

Biresin® RG53 EL

Low pressure RIM-system, impact resistant

Areas of Application

- Manufacture of housings and coverings
- Manufacture of very impact resistant technical parts
- Manufacture of thinwalled mouldings with complexe structure

Product Benefits

- Simulation of ABS with good impact resistance
- Fast curing with good flowability
- Short demoulding time
- Cured parts can be machined

Description

- Basis Two-component-PUR-system
- Resin **Biresin® RG53 EL**, polyol, black, unfilled
- Hardener **Biresin® U5**, MDI-based isocyanate, brown, unfilled

Processing Data		Resin	Hardener
Individual components		Biresin® RG53 EL	Biresin® U5
Viscosity, 25°C	mPas	approx. 2,000	approx. 110
Density	g/cm³	1.03	1.23
Mixing ratio resin to hardener	in parts by weight	100	70
		Mixture	
Potlife, RT	s	approx. 60	
Demoulding time, RT	min	5 - 10	
Curing time, RT	d	approx. 1	

Physical Data (approx.-values)

Biresin® RG53 EL resin			with hardener	Biresin® U5
Density	ISO 1183	g/cm³		1.2
Shore hardness	ISO 868	-		D 77
E-Modulus	ISO 178	MPa		1,100
Flexural strength	ISO 178	MPa		45
Tensile strength	ISO 527	MPa		30
Elongation at break	ISO 527	%		35
Impact resistance	ISO 179	kJ/m²		80
Heat distortion temperature	ISO 75B	°C		66 / 100*

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

Packaging

Individual components	Biresin® RG53 EL resin	200 kg; 20 kg net
	Biresin® U5 hardener	250 kg; 17 kg; 4.25 kg net

Processing

- The material and processing temperature must be 18 - 25°C, mould temperature at least 20°C.
- Before use the resin component must be stirred thoroughly.
- For processing a two-component dosage mixing machine is necessary which conforms to reactivity of resin and volume of casting parts.
- 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. 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 post-curing.

Storage

- Minimum shelf life is 12 month under room condition (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

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