Tooling & Composites

Product Data Sheet
Version 10 / 2013

Biresin® CR170
Composite resin system

Areas of Application
- For RTM processing at 60°C
- Specially for applications at higher processing temperature

Product Benefits
- Hardener for processing at increased temperature
- Mixing ratio of 100 : 16
- Because of low mixed viscosity at processing temperature (60°C) fast infiltration of dry fabrics and nonwovens
- Glass transition temperatures up to 170°C dependent on curing conditions

Description
- Basis: Two-component-epoxy-system
- Resin (A): **Biresin® CR170**, epoxy resin, colourless to yellowish
- Hardener (B): **Biresin® CH170-3**, amine, water clear to brownish

Physical Data		Resin (A)	Hardener (B)
Individual Components		**Biresin® CR170**	**Biresin® CH170-3**
Viscosity, 25°C	mPas	13,000	30
Density, 25°C	g/ml	1.14	0.96
Mixing ratio	in pbw	100	16
		Mixture	
Potlife, 250 g / RT	min	90	
Mixed viscosity, 25°C, approx. values	mPas	1.250	

Mechanical Data, neat resin specimen: approx. values after 3 h / 60 and 4 h / 160°C			
Biresin® CR170 resin (A)		with hardener (B)	**Biresin® CH170-3**
Density	ISO 1183	g/cm³	1.17
Shore hardness	ISO 868	-	D 86
Flexural E-Modulus	ISO 178	MPa	2,750
Flexural strength	ISO 178	MPa	128
Compressive strength	ISO 604	MPa	135
Tensile strength	ISO 527	MPa	69
Impact resistance	ISO 179	kJ/m²	28

Thermal Data, neat resin specimen: approx. values after 3 h / 60 and 4 h / 160°C			
Biresin® CR170 resin (A)		with hardener (B)	**Biresin® CH170-3**
Glass transition temperature	ISO 11357	°C	172

Processing

- The material and processing temperatures should be at least 40°C.
- Before demoulding precuring of at least 3 h at 60°C is recommended.
- To obtain mechanical and thermical values post curing of 4 h at 160°C (heating rate 10 grd/h) is necessary.
- 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® CR170** resin (A)	200 kg; 30 kg; 10 kg net
	Biresin® CH170-3 hardener (B)	180 kg; 16 kg; 1.6 kg net

Storage

- Minimum shelf life of Biresin® CR170 resin (A) is 24 month and of Biresin® CH170-3 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 a maximum of 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

Further information available at:

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