

Biresin® CR131 with Biresin® CH135-8 hardener Composite resin system

Product Description

Biresin® CR131 (A) with hardener (B) CH135-8 can be used in many areas including composite mouldmaking and in general industrial composites.

Application Areas

Biresin® CR131 (A) with hardener (B) CH135-8 is an epoxy resin system designed for infusion and injection processes, especially for applications where a higher thermal resistance is needed.

Features / Advantages

- Biresin® CR131 (A) with hardener CH135-8 (B) has an optimized viscosity designed for good impregnation and fibre wetting properties.
- The system can be used for fast injection and infusion
- Glass transition temperatures up to 140°C can be achieved depending on curing conditions

Physical Data		Resin (A)	Hardener (B)
Individual Components		Biresin® CR131	Biresin® CH135-8
Mixing ratio, parts by	Weight	100	21
Mixing ratio, parts by	Volume	100	26
Viscosity, 25°C	mPa.s	~2,000	~10
Density, 25°C	g/ml	1.16	0.94
Colour		translucent	colourless - transparent
		Mixture	
Potlife, 100 g / RT, approx. values	min	260	
Mixed viscosity, 25°C, approx. values	mPa.s	360	

Processing

- The material and processing temperatures should be in the range 18 - 35°C.
- The mixing ratio must be followed accurately to obtain best results. Deviating from the correct mix ratio will lead to lower performance.
- The final mechanical and thermal values are dependent on the applied postcuring cycles.
- It is recommended to clean brushes or tools immediately after use with Sika Reinigungsmittel 5.
- Additional information is available in "Processing Instructions for Composite Resins".

Mechanical Data, neat resin specimen: approx. values			
Biresin® CR131 resin (A)	with hardener (B)		Biresin® CH135-8
Curing conditions			8 h / 140°C
Tensile strength	ISO 527	MPa	89
Tensile E-Modulus	ISO 527	MPa	2,750
Elongation at max. tensile strength	ISO 527	%	6.3
Flexural strength	ISO 178	MPa	129
Flexural E-Modulus	ISO 178	MPa	2,850
Compressive strength	ISO 604	MPa	120
Density	ISO 1183	g/cm ³	1.17
Shore hardness	ISO 868	-	D 86
Impact resistance	ISO 179	kJ/m ²	29

Postcuring

The suitable cure cycle and the attainable mechanical and thermal values depend on various factors, such as laminate thickness, fibre volume, reactivity of the resin system etc.

An appropriate cure cycle could look as follows:

- Heat-up rate of ca. 0.2°C/Minute until approx. 10°C below the required glass transition temperature (T_g)
- Followed by a dwell at that temperature of between 2 and 12 hours.
- Part(s) should then be cooled at ~0.5°C per minute

The specific postcure should be adapted to the required technical and economic requirements.

To measure the mechanical performance of the resin system a SikaAxson standard cycle is used to ensure that the full T_g potential of the system in question is reached.

Thermal Data, neat resin specimen: approx. values

Biresin® CR131 resin (A)	with hardener (B)		Biresin® CH135-8
Curing conditions			8 h / 140°C
Heat distortion temperature	ISO 75B	°C	138
	ISO 75C	°C	115
Glass transition temperature	ISO 11357	°C	138

Packaging (net weight, kg)

Biresin® CR131 resin (A)	1,000	200	10
Biresin® CH135-8 hardener (B)	850	180	2.1

Storage

- Minimum shelf life of Biresin® CR131 resin (A) is 24 months and of hardener (B) Biresin® CH135-8 is 12 months under room conditions (18 - 25°C), when stored in original unopened containers.
- After prolonged storage at low temperature, crystallisation of resin (A) may occur. This is easily removed by warming up for a sufficient time to a minimum of 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, 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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