

PRODUCT DATA SHEET

SikaBiresin[®] F40 (F40-1)

FILLED FASTCAST RESIN WITH VERY GOOD ABRASION RESISTANCE –
POT LIFE 5'25" – 6'30"

APPLICATIONS

- Casting of foundry patterns and cold core-boxes, negatives and mouldings of medium size
- Any type of parts or tools requiring a good abrasion resistance

MAIN PROPERTIES

- Almost odorless
- Low shrinkage
- High abrasion resistance
- Low viscosity

DESCRIPTION

Basis	Two component polyurethane system
Component A	SikaBiresin[®] F40 , polyol, filled, blue
Component B	SikaBiresin[®] F40 , MDI-based isocyanate, unfilled, dark amber

PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)
Components		SikaBiresin[®] F40	SikaBiresin[®] F40
Viscosity, 25 °C	mPa.s	~ 3,000	~ 60
Density, 25 °C	g/cm ³	1.75	1.22
Mixing ratio A:B	in parts by weight	100	20
Mixing ratio A:B	in parts by volume	100	29
		Mixture	
Colour		blue	
Viscosity, 25 °C, at 1'30"	mPa.s	~ 2,000	
Pot life, 25 °C, 100 g	min	5'25" – 6'30"	
Demoulding time, 8 mm thickness	min	~ 60	
Maximum casting thickness	mm	~ 50	

MECHANICAL PROPERTIES

approx. values; values after post curing 7 d / 23 °C

Density, 23 °C	ISO 2781	g/cm ³	1.7
Shore hardness	ISO 868	-	D 84
Flexural modulus	ISO 178	MPa	3,750
Flexural strength	ISO 178	MPa	61
Tensile modulus	ISO 527	MPa	4,800
Tensile strength	ISO 527	MPa	23
Compressive modulus	ISO 604	MPa	2,800
Compressive strength at yield	ISO 604	MPa	57
Linear shrinkage (250 x 50 x 3 mm)	Internal test	mm/m	1
Abrasion resistance (Taber)	ISO 5470	mg / 100U	126

THERMAL AND SPECIFIC PROPERTIES

approx. values; values after post curing 7 d / 23 °C

Heat deflection temperature	ISO 75	°C	97*
Glass transition temperature	ISO 11359	°C	69
Glass transition temperature	ISO 11359	°C	108*
Coefficient of thermal expansion (15 °C to 110 °C)	ISO 11359	10 ⁻⁶ K ⁻¹	85

* values after post curing
24 h / 80 °C

PACKAGING UNITS

- | | |
|---|------------|
| ■ Polyol (A SikaBiresin® F40) | 6 x 1 kg |
| ■ Isocyanate (B), SikaBiresin® F40 | 6 x 0.2 kg |

PROCESSING DATA

- The material, processing and mould temperature should be at least 18 – 25 °C.
- Pay attention to dry conditions and dry mould surfaces while processing.
- If mould surface is porous it must be sealed prior applying release agent.
- Recommend release agents are wax based. For more information, and recommendation see Product Data Sheets of Sika release agents or contact local technical assistance.
- Component A must be stirred thoroughly before use.
- Both components have to be mixed thoroughly with a spatula or low-rpm stirrer according to mixing ratio and poured immediately into the mould starting from the deepest 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	■ Polyol (A), SikaBiresin® F40	9 months
	■ Isocyanate (B), SikaBiresin® F40	12 months
Storage temperature	■ Polyol (A), SikaBiresin® F40	15 – 25 °C
	■ Isocyanate (B), SikaBiresin® F40	15 – 25 °C
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 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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