BUILDING TRUST

PRODUCT DATA SHEET

SikaBiresin® F320

Unfilled fastcast resin for production of thin parts

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties		SikaBiresin® F320 (A)	SikaBiresin® F320 (B)
Chemical base		Polyol, unfilled	MDI-based isocyanate, unfilled
Color		Off-white	Dark amber
	mixed	Beige	
Density		0.98 kg/l	1.14 kg/l
	cured	1.10 kg/l	
Mixing ratio	by weight	100 : 100	
	by volume	100 : 86	
Viscosity (CQP029-4)		43 mPa·s	35 mPa·s
	mixed	53 mPa·s	
Pot life (CQP021-4)	150 g at 23 °C	2 minutes 10 seconds	
Demolding time	2 mm thickness	20 minutes	
Maximum casting thickness		5 mm	
Shore D hardness (CQP023-1 / ISO 868)		74 [A]	
Flexural strength (CQP027-2 / ISO 178)		36 MPa [A]	
Flexural modulus (CQP027-2 / ISO 178)		1000 MPa [A]	
Flexural strain at flexural strength (CQP027-2 / ISO 178)		7.2 % [A]	
Impact resistance (CQP038-2 / ISO 179)		31 kJ/m² [A]	
Linear shrinkage (CQP014-5)	250 x 50 x 3 mm	0.4 mm/m [A]	
Heat deflection temperature (CQP030-1 / ISO 75B)		90 °C [B]	
Glass transition temperature TMA (CQP053-1 / ISO 11359)		103 °C [B]	
Shelf life		12 months	

CQP = Corporate Quality Procedure

A) curing condition: 23 °C for 7 days

B) post curing: 80 °C for 24 hours

DESCRIPTION

SikaBiresin® F320 is an unfilled fast curing 2-component polyurethane system for manufacturing of prototype parts.

PRODUCT BENEFITS

- Very quick setting product
- User friendly mixing ratio
- Low aggressiveness to silicone molds
- Opaque even in small thickness
- Good ability to be painted
- Odorless

AREAS OF APPLICATION

SikaBiresin® F320 is designed for manufacturing of prototype parts and scale models.
This product is suitable for experienced professional users only.

METHOD OF APPLICATION

Surface preparation

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.

Mixing process

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.
Consider, pot life is affected by temperature and mixed quantity.
Prior to mixing both components 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, considering the pot life.

Note: Both containers must be closed tightly immediately after use to prevent moisture ingress.
Once opened the product shall be used as soon as possible.

Application

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.
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.
With SikaBiresin® F320 it is recommended using SikaBiresin® SI125 (silicone) for molds.

STORAGE CONDITIONS

Both components must be stored at temperature between 15 °C and 25 °C in original unopened containers.

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 Industry.
Copies of the following publications are available on request:

- Safety Data Sheets

PACKAGING INFORMATION

SikaBiresin® F320 (A)

Canister	4.5 kg

SikaBiresin® F320 (B)

Canister	4.5 kg

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.

DISCLAIMER

The information, and, in particular, the recommendations relating to the application and end-use 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.

Sika Deutschland CH AG & Co KG
Industry
Stuttgarter Straße 139
72574 Bad Urach
Tel. +49 7125 940-7692
verkauf.industry@de.sika.com
www.sika.de