

Biresin® CR174

Composite resin system

Areas of Application

- For injection, infusion and wet-lay-up processing

Product Benefits

- Because of low mixed viscosity at processing temperature fast infiltration of dry fabrics and nonwovens
- Glass transition temperatures up to 175°C dependent on curing conditions

Description

- Basis Two-component-epoxy-system
- Resin **Biresin® CR174**, epoxy resin, amber
- Hardener **Biresin® CH174**, amine, colourless to yellow

Physical Data		Resin	Hardener
Individual Components		Biresin® CR174	Biresin® CH174
Viscosity, 25°C	mPas	3,800	< 50
Density, 25°C	g/ml	1.14	0.98
Mixing ratio	in pbw	100	40
		Mixture	
Potlife, 100 g / 25°C, approx. values	min	240	
Mixed viscosity, 25°C, approx. values	mPas	700 - 1,000	

Mechanical Data, neat resin specimen: approx. values after 12 h / 70°C			
Biresin® CR174 resin with hardener			Biresin® CH174
Flexural E-Modulus	ISO 178	MPa	3,050
Tensile E-Modulus	ISO 527	MPa	3,000
Flexural strength	ISO 178	MPa	129
Tensile strength	ISO 527	MPa	90
Elongation at maximum tensile strength	ISO 527	%	6.0

Mechanical Data, neat resin specimen: approx. values after 8 h / 150°C			
Biresin® CR174 resin with hardener			Biresin® CH174
Flexural E-Modulus	ISO 178	MPa	2,950
Tensile E-Modulus	ISO 527	MPa	2,900
Flexural strength	ISO 178	MPa	90
Tensile strength	ISO 527	MPa	63
Elongation at maximum tensile strength	ISO 527	%	2.9

Packaging

Individual components

Biresin® CR174 resin
Biresin® CH174 hardeneron request
on request

Thermal Data of neat resin specimen at different post curing conditions				
Biresin® CR174 resin		with hardener		Biresin® CH174
Post curing conditions				
Heat distortion temperature	12 h / 70°C	ISO 75A	°C	94
	12 h / 70°C	ISO 75B	°C	96
	8 h / 150°C	ISO 75A	°C	166
	8 h / 150°C	ISO 75B	°C	170
Glass transition temperatur		ISO 11357		°C 174

Processing

- The material and processing temperatures should be 18 - 30°C.
- Before demoulding precuring of at least 3 h at 60°C is recommended.
- To clean brushes or tools immediately Sika Reinigungsmittel 5 is recommended.
- Additional informations are available in "Processing Instructions for Composite Resins".

Storage

- Minimum shelf life of Biresin® CR174 resin is 24 month and of Biresin® CH174 hardener 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 50 - 60°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 and storage of products, users should refer to the current Safety Data Sheet 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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