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	**SikaBiresin® RG631**, polyol, black
Component B	**SikaBiresin® RG631,** MDI-based isocyanate, amber

PHYSICAL PROPERTIES

		Polyol (A)	Isocyanate (B)
Components		**SikaBiresin® RG631**	**SikaBiresin® RG631**
Viscosity, 25 °C	mPa.s	~ 900 – 1,500	~ 2,000 – 2,600
Density, 25 °C	g/cm³	~ 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/cm³	~ 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*

* values after postcuring:
4 h / 80 °C

PACKAGING UNITS

- Polyol (A), **SikaBiresin® RG631** 21 kg
- Isocyanate (B), **SikaBiresin® RG631** 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	■ Polyol (A), **SikaBiresin® RG631** ■ Isocyanate (B), **SikaBiresin® RG631**	12 months 12 months
Storage temperature	■ Polyol (A), **SikaBiresin® RG631** ■ Isocyanate (B), **SikaBiresin® RG631**	15 – 25 °C 15 – 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 40 °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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