

Biresin® CR135

Composite resin system

Areas of Application

- For RTM processing especially at 50°C

Product Benefits

- Because of low mixed viscosity fast infiltration of dry fabrics and nonwovens
- Glass transition temperatures up to 150°C dependent on curing conditions

Description

- Basis Two-component-epoxy-system
- Resin (A) **Biresin® CR135**, epoxy resin, amber
- Hardener (B) **Biresin® CH135-4**, amine, colourless-transparent

Physical Data		Resin (A)	Hardener (B)
Individual Components		Biresin® CR135	Biresin® CH135-4
Viscosity, 25°C	mPas	5,750	< 10
Density, 25°C	g/ml	1.17	0.92
Mixing ratio	in pbw	100	24
		Mixture	
Potlife, 100 g / RT, approx. values	min	160	
Mixed viscosity, 25°C, approx. values	mPas	940	

Mechanical Data, neat resin specimen: approx. values

Biresin® CR135 resin (A) with hardener (B)			Biresin® CH135-4	
Curing conditions time / temperature			4 h / 90°C	4 h / 140°C
Density	ISO 1183	g/cm³	1.15	1.14
Shore hardness	ISO 868	-	D 86	D 87
Flexural E-Modulus	ISO 178	MPa	3,250	2,900
Tensile E-Modulus	ISO 527	MPa	3,200	2,850
Flexural strength	ISO 178	MPa	144	134
Compressive strength	ISO 604	MPa	129	129
Tensile strength	ISO 527	MPa	99	72
Elongation at max. tensile strength	ISO 527	%	5,2	3,3
Impact resistance	ISO 179	kJ/m²	26,5	26,9

Thermal Data, neat resin specimen: approx. values

Biresin® CR135 resin (A) with hardener (B)			Biresin® CH135-4	
Curing conditions time / temperature			4 h / 90°C	4 h / 140°C
Heat distortion temperature	ISO 75B	°C	114	150
	ISO 75C	°C	105	133
Glass transition temperature	DIN 53 765	°C	112	152

Processing

- The material and processing temperatures should be at least 18°C.
- Before demoulding precuring of at least 3 h at 60°C is recommended.
- To obtain mechanical and thermal values post curing of 4 h at 90°C (heating rate 10 grd/h) is necessary. The post curing cycle can be adapted as necessary to fit the process requirements.
- To clean brushes or tools immediately Sika Reinigungsmittel 5 is recommended.
- Additional informations are available in "Processing Instructions for Composite Resins".

Packaging

Individual components	Biresin® CR135 resin (A)	1,000 kg; 10 kg net
	Biresin® CH135-4 hardener (B)	850 kg; 180 kg; 26 kg; 3 kg net

Storage

- Minimum shelf life of Biresin® CR135 resin (A) is 24 month and of Biresin® CH135-4 hardener (B) 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 60 to 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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