

## PRODUCT DATA SHEET

# SikaBiresin® RG631 (RIM 631)

## LOW PRESSURE RIM SYSTEM – SIMULATION OF RUBBER AND SOFT PVC

### APPLICATIONS

- Manufacture of rubber like, flexible prototype parts
- Manufacture of sealings, bellows and other rubber like mouldings
- Manufacture of thin walled mouldings with complex structure

### MAIN PROPERTIES

- Simulation of rubber and soft PVC
- Fast curing with good flowability
- Short demoulding time
- Very flexible

### DESCRIPTION

Basis	Two component polyurethane system
Component A	<b>SikaBiresin® RG631</b> , polyol, black
Component B	<b>SikaBiresin® RG631</b> , MDI-based isocyanate, amber

### PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)
Components		<b>SikaBiresin® RG631</b>	<b>SikaBiresin® RG631</b>
Viscosity, 25 °C	mPa.s	~ 900 – 1,500	~ 2,000 – 2,600
Density, 25 °C	g/cm <sup>3</sup>	~ 1.01 – 1.05	~ 1.10 – 1.14
Mixing ratio A:B	in parts by weight	100	100
Mixing ratio A:B, 25 °C	in parts by volume	100	92
		Mixture	
Colour		black	
Viscosity, 25 °C	mPa.s	~ 1,300 – 1,900	
Pot life, 25 °C, 100 g	s	~ 50 – 70	
Demoulding time, 30 °C	min	~ 15 – 20	
Maximal casting thickness	mm	10	

## MECHANICAL PROPERTIES

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

Density, 23 °C	ISO 2781	g/cm <sup>3</sup>	~ 1.05 – 1.09
Shore hardness	ISO 868	-	A 73*
Flexural modulus	ISO 178	MPa	not measurable
Tensile strength	ISO 527	MPa	7*
Tear strength	ISO 34	kN/m	30*
Elongation at break	ISO 527	%	300*
Linear shrinkage on parts at 23 °C: - thickness 2 to 3 mm - thickness 4 to 5 mm	Internal test	mm/m	5 – 6* 8 – 9*

## THERMAL AND SPECIFIC PROPERTIES

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

Using temperature		°C	-40 – 70*
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\* values after postcuring:  
4 h / 80 °C

## PACKAGING UNITS

- |   |       |
|---|-------|
| ■ Polyol (A), <b>SikaBiresin® RG631</b>     | 21 kg |
| ■ Isocyanate (B), <b>SikaBiresin® RG631</b> | 21 kg |

## PROCESSING DATA

- The material and processing temperature should be at least 18 – 25 °C, mould temperature at least 40 – 60 °C.
- 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.
- 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.
- Before overpainting, the parts have to be grinded or sandblasted. A polyurethane paint is recommended.

## STORAGE CONDITIONS

Shelf life	<ul style="list-style-type: none"><li>■ Polyol (A), <b>SikaBiresin® RG631</b> 12 months</li><li>■ Isocyanate (B), <b>SikaBiresin® RG631</b> 12 months</li></ul>
Storage temperature	<ul style="list-style-type: none"><li>■ Polyol (A), <b>SikaBiresin® RG631</b> 15 – 25 °C</li><li>■ Isocyanate (B), <b>SikaBiresin® RG631</b> 15 – 25 °C</li></ul>
Crystallization	<ul style="list-style-type: none"><li>■ After prolonged storage at low temperature, crystallization of B component may occur.</li><li>■ This is easily removed by warming up for a sufficient time to a maximum of 40 °C.</li><li>■ Allow to cool to requested processing 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>

### 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](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'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](mailto:advanced.resins@fr.sika.com)  
Website: [www.sikaadvancedresins.fr](http://www.sikaadvancedresins.fr)

**AXSON TECHNOLOGIES SPAIN, S.L.**  
Ramon Turro 100,1°  
08005 Barcelona - SPAIN  
Phone: +34 93 225 16 20  
Fax: +34 93 225 03 05  
E-Mail: [spain@axson.com](mailto:spain@axson.com)  
Website: [www.sikaadvancedresins.es](http://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](mailto:axson@axson.it)  
Website: [www.sikaadvancedresins.it](http://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](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 37 6422 526  
Fax: +421 376 42 25 27  
E-Mail: [axson.sk@axson.com](mailto:axson.sk@axson.com)  
Website: [www.sikaadvancedresins.sk](http://www.sikaadvancedresins.sk)

**SIKA ADVANCED RESINS US**  
31200 Stephenson Hwy, Madison Heights,  
MI 48071 - USA  
Phone: +1 248 588 2270  
Fax: +1 248 588 5909  
E-Mail: [axsonmh@axson.com](mailto:axsonmh@axson.com)  
Website: [www.sikaadvancedresins.us](http://www.sikaadvancedresins.us)

**SIKA AUTOMOTIVE EATON RAPIDS, INC.**  
1611 Hults Drive MI 48827 Eaton Rapids - USA  
Phone: +1 517 663 81 91  
Fax: +1 517 663 05 23  
E-Mail: [axsonmh@axson.com](mailto:axsonmh@axson.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  
Fax: +52 55 5264 49 16  
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)

**AXSON JAPAN KK**  
2-5-12 Onishi Okazaki Aichi  
444-0871 - JAPAN  
Phone: +81 564 26 2591  
Fax: +81 564 26 2593  
E-Mail: [sales.japan@axson.com](mailto:sales.japan@axson.com)  
Website: [www.sikaadvancedresins.jp](http://www.sikaadvancedresins.jp)

**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](mailto:info.india@axson.com)  
Website: [www.sikaadvancedresins.in](http://www.sikaadvancedresins.in)