

PRODUCT DATA SHEET

SikaBiresin[®] G33 (Biresin[®] G33)

EPOXY CASTING RESIN WITH HIGH ABRASION RESISTANCE

APPLICATIONS

- Embedding of highly abrasion resistant guides
- Manufacturing of drawing tools, drop hammer dies, hydroforming and rubber cushion tools for metal sheet forming
- Manufacturing of marking and copy models
- Mould receptacles for fixtures and tools
- Manufacturing of cutting punch guides and stamp mounts

MAIN PROPERTIES

- Very good flowability
- Very good degassing properties
- High abrasion resistance
- Very low shrinkage
- Very high edge stability and compressive strength
- Casting thicknesses up to 25 mm possible in open moulds

DESCRIPTION

Basis	Two component epoxy system
Component A	SikaBiresin[®] G33 , epoxy resin, filled, black
Component B	SikaBiresin[®] GC05 , amine, unfilled, amber

PHYSICAL PROPERTIES

		Resin (A)	Hardener (B)
		SikaBiresin[®] G33	SikaBiresin[®] GC05
Components			
Viscosity, 25 °C	mPa.s	~ 15,500	~ 50
Density	g/cm ³	1.93	0.99
Mixing ratio A:B	in parts by weight	100	6
		Mixture	
Colour		black	
Viscosity, 25 °C	mPa.s	~ 6,000	
Pot life, room temperature, 500 g	min	~ 45 – 60	
Demoulding time, room temperature	h	~ 16	

MECHANICAL PROPERTIES

approx. values

Curing conditions			room temperature	2 h / 80 °C
Density	ISO 1183	g/cm ³	1.87	1.87
Shore hardness	ISO 868	-	D 90	D 90
Flexural modulus	ISO 178	MPa	9,800	7,800
Flexural strength	ISO 178	MPa	88	88
Impact resistance	ISO 179	kJ/m ²	8	10
Compressive strength	ISO 604	MPa	120	120
Linear shrinkage	Internal test	%	0.05	0.05

PACKAGING UNITS

- Kit (AB), **SikaBiresin® G33** Box: 1 x 5.8 kg (A) + 1 x 0.35 kg (B)

PROCESSING DATA

- 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

Shelf life	Resin (A), SikaBiresin® G33	12 months
	Hardener (B), SikaBiresin® GC05	12 months
Storage temperature	Resin (A), SikaBiresin® G33	18 – 25 °C
	Hardener (B), SikaBiresin® GC05	18 – 25 °C
Crystallization	After prolonged storage at low temperature, crystallization of components may occur.	
	This is easily removed by warming up for a sufficient time to a maximum of 70 °C.	
	Allow to cool to room temperature before use.	
Opened packagings	Containers must be closed tightly immediately after use to prevent moisture ingress.	
	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

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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