PRODUCT DATA SHEET

SikaBiresin® RG53 FIBRE (Biresin® RG53 Fibre)

LOW PRESSURE RIM SYSTEM FILLED WITH GLASS FIBRES - SIMULATION OF ABS

APPLICATIONS

- Manufacture of housings and coverings
- Manufacture of very impact resistant technical parts
- Manufacture of thin walled mouldings with complex structure

MAIN PROPERTIES

- Simulation of ABS with good impact resistance
- Fast curing with good flowability
- Short demoulding time
- Cured parts can be machined
- Low thermal expansion due to short glass fibre content

DESCRIPTION

Basis	Two component polyurethane system
Component A	**SikaBiresin® RG53 Fibre**, polyol, filled, black
Component B	**SikaBiresin® RG500,** MDI-based isocyanate, brown

PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)
Components		**SikaBiresin® RG53 Fibre**	**SikaBiresin® RG500**
Viscosity, 25 °C	mPa.s	~ 6,000	~ 110
Density	g/cm³	1.2	1.23
Mixing ratio A:B	in parts by weight	100	60
		Mixture	
Colour		black	
Pot life, room temperature	s	~ 50	
Demoulding time, room temperature	min	> 10	
Curing time, room temperature	d	~ 3 – 5	

MECHANICAL PROPERTIES

approx. values

Shore hardness	ISO 868	-	D 81
Flexural modulus	ISO 178	MPa	1,730
Flexural strength	ISO 178	MPa	55
Tensile strength	ISO 527	MPa	35
Elongation at break	ISO 527	%	11
Impact resistance	ISO 179	kJ/m²	48

THERMAL AND SPECIFIC PROPERTIES

approx. values

Heat deflection temperature	ISO 75B	°C	63 / 125*

* values after post curing:
4 h / 80 °C + 2 h / 120 °C

PACKAGING UNITS

■ Polyol (A), **SikaBiresin® RG53 Fibre**	20 kg
■ Isocyanate (B), **SikaBiresin® RG500**	5 kg / 20 kg / 250 kg

PROCESSING DATA

- The material and processing temperature should be at least 18 – 25 °C, mould temperature at least 20 °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.
- 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.
- 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® RG53 Fibre** ■ Isocyanate (B), **SikaBiresin® RG500**	6 months 12 months
Storage temperature	■ Polyol (A), **SikaBiresin® RG53 Fibre** ■ Isocyanate (B), **SikaBiresin® RG500**	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

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