

PRODUCT DATA SHEET

SikaBiresin[®] G36 (Biresin[®] G36)

EPOXY CASTING RESIN WITH VERY GOOD TEMPERATURE RESISTANCE

APPLICATIONS

- Manufacturing of heat resistant moulds and tools
- Manufacturing of backfilling for foundry patterns
- Manufacturing of injection moulds for prototypes and small series
- Manufacturing of vacuum forming tools

MAIN PROPERTIES

- Good flowability and long pot life
- With component B **SikaBiresin[®] G36** for a maximum casting thickness up to 100 mm in open moulds
- With component B **Biresin[®] CH170-3** for casting thickness up to 40 mm
- Good mechanical properties after post curing and low shrinkage
- Good workability after curing

DESCRIPTION

Basis	Two component epoxy system
Component A	SikaBiresin[®] G36 , epoxy resin, filled, grey
Component B	SikaBiresin[®] G36 , amine, unfilled, amber
Component B	Biresin[®] CH170-3 , amine, unfilled, colourless to amber

PHYSICAL PROPERTIES

		Resin (A)	Hardener (B)	Hardener (B)
Components		SikaBiresin® G36	SikaBiresin® G36	Biresin® CH170-3
Viscosity, 25 °C	mPa.s	~ 80,000	~ 35	~ 10
Density	g/cm ³	1.79	0.96	0.94
Mixing ratio A:B	in parts by weight	100	10	6
Mixture				
Colour		grey		
Viscosity, 25 °C	mPa.s	~ 18,000		~ 6,700
Pot life, room temperature, 500 g	min	~ 60 – 120		~ 60 – 120
Demoulding time, room temperature	h	~ 24 + 3 h / 60 °C		~ 24 + 3 h / 60 °C

MECHANICAL PROPERTIES

approx. values

			SikaBiresin® G36	Biresin® CH170-3
Curing conditions			4 h / 100 °C	3 h / 140 °C
Density	ISO 2781	g/cm ³	1.7	1.7
Shore hardness	ISO 868	-	D 89	D 89
Flexural modulus	ISO 178	MPa	7,300	8,700
Flexural strength	ISO 178	MPa	80	89
Impact resistance	ISO 179	kJ/m ²	11	12
Compressive strength	ISO 604	MPa	130	135
Linear shrinkage, aluminum mould	Internal test	%	0.04	not measured

THERMAL AND SPECIFIC PROPERTIES

approx. values

			SikaBiresin® G36	Biresin® CH170-3
Heat distortion temperature	ISO 75B	°C	141*	> 220*
Coefficient of thermal expansion	DIN 53752	K ⁻¹	35 – 40 x 10 ⁻⁶	35 x 10 ⁻⁶

* values after post curing 4 h / 120 °C

PACKAGING UNITS

■ Resin (A), SikaBiresin® G36	5 kg / 20 kg
■ Hardener (B), SikaBiresin® G36	2 kg
■ Hardener (B), Biresin® CH170-3	1.7 kg / 16 kg / 180 kg

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.
- For casting of higher thicknesses, the addition of 50 % aluminum powder to SikaBiresin® G36 (A) and Biresin® CH170-3 (B) can be used.
- 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	<ul style="list-style-type: none">▪ Resin (A), SikaBiresin® G36 12 months▪ Hardener (B), SikaBiresin® G36 12 months▪ Hardener (B), Biresin® CH170-3 12 months
Storage temperature	<ul style="list-style-type: none">▪ Resin (A), SikaBiresin® G36 18 – 25 °C▪ Hardener (B), SikaBiresin® G36 18 – 25 °C▪ Hardener (B), Biresin® CH170-3 18 – 25 °C
Crystallization	<ul style="list-style-type: none">▪ 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	<ul style="list-style-type: none">▪ 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 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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