

## PRODUCT DATA SHEET

# SikaBiresin® F160 (F160-1)

UNFILLED FASTCAST RESIN WITH QUICK SETTING AND GOOD TEMPERATURE RESISTANCE – POT LIFE 2'20''

## APPLICATIONS

- Unfilled version for casting of negatives, molds, masters and mock-ups
- Filled version for higher volume castings

## MAIN PROPERTIES

- Quick setting system
- Low viscosity
- Good temperature resistance after heat curing
- Phthalate free
- Easy-to-use mix ratio (1:1 by weight)
- Adjustable filler content
- Filled with RZ 30150 / TE Filler to get easy machining
- Filled with RZ 209/6 / aluminum powder in order to increase thermal conductivity
- REACH and RoHS compliant

## DESCRIPTION

Basis	Two component polyurethane system
Component A	<b>SikaBiresin® F160</b> , polyol, unfilled, off-white
Component B	<b>SikaBiresin® F160</b> , MDI-based isocyanate, unfilled, amber
Filler	<b>RZ 30150 / TE Filler</b> , aluminum hydroxide powder, white

## PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)	Filler
		<b>SikaBiresin® F160</b>	<b>SikaBiresin® F160</b>	<b>RZ 30150 / TE Filler</b>
Components				
Viscosity, 25 °C	mPa.s	~ 110	~ 60	not measurable
Density	g/cm <sup>3</sup>	0.97	1.1	not measurable
Mixing ratio A:B	in parts by weight	100	100	360
Mixture				
Colour		beige		beige
Viscosity, 25 °C	mPa.s	~ 90		~ 3,000
Pot life, 25 °C, 200 g	min	~ 2'20''		~ 3'30''
Demoulding time, 25°C				
- 10 mm thickness	min	~ 30		-
- 40 mm thickness		Not applicable		~ 20

## MECHANICAL PROPERTIES

approx. values; values after post curing 16 h / 70 °C

			SikaBiresin® F160	RZ 30150 / TE Filler
Density, 23 °C	ISO 1183	g/cm <sup>3</sup>	1.08	1.67
Shore hardness	ISO 868	-	D 75	D 82
Flexural modulus	ISO 178	MPa	1,300	5,300
Flexural strength	ISO 178	MPa	60	43
Impact resistance	ISO 179	kJ/m <sup>2</sup>	14	4
Linear shrinkage	(1000 x 50 x 10 mm)	mm/m	7.8	-
Linear shrinkage	(1000 x 50 x 40 mm)	mm/m	Not applicable	2.5

## THERMAL AND SPECIFIC PROPERTIES

approx. values; values after post curing 16 h / 70 °C

			SikaBiresin® F160	RZ 30150 / TE Filler
Glass transition temperature	ISO 11359	°C	100	100
Coefficient of thermal expansion	ISO 11359	10 <sup>-6</sup> K <sup>-1</sup>	150	65

## PACKAGING UNITS

■ Polyol (A), SikaBiresin® F160	18 kg / 4.5 kg / 6 x 0.9 kg
■ Isocyanate (B), SikaBiresin® F160	18 kg / 4.5 kg / 6 x 0.9 kg
■ Filler, RZ 30150 / TE Filler	25 kg

## PROCESSING DATA

- The material, processing and mold temperature should be at least 18 – 25 °C.
- Pay attention to dry conditions and dry mold surfaces while processing.
- If mold 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.
- Both components must be shaken well before use.
- For casting thicknesses above 5 mm and up to 40 mm, it is recommended to add filler as follows:
  - up to 360 parts per hundred of resin of RZ 30150 / TE Filler (mineral filler)
  - up to 360 parts per hundred of resin of RZ 209/6 / Aluminum powder
- If fillers are to be added: split filler quantity equally and add each half in each of the 2 components to disperse by stirring to obtain a homogenous mixture.
- Both components have to be mixed thoroughly with a spatula or low-rpm stirrer according to mixing ratio and poured immediately into the mold starting from the deepest point.
- 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.
- 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), <b>SikaBiresin® F160</b>	12 months
	■ Isocyanate (B), <b>SikaBiresin® F160</b>	12 months
	■ Filler, <b>TE Filler / RZ 30150</b>	24 months
Storage temperature	■ Polyol (A), <b>SikaBiresin® F160</b>	15 – 25 °C
	■ Isocyanate (B), <b>SikaBiresin® F160</b>	15 – 25 °C
	■ Filler, <b>TE Filler / RZ 30150</b>	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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## Contact

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### SIKA DEUTSCHLAND GMBH

Business Unit Industry  
Stuttgarter Straße 139  
72574 Bad Urach  
Phone: +49 7125 940-7692  
E-Mail: industry@de.sika.com  
Website: www.sika.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

### Sika S.A.U.

Carretera de Madrid a Irún – km 14.5  
P.I. Congost 28108 Alcobendas (Madrid) - SPAIN  
Phone: +34 93 225 16 20  
E-Mail: sar-sales@es.sika.com  
Website: www.sikaadvancedresins.es

### Sika Italia S.p.A.

Via Luigi Einaudi 6  
20068 Peschiera Borromeo (MI) - Italy  
Phone: +39 02 54778111  
Fax +39 02 54778 119  
E-Mail: info@sika.it  
Website: www.sika.it

### Sika Limited

Head Office, Watchmead – Welwyn  
Garden City – AL7 1BQ – United Kingdom  
Phone: +44 1707 394444  
E-Mail: industry-sales@uk.sika.com  
Website: www.gbr.sika.com

### 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 Industry – Tooling, Resins and Marine

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.sikaindustry.com

### 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 MEXICANA SA de CV

Av. Gustavo Baz #309 Centrum Park  
54060 Tlanepantla Estado de MEXICO  
Phone: +52 442 238 5800  
E-Mail: roman.octavio@mx.sika.com

### 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: industry@cn.sika.com  
Website: www.sika.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

### SIKA INDIA PVT LTD,

Plot No. Pap-V-90/1,  
Chakan Industrial Area,  
Phase-II, Vasuli, Khed, PUNE,  
Maharashtra – 410501  
E-Mail: info.india@in.sika.com