

Biresin® CR144

Composite resin system for heat curing

Areas of Application

- In particular for pultrusion and filament winding processing
- Specially for applications when low reactivity and a long potlife are required

Product Benefits

- Fast infiltration of dry fibres due to low mixed viscosity and an elevated processing temperature
- Adjustment of the potlife via the accelerator component
- High elongation at break
- High glass transition temperature (155°C)

Description

- Basis Three-component-epoxy-system
- Resin (A) **Biresin® CR144**, epoxy resin, translucent
- Hardener (B) **Biresin® CH141**, carboxylic acid anhydride, transparent
- Accelerator (C) **Biresin® CA144**, amine, amber

Physical Data		Resin (A)	Hardener (B)	Accelerator (C)
Individual Components		Biresin® CR144	Biresin® CH141	Biresin® CA144
Viscosity, 25°C	mPas	12.000	< 10	40
Density, 25°C	g/ml	1.16	1.20	1.03
Mixing ratio	in parts by weight	100	90	1-4
		Mixture		
Potlife, 100 g / RT, approx. values	h	> 24		
Mixed viscosity, 25°C, approx. values	mPas	800		

Mechanical Data, neat resin specimen

approx. values after 3 h / 80°C + 8 h / 140°C (source: Sika internal)

Biresin® CR144 resin (A)		with Biresin® CH141 hardener (B) and Biresin® CA144 accelerator (C)	
Density	ISO 1183	g/cm³	1,20
Shore hardness	ISO 868	-	D 87
Flexural E-Modulus	ISO 178	MPa	3.000
Tensile E-Modulus	ISO 527	MPa	2.900
Flexural strength	ISO 178	MPa	144
Compressive strength	ISO 604	MPa	126
Tensile strength	ISO 527	MPa	98
Elongation at break	ISO 527	%	6,4
Impact resistance	ISO 179	kJ/m²	15

Processing

- Before demoulding an appropriate precuring is necessary.
- To clean brushes or tools immediately Sika Reinigungsmittel 5 is recommended.



Thermal data of neat resin specimen at different post curing conditions

Biresin® CR144 resin (A) with Biresin® CH141 hardener (B) and Biresin® CA144 accelerator (C)		
Heat distortion temperature	ISO 75B °C	147*
	ISO 75C °C	130*
Glass transition temperature	ISO 11357 °C	155*

* values after post curing: 3 h / 80°C + 8 h / 140°C

Packaging

Individual components	Biresin® CR144 resin (A)	200 kg; 10 kg net
	Biresin® CH141 hardener (B)	1,100 kg; 220 kg; 9 kg net
	Biresin® CA144 accelerator (C)	0.2 kg net

Storage

- Minimum shelf life of Biresin® CR144 resin (A) is 24 month and of Biresin® CH141 hardener (B) and CA144 accelerator (C) is 12 month under room conditions (18 - 25°C), when stored in original unopened containers.
- After prolonged storage at low temperature, crystallisation of resin may occur. This is easily removed by warming up for a sufficient time to a maximum of 60-80°C.
- Containers must be closed tightly immediately after use. The residual material needs to be used up as soon as possible.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safetyrelated 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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