	<ul style="list-style-type: none"><li>■ Resin (A), <b>SikaBiresin® G32</b> 18 – 25 °C</li><li>■ Hardener (B), <b>SikaBiresin® F02</b> 18 – 25 °C</li><li>■ Hardener (B), <b>SikaBiresin® F04</b> 18 – 25 °C</li><li>■ Hardener (B), <b>SikaBiresin® GC11</b> 15 – 25 °C</li></ul>
Crystallization	<ul style="list-style-type: none"><li>■ After prolonged storage at low temperature, crystallization of components may occur.</li><li>■ This is easily removed by warming up for a sufficient time to a maximum of 70 °C.</li><li>■ Allow to cool to room temperature before use.</li></ul>
Opened packagings	<ul style="list-style-type: none"><li>■ Containers must be closed tightly immediately after use to prevent moisture ingress.</li><li>■ The residual material needs to be used up as soon as possible.</li></ul>

## 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 enduse 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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