

## PRODUCT DATA SHEET

# SikaBiresin® F27 (Biresin® G27)

UNFILLED FASTCAST RESIN – AVAILABLE WITH DIFFERENT HARDENERS FOR VARIABLE MECHANICAL PROPERTIES – POT LIFE 2`15``

## APPLICATIONS

- Casting of master and core models, negatives and mouldings of small up to medium dimensions
- Applicable for thinner and thicker layers
- For casting of art and crafts articles with excellent detail reproduction

## MAIN PROPERTIES

- Good wetting of fillers
- High quality of surface detail reproduction
- Low shrinkage and good dimensional stability
- Very good mechanically workable
- Very fine structure
- With component B **SikaBiresin® F27 beige** for good flowability and short demoulding time
- With component B **SikaBiresin® F27 white** for increased flowability
- With component B **SikaBiresin® F55** suitable for rotomoulding production of hollow mouldings because of shorter potlife and shorter demoulding time

## DESCRIPTION

Basis	Two component polyurethane system
Component A	<b>SikaBiresin® F27</b> , polyol, unfilled, beige
Component B	<b>SikaBiresin® F27 beige</b> , MDI-based isocyanate, unfilled, brown
Component B	<b>SikaBiresin® F27 white</b> , MDI-based isocyanate, unfilled, weißlich
Component B	<b>SikaBiresin® F55</b> , MDI-based isocyanate, unfilled, colourless

## PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)	Isocyanate (B)	Isocyanate (B)
Components		SikaBiresin® F27	SikaBiresin® F27 beige	SikaBiresin® F27 white	SikaBiresin® F55
Viscosity, 25 °C	mPa.s	~ 70	~ 60	~ 13	~ 250
Density	g/cm <sup>3</sup>	1.02	1.14	1.13	1.22
Mixing ratio A:B	in parts by weight	100	100	100	80
Mixture					
Colour		beige		beige	white
Viscosity, 25 °C	mPa.s	~ 50		~ 30	~ 140
Pot life, room temperature, 200 g	min	~ 2`15``		~ 2`15``	~ 1`30``
Demoulding time, room temperature	min	> 20		> 20	> 15
Curing time, room temperature	d	~ 3		~ 3	~ 3

## MECHANICAL PROPERTIES

approx. values

			SikaBiresin® F27 beige	SikaBiresin® F27 white	SikaBiresin® F55
Density	ISO 1183	g/cm <sup>3</sup>	1.1	1.1	1.1
Shore hardness	ISO 868	-	D 70	D 70	D 75
Flexural modulus	ISO 178	MPa	1,300	900	1,500
Flexural strength	ISO 178	MPa	55	42	60
Tensile strength	ISO 527	MPa	32	22	40
Elongation at break	ISO 527	%	7	10	7
Impact resistance	ISO 179	kJ/m <sup>2</sup>	25	60	50
Linear shrinkage	Internal test	%	0.2	not measured	not measured

## THERMAL AND SPECIFIC PROPERTIES

approx. values

			SikaBiresin® F27 beige	SikaBiresin® F27 white	SikaBiresin® F55
Heat deflection temperature	ISO 75B	°C	80	75	75

## PACKAGING UNITS

- Polyol (A), SikaBiresin® F27
  - Isocyanate (B), SikaBiresin® F27 beige
  - Isocyanate (B), SikaBiresin® F27 white
  - Isocyanate (B), SikaBiresin® F55
- 6 x 1 kg / 5 kg / 20 kg / 200 kg  
6 x 1 kg / 5 kg / 20 kg / 200 kg  
6 x 1 kg / 5 kg / 20 kg  
5 kg / 20 kg / 1,100 kg

## PROCESSING DATA

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- 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.
- If fillers are used, mix them thoroughly into the A component or half in each component before mixing the components.
- Both components have to be mixed thoroughly according to mixing ratio and poured immediately into the released mould with beginning at the lowest point.
- 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.

## STORAGE CONDITIONS

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Shelf life	<ul style="list-style-type: none"><li>▪ Polyol (A), <b>SikaBiresin® F27</b> 12 months</li><li>▪ Isocyanate (B), <b>SikaBiresin® F27 beige</b> 12 months</li><li>▪ Isocyanate (B), <b>SikaBiresin® F27 white</b> 12 months</li><li>▪ Isocyanate (B), <b>SikaBiresin® F55</b> 12 months</li></ul>
Storage temperature	<ul style="list-style-type: none"><li>▪ Polyol (A), <b>SikaBiresin® F27</b> 18 – 25 °C</li><li>▪ Isocyanate (B), <b>SikaBiresin® F27 beige</b> 18 – 25 °C</li><li>▪ Isocyanate (B), <b>SikaBiresin® F27 white</b> 18 – 25 °C</li><li>▪ Isocyanate (B), <b>SikaBiresin® F55</b> 18 – 25 °C</li></ul>
Crystallization	<ul style="list-style-type: none"><li>▪ After prolonged storage at low temperature, crystallization of components may occur.</li><li>▪ This is easily removed by warming up for a sufficient time to a maximum of 70 °C.</li><li>▪ Allow to cool to room temperature before use.</li></ul>
Opened packagings	<ul style="list-style-type: none"><li>▪ Containers must be closed tightly immediately after use to prevent moisture ingress.</li><li>▪ The residual material needs to be used up as soon as possible.</li></ul>

