

Biresin® CR84 with Biresin® CH120-6 hardener

Composite resin system

Areas of Application

- In particular for filament winding processing
- Specially for applications when higher temperature resistance is required

Product Benefits

- Approved by Germanischer Lloyd for the production of components
- Good impregnation and good non draining properties due to an optimized mixed viscosity
- Low exothermal reaction temperature due to long potlife

Description

- Basis Two-component-epoxy-system
- Resin (A) **Biresin® CR84**, epoxy resin, translucent
- Hardener (B) **Biresin® CH120-6**, amine, colourless to yellowish

Physical Data		Resin (A)	Hardener (B)
Individual Components		Biresin® CR84	Biresin® CH120-6
Viscosity, 25°C	mPas	4,450	35
Density, 25°C	g/ml	1.15	0.93
Mixing ratio	in parts by weight	100	28
		Mixture	
Potlife, 100 g / RT, approx. values	h	5	
Mixed viscosity, 25°C, approx. values	mPas	850	

Mechanical Data, neat resin specimen			
approx. values after 8 h / 80°C (source: Sika internal)			
Biresin® CR84 resin (A)			with Biresin® CH120-6 hardener (B)
Density	ISO 1183	g/cm³	1.14
Shore hardness	ISO 868	-	D 86
Flexural E-Modulus	ISO 178	MPa	3.200
Tensile E-Modulus	ISO 527	MPa	3.200
Flexural strength	ISO 178	MPa	132
Compressive strength	ISO 604	MPa	116
Tensile strength	ISO 527	MPa	85
Elongation at break	ISO 527	%	4.2
Impact resistance	ISO 179	kJ/m²	32

Processing

- The material and processing temperatures should be from 18 to 35°C.
- Before demoulding precuring of at least 2 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".



Thermal data of neat resin specimen			
Biresin® CR84 resin (A)		with Biresin® CH120-6 hardener (B)	
Heat distortion temperature	ISO 75A	°C	98*
	ISO 75B	°C	101*
	ISO 75C	°C	90*
Glass transition temperature	ISO 11357	°C	104*

* values after post curing: 8 h / 80°C

Packaging

Individual components	Biresin® CR84 resin (A)	1000 kg; 200 kg; 10 kg net
	Biresin® CH120-6 hardener (B)	900 kg; 20 kg; 3 kg net

Storage

- Minimum shelf life of Biresin® CR84 resin (A) is 24 month and of Biresin® CH120-6 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 60-80°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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Statement of Approval



Approval No. **WP 1420018 HH**

The material described below complies with the applicable requirements as given in the Rules and Regulations of Germanischer Lloyd. On this basis the material is

approved as **Laminating Resin**

for the construction of components provided that the recommendations for use as specified by the producer are observed.

Type	Biresin CR84
Description	Two Component Epoxy Resin System
Producer	SIKA Deutschland GmbH Stuttgarter Str. 139 72574 Bad Urach Germany
Normative Reference	Rules for Classification and Construction, II - Material and Welding Technology Part 2 Non-Metallic Materials

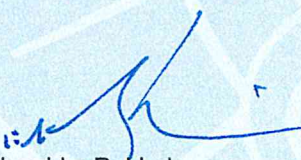
This document consists of this page and a one-page annex which is integral part of the approval.

This Statement of Approval is valid until 2018-06-21.

Hamburg, 2014-03-19

Germanischer Lloyd


Guido Michalek


Joachim Renbein

Statement of Approval



ANNEX

Approval No. WP 1420018 HH

Date: 2014-03-19

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Reference Documents	Technical specifications deposited at Germanischer Lloyd Head Office.
Assessed Documents	- Technical Data Sheet - Test Report issued by IFB Stuttgart, dated on 2010-03-04 - Test Report No. 90981/10 issued by SKZ Wuerzburg, dated on 2010-03-08
Fields of Application	Construction of FRP laminates of components, on condition that the fibre reinforcements comply with the applicable requirements of the Germanischer Lloyd and are compatible to the resin.
Approved Variants	Epoxy Resin Biresin CR84 with following hardener: - Biresin CH84-20 - Biresin CH120-6
Limitations	Any significant changes in design and/or quality of the material will render the approval invalid.
Remarks	This certificate supersedes the approval WP 1020030 HH.
End of Annex	

Germanischer Lloyd

