

## PRODUCT DATA SHEET

# SikaBiresin<sup>®</sup> G38 (Biresin<sup>®</sup> G38)

## EPOXY CASTING RESIN WITH HIGH HEAT RESISTANCE

### APPLICATIONS

- Manufacturing of heat resistant moulds, e.g. vacuumforming moulds
- Casting of heat resistant backfillings of foundry patterns

### MAIN PROPERTIES

- Good flowability and good degassing
- Casting thickness up to 40 mm
- Demoulding without heat treatment
- Low shrinkage
- Good mechanical properties, at elevated temperatures too
- Good mechanical workability

### DESCRIPTION

Basis	Two component epoxy system
Component A	<b>SikaBiresin<sup>®</sup> G38</b> , epoxy resin, filled, grey
Component B	<b>SikaBiresin<sup>®</sup> G38</b> , amine, unfilled, amber

### PHYSICAL PROPERTIES

		Resin (A)	Hardener (B)
Components		<b>SikaBiresin<sup>®</sup> G38</b>	<b>SikaBiresin<sup>®</sup> G38</b>
Viscosity, 25 °C	mPa.s	~ 40,000	~ 200
Density	g/cm <sup>3</sup>	1.86	0.96
Mixing ratio A:B	in parts by weight	100	7
		Mixture	
Colour		grey	
Viscosity, 25 °C	mPa.s	~ 11,000	
Pot life, room temperature, 500 g	min	~ 120	
Demoulding time, room temperature	h	~ 16 – 24	

## MECHANICAL PROPERTIES

approx. values

Curing conditions			14 d / room temperature	4 h / 60 °C + 2 h / 100 °C
Density	ISO 1183	g/cm <sup>3</sup>	1.8	1.8
Shore hardness	ISO 868	-	D 88	D 90
Flexural strength	ISO 178	MPa	51	68
Impact resistance	ISO 179	kJ/m <sup>2</sup>	5	8
Compressive strength	ISO 604	MPa	94	112
Linear shrinkage	Internal test	%	0.08	not measured

## THERMAL AND SPECIFIC PROPERTIES

approx. values

Heat deflection temperature	ISO 75B	°C	54	> 130
Coefficient of thermal expansion	DIN 53 752	K <sup>-1</sup>	not measured	35 – 40 x 10 <sup>-6</sup>

## PACKAGING UNITS

- |   |              |
|---|--------------|
| ■ Resin (A), <b>SikaBiresin® G38</b>    | 5 kg / 10 kg |
| ■ Hardener (B), <b>SikaBiresin® G38</b> | 6 x 0.7 kg   |

## PROCESSING DATA

- The material, processing and mould temperature should be at least 18 – 25 °C.
- Component A must be stirred thoroughly 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.
- 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.

## STORAGE CONDITIONS

Shelf life	■ Resin (A), <b>SikaBiresin® G38</b>	18 months
	■ Hardener (B), <b>SikaBiresin® G38</b>	24 months
Storage temperature	■ Resin (A), <b>SikaBiresin® G38</b>	18 – 25 °C
	■ Hardener (B), <b>SikaBiresin® G38</b>	18 – 25 °C
Crystallization	■ After prolonged storage at low temperature, crystallization of components may occur. ■ This is easily removed by warming up for a sufficient time to a maximum of 70 °C. ■ Allow to cool to room temperature before use.	
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 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.

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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](mailto:tooling@de.sika.com)  
Website: [www.sikaadvancedresins.de](http://www.sikaadvancedresins.de)

**SIKA AUTOMOTIVE FRANCE S.A.S.**  
ZI des Béthunes - 15, Rue de l'Équerre  
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](mailto:advanced.resins@fr.sika.com)  
Website: [www.sikaadvancedresins.fr](http://www.sikaadvancedresins.fr)

**AXSON TECHNOLOGIES SPAIN, S.L. – Sika Advanced Resins**  
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: [sar-sales@es.sika.com](mailto:sar-sales@es.sika.com)  
Website: [www.sikaadvancedresins.es](http://www.sikaadvancedresins.es)

**AXSON ITALIA S.R.L. – Sika Advanced Resins**  
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](mailto:axson@axson.it)  
Website: [www.sikaadvancedresins.it](http://www.sikaadvancedresins.it)

**AXSON UK LTD – Sika Advanced Resins**  
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](mailto:sales.uk@axson.com)  
Website: [www.sikaadvancedresins.uk](http://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](mailto:SikaAdvancedResins@sk.sika.com)  
Website: [www.sikaadvancedresins.com](http://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](mailto:advanced.resins@us.sika.com)  
Website: [www.sikaadvancedresins.us](http://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](mailto:advanced.resins@us.sika.com)  
Website: [www.sikaadvancedresins.us](http://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](mailto:marketing@axson.com.mx)  
Website: [www.sikaadvancedresins.mx](http://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](mailto:marketing.china@axson.com)  
Website: [www.sikaaxson.cn](http://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](mailto:advanced-resins@jp.sika.com)  
Website: [www.jpn.sika.com](http://www.jpn.sika.com)

**AXSON INDIA PVT. LTD. – Sika Advanced Resins**  
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](mailto:info.india@axson.com)  
Website: [www.sikaadvancedresins.in](http://www.sikaadvancedresins.in)

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