

# Biresin® CR144 with Biresin® CH125-1 hardener Composite resin system

## Areas of Application

- For injection processing

## Product Benefits

- Short cycle times for RTM processing
- Glass transition temperatures up to 115°C dependent on curing conditions

## Description

- Basis Two-component-epoxy-system
- Resin (A) Biresin® CR144, epoxy resin
- Hardener (B) Biresin® CH125-1, amine

Physical Data		Resin (A)	Hardener (B)
Individual Components		Biresin® CR144	Biresin® CH125-1
Mixing ratio	in parts by weight	100	24
Mixing ratio	in parts by volume	100	28
Colour		translucent	colourless to yellowish
Viscosity, 25°C	mPa.s	~12,000	~20
Density, 25°C	g/cm³	~1.14	~1,02
		<b>Mixture</b>	
Potlife, 100 g / RT, approx. values	min	24	
Mixed viscosity, RT, approx. values	mPa.s	1,250	

## Mechanical Data of neat resin specimen

Biresin® CR144 resin (A)		with hardener (B)	Biresin® CH125-1	
Curing conditions		time/temperature	9 min / 110°C	2 h / 120°C
Tensile strength	ISO 527	MPa	75	75
Tensile E-Modulus	ISO 527	MPa	2,400	2,400
Elongation at break	ISO 527	%	8	8
Flexural strength	ISO 178	MPa	100	100
Flexural E-Modulus	ISO 178	MPa	2,500	2,500
Shore hardness	ISO 868	-	D 85	D 84
Impact resistance	ISO 179	kJ/m²	85	90

## Processing

- The mixing ratio must be followed accurately to obtain best results. Deviating from the correct mixing ratio will lead to lower performance.
- The injection temperature of the resin system shall be between 45°C-80°C.
- The mould temperature shall be 60°C-100°C for an isothermal process. For variothermal processing, mould temperature can be between 60°C-140°C.
- The final mechanical and thermal values are dependent on the applied postcuring cycles.
- To clean brushes or tools immediately Sika Reinigungsmittel 5 is recommended.
- Additional information are available in "Processing Instructions for Composite Resins".

## Packaging (net weight, kg)

Biresin® CR144 resin (A)	1,000	200	10
Biresin® CH125-1 hardener (B)		180	3

Thermal Data of neat resin specimen				
Biresin® CR144 resin (A)		with hardener (B)	Biresin® CH125-1	
Curing conditions		time / temperature	9 min / 110°C	2 h / 120°C
Heat distortion temperature	ISO 75B	°C	110	115
	ISO 75C	°C	85	100
Glass transition temperature	ISO 11357	°C	110	115

### Storage

- Minimum shelf life of Biresin® CR144 resin (A) is 24 month and of Biresin® CH125-1 hardener (B) is 12 month under room conditions (18 - 25°C), when stored in original unopened containers.
- After prolonged storage crystallisation of resin may occur. This is easily removed by warming up for a sufficient time to at least 60°C.
- 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 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 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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