

PRODUCT DATA SHEET

SikaBiresin® F38 (F38)

UNFILLED FASTCAST RESIN FOR MANUFACTURING OF MODELS AND PROTOTYPES WITH GOOD IMPACT RESISTANCE – POT LIFE 20 – 25'

APPLICATIONS

- Manufacturing of models and prototypes in the model building

MAIN PROPERTIES

- Good impact resistance
- Short demoulding time
- Low viscosity
- Thermoplastic aspect
- Low shrinkage
- Easy mix ratio
- Good ability for being painted

DESCRIPTION

Basis	Two component polyurethane system	
Component A	SikaBiresin® F38, polyol, unfilled, transparent	
Component B	SikaBiresin® F38, MDI-based isocyanate, unfilled, amber	

PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)
Components		SikaBiresin® F38	SikaBiresin® F38
Viscosity, 25 °C	mPa.s	~ 35	~ 40
Density, 25 °C	g/cm³	0.98	1.16
Mixing ratio A:B	in parts by weight	100	100
Mixing ratio A:B	in parts by volume	100	85
		Mixture	
Colour		off-white	
Viscosity, 25 °C	mPa.s	~ 35	
Pot life, 25 °C, 200 g	min	~ 2	
Demoulding time, 23 °C	min	~ 20 – 25	
Curing time, 23 °C	d	~ 3	
Maximum casting thickness	mm	5 – 10	

MECHANICAL PROPERTIES

approx. values; values after post curing 7 d / room temperature

Density, 23 °C	ISO 2781	g/cm ³	1.07
Shore hardness	ISO 868	-	D 70
Flexural modulus	ISO 178	MPa	750
Flexural strength	ISO 178	MPa	32
Tensile strength	ISO 527	MPa	28
Elongation at break	ISO 527	%	10
Impact resistance	ISO 179	kJ/m ²	30
Compressive strength at yield	ISO 604	MPa	20
Linear shrinkage, 3 mm thickness	Internal test	mm/m	1.5

THERMAL AND SPECIFIC PROPERTIES

approx. values; values after post curing 7 d / room temperature

Working temperature	Internal	°C	20 – 60
Heat deflection temperature	ISO 75	°C	55

PACKAGING UNITS

- Polyol (A), **SikaBiresin® F38** 5 kg
- Isocyanate (B), **SikaBiresin® F38** 5 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 ESSL 125 for mould making is recommended for SIKABIRESIN® F38.

STORAGE CONDITIONS

Shelf life	■ Polyol (A), SikaBiresin® F38	6 months
	■ Isocyanate (B), SikaBiresin® F38	12 months
Storage temperature	■ Polyol (A), SikaBiresin® F38	15 – 25 °C
	■ Isocyanate (B), SikaBiresin® F38	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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