

PRODUCT DATA SHEET

SikaBiresin® GC080 (GC1 080)

EPOXY GELCOAT WITH VERY GOOD CHEMICAL RESISTANCE – BLUE / WHITE / GREEN

APPLICATIONS

- Manufacturing of moulds with very good chemical resistance
- Manufacturing of ceramic and plaster moulds
- Manufacturing of RTM moulds

MAIN PROPERTIES

- Good chemical resistance
- Easy to apply
- Sandable and polishable
- Applicable on wet plaster

DESCRIPTION

Basis	Two component epoxy system
Component A	SikaBiresin® GC080 , epoxy resin, filled, blue, white, green
Component B	SikaBiresin® GC11 , amine, unfilled, amber
Component B	SikaBiresin® GC14 , amine, unfilled, amber

PHYSICAL PROPERTIES

		Resin (A)	Hardener (B)	Hardener (B)
Components		SikaBiresin® GC080	SikaBiresin® GC11	SikaBiresin® GC14
Viscosity, 25 °C	mPa.s	~ 52,000	~ 1,400	~ 500
Density	g/cm ³	1.78	1.08	1.03
Mixing ratio A:B	in parts by weight	100	10	10
Mixing ratio A:B	in parts by volume	100	16	17
		Mixture		
Colour		blue / white / green		
Viscosity, 25 °C	mPa.s	~ 41,000		~ 22,000
Pot life, 25 °C, 165 g	min	~ 12		~ 25
Geltime, 23 °C	min	~ 40		~ 60
Tacky time, 23 °C	min	~ 40 – 80		~ 60 – 150

MECHANICAL PROPERTIES

approx. values; values after post curing 24 h / 23 °C + 16 h / 80 °C

			SikaBiresin® GC11	SikaBiresin® GC14
Density, 23 °C	ISO 2781	g/cm ³	1.73	1.72
Shore hardness	ISO 868	-	D 91	D 90
Flexural modulus	ISO 178	MPa	5,200	4,450
Flexural strength	ISO 178	MPa	74	82

THERMAL AND SPECIFIC PROPERTIES

approx. values; values after post curing 24 h / 23 °C + 16 h / 80 °C

			SikaBiresin® GC11	SikaBiresin® GC14
Glass transition temperature	ISO 11359	°C		
- 48 h / 23 °C			53	61
- 16 h / 80 °C			100	104

PACKAGING UNITS

- | | |
|--|------------------------------|
| ■ Resin (A), SikaBiresin® GC080, blue | 12 x 0.5 kg / 5 kg |
| ■ Resin (A), SikaBiresin® GC080, white | 5 kg |
| ■ Resin (A), SikaBiresin® GC080, green | 12 x 0.5 kg |
| ■ Hardener (B), SikaBiresin® GC11 | 0.5 kg / 12 x 0.05 kg / 1 kg |
| ■ Hardener (B), SikaBiresin® GC14 | 0.5 kg / 12 x 0.05 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.
- Porous surfaces have to be well sealed before.
- Both components have to be mixed thoroughly according to mixing ratio with a spatula or slow speed mixing equipment.
- Apply the gelcoat in a homogenous thickness on the mould by using a flat, short-haired brush. We recommend to apply the material in a uniform direction in order to get a homogeneous, even and void-free surface coat.
- Within the geltime of gelcoat we recommend to apply a coupling layer or other backfilling layer in order to avoid adhesion problems.
- In order to improve resistance of gelcoat and final part against temperature influences, solvents as well as exposition of water, a post curing process of the final part is recommended. In this case a slow increase and slow decrease of temperature is required.
- 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), SikaBiresin® GC080	24 months
	■ Hardener (B), SikaBiresin® GC11	24 months
	■ Hardener (B), SikaBiresin® GC14	24 months
Storage temperature	■ Resin (A), SikaBiresin® GC080	15 – 25 °C
	■ Hardener (B), SikaBiresin® GC11	15 – 25 °C
	■ Hardener (B), SikaBiresin® GC14	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.

Contact

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