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### 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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## Contact

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**SIKA DEUTSCHLAND GMBH**  
Stuttgarter Straße 139  
72574 Bad Urach - GERMANY  
Phone: +49 7125 940 492  
Fax: +49 7125 940 401  
E-Mail: tooling@de.sika.com  
Website: www.sikaadvancedresins.de

**SIKA AUTOMOTIVE FRANCE S.A.S.**  
ZI des Béthunes - 15, Rue de l'Equerre  
95310 Saint-Ouen-l'Aumône  
CS 40444  
95005 Cergy Pontoise Cedex - FRANCE  
Phone: +33 1 34 40 34 60  
Fax: +33 1 34 21 97 87  
E-Mail: advanced.resins@fr.sika.com  
Website: www.sikaadvancedresins.fr

**AXSON TECHNOLOGIES SPAIN, S.L.**  
C/Guardaagullés, 8 – P.I. Congost - 08520  
Les Franqueses del Valles (Barcelona) - SPAIN  
Phone: +34 93 225 16 20  
Fax: +34 93 225 03 05  
E-Mail: spain@axson.com  
Website: www.sikaadvancedresins.es

**AXSON ITALIA S.R.L.**  
Via Morandi 15  
21047 Saronno (Va) – ITALY  
Phone: +39 02 96 70 23 36  
Fax: +39 02 96 70 23 69  
E-Mail: axson@axson.it  
Website: www.sikaadvancedresins.it

**AXSON UK LTD**  
Unit 15 Studlands Park Ind. Estate  
Newmarket Suffolk, CB8 7AU - UNITED KINGDOM  
Phone: +44 1638 660 062  
Fax: +44 1638 665 078  
E-Mail: sales.uk@axson.com  
Website: www.sikaadvancedresins.uk

**SIKA AUTOMOTIVE SLOVAKIA S.R.O.**  
Tovarenska 49  
953 01 Zlate Moravce - SLOVAKIA  
Phone: +421 2 5727 29 33  
Fax: +421 37 3000 087  
E-Mail: SikaAdvancedResins@sk.sika.com  
Website: www.sikaadvancedresins.com

**SIKA ADVANCED RESINS US**  
30800 Stephenson Highway  
Madison Heights, Michigan 48071 - USA  
Phone: +1 248 588 2270  
Fax: +1 248 616 7452  
E-Mail: advanced.resins@us.sika.com  
Website: www.sikaadvancedresins.us

**SIKA AUTOMOTIVE EATON RAPIDS, INC.**  
1611 Hults Drive  
Eaton Rapids, Michigan 48827 - USA  
Phone: +1 517 663 81 91  
Fax: +1 517 663 05 23  
E-Mail: advanced.resins@us.sika.com  
Website: www.sikaadvancedresins.us

**SIKA AUTOMOTIVE MEXICO S.A. DE C.V.**  
Ignacio Ramirez #20 Despacho 202 Col.  
Tabacalera C.P. 06030 CDMX - MEXICO  
Phone: +52 55 5264 49 22  
E-Mail: marketing@axson.com.mx  
Website: www.sikaadvancedresins.mx

**SIKA AUTOMOTIVE SHANGHAI CO. LTD.**  
N°53 Tai Gu Road  
Wai Gao Qiao  
Free Trade Zone, Pudong  
200131 Shanghai - CHINA  
Phone: +86 21 58 68 30 37  
Fax: +86 21 58 68 26 01  
E-Mail: marketing.china@axson.com  
Website: www.sikaaxson.cn

**Sika Ltd.**  
10 F, Shinagawa Intercity Tower B.  
2-15-2 Konan, Minato-ku  
Tokyo 108-6110 - JAPAN  
Phone: +81 3 6433 2314  
Fax: +81 3 6433 2102  
E-Mail: advanced-resins@jp.sika.com  
Website: www.jpn.sika.com

**AXSON INDIA PVT. LTD.**  
Office n°8, Building Symphony C - 3rd Floor  
Range Hills Road  
Bhosale Nagar  
Pune 411 020 - INDIA  
Phone: +91 20 25560 710  
Fax: +91 20 25560 712  
E-Mail: info.india@axson.com  
Website: www.sikaadvancedresins.in