PRODUCT DATA SHEET

SikaBiresin® RG51 FIBRE (Biresin® RG51 FIBRE)

LOW PRESSURE RIM SYSTEM WITH HIGH IMPACT RESISTANCE AND FIBRE FILLED – SIMULATION OF PE / PP

APPLICATIONS

- Manufacture of shock resistant mouldings

MAIN PROPERTIES

- Simulation of PE / PP with high impact resistance
- Fast curing with good flowability
- Short demoulding time
- Very abrasion resistant surface
- Low thermal expansion due to short glass fibre content

DESCRIPTION

Basis	Two component polyurethane system
Component A	**SikaBiresin® RG51 Fibre**, polyol, filled with glass fibres, black
Component B	**SikaBiresin® RG530,** MDI-based isocyanate, amber

PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)
Components		**SikaBiresin® RG51 Fibre**	**SikaBiresin® RG530**
Viscosity, 25 °C	mPa.s	~ 2,600	~ 175
Density	g/cm³	1.25	1.23
Mixing ratio A:B	in parts by weight	100	40
Mixing ratio A:B	in parts by volume	100	40
		Mixture	
Colour		black	
Pot life, room temperature	s	~ 45 – 50	
Demoulding time, plastic mould, room temperature	min	~ 10 – 15	
Curing time, room temperature	d	~ 3	

MECHANICAL PROPERTIES

approx. values; processing conditions: > 60 °C mould temperature

Shore hardness	ISO 868	-	D 73
Flexural modulus	ISO 178	MPa	1,250
Flexural strength	ISO 178	MPa	45
Tensile strength	ISO 527	MPa	30
Elongation at break	ISO 527	%	20
Impact resistance	ISO 179	kJ/m²	90
Linear shrinkage, 500 x 40 mm	Internal test	%	0.24

THERMAL AND SPECIFIC PROPERTIES

approx. values; processing conditions: > 60 °C mould temperature

Heat deflection temperature	ISO 75B	°C	105

PACKAGING UNITS

■ Polyol (A), **SikaBiresin® RG51 Fibre**	20 kg
■ Isocyanate (B), **SikaBiresin® RG530**	0.975 kg / 10 kg / 20 kg / 200 kg / 1,200 kg

PROCESSING DATA

- The material and processing temperature for component A is 30 °C. The mould temperature must be at least 30 – 60 °C. This is necessary to avoid a brittle phase at short demoulding times.
- Component A must be stirred thoroughly before use.
- For processing, a suitable two-component meter mix and dispense machine should be used.
- The machine should be conform to the reactivity of the material and the volume of the casted parts. A static-dynamic or dynamic mixing unit is recommended.
- The machine vessel for component A must have a mixing unit. Furthermore, a heating unit for the machine vessels of both components is recommended.
- Machine vessel for both components must be moisture tight, e.g. by installation of a silicagel filter.
- The material contains glass fibres with abrasive properties on the machine. Please contact your machine equipment manufacturer for further information and recommendation.
- Recommended release agents are Sika® Liquid Wax-852 or Sika® Liquid Spray-872. For more information, see Product Data Sheets of the release agents.
- Pay attention to dry conditions and dry mould surfaces (moisture content of wood < 7 %) while processing.
- Increased mould temperatures are decreasing the demoulding time.
- Further post curing of the demoulded part can improve the final mechanical properties (recommendation for post curing: 4 h / 80 °C; take slightly increased shrinkage values into account).
- When a mould temperature of 60 °C is used, a thermal post curing of the parts is not necessary.
- Depending on the geometry and weight of the part, it is recommended to use a conformer while post curing.
- Before overpainting, the parts have to be grinded or sandblasted. A polyurethane paint is recommended.

STORAGE CONDITIONS

Shelf life	■ Polyol (A), **SikaBiresin® RG51 Fibre** ■ Isocyanate (B), **SikaBiresin® RG530**	12 months 12 months
Storage temperature	■ Polyol (A), **SikaBiresin® RG51 Fibre** ■ Isocyanate (B), **SikaBiresin® RG530**	18 – 25 °C 18 – 25 °C
Crystallization	■ After prolonged storage at low temperature, crystallization of B component may occur. ■ This is easily removed by warming up for a sufficient time to a maximum of 70 °C. ■ Allow to cool to requested processing 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 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/Guardaagulles, 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.
Shinagawa Intercity Tower B. 10th FL.
2-15-2 Konan Minato-ku
Tokyo 108-6110 - JAPAN
E-Mail: advanced-resins@jp.sika.com
Website: www.sikaadvancedresins.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