

PRODUCT DATA SHEET

SikaBiresin® F31 (F31)

UNFILLED FASTCAST RESIN FOR MANUFACTURING OF THIN PARTS –
POT LIFE 1'50`` – 2'00``

APPLICATIONS

- Manufacturing of prototype parts and scale models

MAIN PROPERTIES

- Very quick setting
- Friendly use mix ratio (1:1 by weight)
- Low aggressiveness toward silicone moulds
- Opaque even in small thickness
- Good ability to being painted

DESCRIPTION

Basis	Two component polyurethane system	
Component A	SikaBiresin® F31, polyol, unfilled, off-white	
Component B	SikaBiresin® F31, MDI-based isocyanate, unfilled, dark amber	

PHYSICAL PROPERTIES

Components	Polyol (A)	Isocyanate (B)
Viscosity, 25 °C	mPa.s	~ 55
Density, 25 °C	g/cm³	0.97
Mixing ratio A:B	in parts by weight	100
Mixing ratio A:B	in party by volume	100
		Mixture
Colour		beige
Viscosity, 25 °C	mPa.s	~ 40
Pot life, 25 °C, 200 g	min	~ 1'50`` – 2'00``
Demoulding time, 23 °C, 2 mm thickness	min	~ 20
Curing time, 23 °C	d	~ 3
Maximum casting thickness	mm	5

MECHANICAL PROPERTIES

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

Density, 23 °C	ISO 2781	g/cm ³	1.07
Shore hardness	ISO 868	-	D 73
Flexural modulus	ISO 178	MPa	1,100
Flexural strength	ISO 178	MPa	44
Impact resistance	ISO 179	kJ/m ²	16
Maximum casting thickness		mm	5

THERMAL AND SPECIFIC PROPERTIES

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

Temperature of use		°C	20 – 80
Glass transition temperature	ISO 11359	°C	95

PACKAGING UNITS

- Polyol (A), **SikaBiresin® F31** 5 kg / 20 kg
- Isocyanate (B), **SikaBiresin® F31** 5 kg / 20 kg

PROCESSING DATA

- The material, processing and mould temperature should be at least 18 – 25 °C.
- Both components must be shaken well 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.
- Porous surfaces have to be well sealed before.
- 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.
- Before overpainting, the parts have to be grinded or sandblasted. A polyurethane paint is recommended.
- Silicone elastomer ESSIL 125 for mould making is recommended for SIKABIRESIN® F31.

STORAGE CONDITIONS

Shelf life	■ Polyol (A), SikaBiresin® F31	12 months
	■ Isocyanate (B), SikaBiresin® F31	12 months
Storage temperature	■ Polyol (A), SikaBiresin® F31	15 – 25 °C
	■ Isocyanate (B), SikaBiresin® F31	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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Sika Advanced Resins

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BUILDING TRUST

