

Biresin® RG51 HS

Low pressure RIM-system, high impact resistant

Areas of Application

- Manufacture of shock-resistant mouldings

Product Benefits

- Simulation of PE / PP with very high impact resistance
- Fast curing with good flowability
- Short demoulding time
- Very abrasion resistant surface

Description

- Basis Two-component-PUR-system
- Resin **Biresin® RG51 HS**, polyol, yellowish-translucent and black, unfilled
- Hardener **Biresin® G53**, MDI-based isocyanate, amber, unfilled

Processing Data		Resin	Hardener
Individual components		Biresin® RG51 HS	Biresin® G53
Viscosity, 25°C	mPas	approx. 1,300	approx. 175
Density	g/cm³	1.05	1.23
Mixing ratio resin to hardener	in parts by weight	100	50
Mixing ratio resin to hardener	in parts by volume	100	43
		Mixture	
Potlife, RT	s	60	
Demoulding time, plastic mould, RT	min	10 - 20	
Curing time, RT	d	approx. 3	

Physical Data (approx.-values)

Biresin® RG51 HS resin			with hardener	Biresin® G53
Density	ISO 1183	g/cm³		1.15
Shore hardness	ISO 868	-		D 65
E-Modulus	ISO 178	MPa		450
Flexural strength	ISO 178	MPa		20
Tensile strength	ISO 527	MPa		25
Elongation at break	ISO 527	%		150
Tear resistance	ISO 34	N/mm		120
Notched bar impact resistance	ISO 179	kJ/m²		75
Heat distortion temperature	ISO 75 B	°C		65
Abrasion resistance	ISO 4649 A	mm³		160

Packaging

Individual components	Biresin® RG51 HS resin translucent	20 kg net
	Biresin® RG51 HS resin black	200 kg; 20 kg net
	Biresin® G53 hardener	200 kg; 20 kg; 10 kg net

Processing

- The resin component must be stirred thoroughly before use.
- The resin component must be preheated up to at least 30°C. The mould temperature should be at least 30°C. This is necessary to avoid a brittleness phase at short demoulding times.
- For processing a two-component dosage mixing machine is necessary which conforms to reactivity of resin and volume of casting parts. A static-dynamic mixing unit is recommended.
- Machine vessel for resin component (part A - polyol) must have a mixing unit and heating.
- Machine vessel for hardener component (Part B - isocyanate must be moisture tight, e. g. by installation of a silicagel filter.
- Prior to casting, ensure moulds are thoroughly released. If the application of silicone free release agents is necessary, Sika® Trennmittel 810 and 815 Quick or Sika® Trennwachs 818 (for more information see Technical Data Sheet) are recommended.
- Improved thermal stability of the demoulded mouldings can be obtained by thermal post curing (e. g. 4 h / 80°C, take slightly increased shrinkage values into account).
- For heavy parts and parts with complicated geometry a support while post curing is recommended.

Storage

- Minimum shelf life is 12 month under room conditions (18 - 25°C), when stored in original un-opened containers.
- After prolonged storage at low temperature, crystallisation of components may occur. This is easily removed by warming up for a sufficient time to a maximum of 70°C. Allow to cool to room temperature before use.
- Containers must be closed tightly immediately after use to prevent moisture ingress. The residual material needs to be used up as soon as possible.

Health and Safety Information

For information and advice regarding transportation, handling, storage and disposal of chemical products, users should refer to the actual Material Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

Disposal considerations

Product Recommendations: Must be disposed of in a special waste disposal unit in accordance with the corresponding regulations.

Packaging Recommendations: Completely emptied packagings can be given for recycling. Packaging that cannot be cleaned should be disposed of as product waste.

Value Bases

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Legal Notice

The information, and, in particular, the recommendations relating to the application and end-use 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.



SCABRO
Ideeën Krijgen Vorm

Distributeur voor Nederland, België en Luxemburg: Scabro Composites

Vliegveld Valkenburg Wassenaarseweg 75-3265 NL - 2223 LA Katwijk The Netherlands
Tel: +31 (0) 71 4017246 Fax: +31 (0) 84 7402572 Email: info@scabro.com www.scabro.com