

PRODUCT DATA SHEET

SikaBiresin[®] F46 (Biresin[®] G46)

FILLED PUR CASTING RESIN WITH LONG POTLIFE FOR CASTING OF THICK SECTIONS – POT LIFE 40´

APPLICATIONS

- Manufacture of master and core models, negatives and foundry patterns
- For control moldings and copy models

MAIN PROPERTIES

- Low odour
- Good flowability and good degassing
- Casting of thick sections and true-to-size curing
- Long pot life and low reaction temperature
- Good mechanical properties
- Cured moldings can be machined

DESCRIPTION

Basis	Two component polyurethane system
Component A	SikaBiresin[®] F46 , polyol, filled, beige
Component B	SikaBiresin[®] F46 , MDI-based isocyanate, unfilled, brown-transparent

PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)
Components		SikaBiresin[®] F46	SikaBiresin[®] F46
Viscosity, 25 °C	mPa.s	~ 20,000	~ 200
Density	g/cm ³	1.8	1.22
Mixing ratio A:B	in parts by weight	100	25
		Mixture	
Colour		beige	
Viscosity, 25 °C	mPa.s	~ 3,000	
Pot life, room temperature, 200 g	min	~ 40	
Demoulding time, room temperature	h	~ 16 – 24	

MECHANICAL PROPERTIES

approx. values

Density	ISO 1183	g/cm ³	1.7
Shore hardness	ISO 868	-	D 87
Flexural modulus	ISO 178	Mpa	6,500
Flexural strength	ISO 178	Mpa	65
Tensile strength	ISO 527	Mpa	25
Elongation at break	ISO 527	%	2
Compressive strength	ISO 604	Mpa	110
Impact resistance	ISO 179	kJ/m ²	6
Linear shrinkage	Internal test	%	0.03 – 0.05

THERMAL AND SPECIFIC PROPERTIES

approx. values

Heat deflection temperature			
7 days at 23°C	ISO 75B	°C	50
8 hours at 80°C			75

PACKAGING UNITS

- | | |
|------------------------------------|-------|
| ■ Polyol (A), SikaBiresin® F46 | 20 kg |
| ■ Isocyanate (B), SikaBiresin® F46 | 5 kg |

PROCESSING DATA

- The material, processing and mold or master-model temperature shall be between 18 °C and 25 °C.
- Make sure the mold or master model is clean, dry, dust and grease free.
- If mold or master-model surface is porous, it must be sealed prior applying the release agent.
- It is recommended to use wax-based release agents.
For further information regarding Sika release agent consult the corresponding Product Data Sheet.
- Prior to use check the material for homogeneity and crystallization.
After prolonged storage at low temperature, crystallization of components may occur. This process can be easily reversed by heating the affected component to a maximum of 70 °C until the crystals have disappeared. Allow to cool down to requested processing temperature before use.
- Prior to mixing component A must be stirred thoroughly.
- Prior to mixing component B must be shaken thoroughly.
- Both components must be mixed homogeneously respecting the defined mixing ratio. The mixing can be performed with a spatula or a machine stirrer at ≤ 300 rpm. To secure homogeneous and complete mixing, pour the mixed product into another container and mix again shortly.
- Immediately after mixing pour the Product into the mold starting at the deepest point.
- Demolding time may vary depending on casted thickness and room-temperature.
- 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	■ Polyol (A), SikaBiresin® F46	12 months
	■ Isocyanate (B), SikaBiresin® F46	12 months
Storage temperature	■ Polyol (A), SikaBiresin® F46	18 – 25 °C
	■ Isocyanate (B), SikaBiresin® F46	18 – 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 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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PRODUCT DATA SHEET

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