BUILDING TRUST

PRODUCT DATA SHEET

SikaBiresin® CR910

Fast 2-component epoxy resin system for structural laminate repairs

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties		SikaBiresin® CR910	SikaBiresin® CH910-1 (B)	SikaBiresin® CH910-5 (B)
Chemical base		Epoxy	Amine	Amine
Color		translucent	amber	amber
	mixed	Colorless to amber		
Density		1.17 g/cm³ [A]	0.98 g/cm³ [A]	0.94 g/cm³ [A]
	cured		1.18 g/cm³ [A]	1.17 g/cm³ [A]
Mixing ratio	by weight		100 : 20	100 : 20
Viscosity (CQP029-4)		2300 mPa·s [A, C]	50 mPa·s [B, C]	12 mPa·s [B, C]
	mixed		800 mPa·s [B, C]	580 mPa·s [B, C]
Application temperature			5 – 35 °C	5 – 35 °C
Pot-life (CQP536-3)			45 minutes	160 minutes
Curing conditions	2 hours		80 °C	80 °C
Tensile strength (CQP036-2 / ISO 527)			80 MPa [A, D]	85 MPa [A, D]
Tensile modulus (CQP036-2 / ISO 527)			3200 MPa [A, D]	3300 MPa [A, D]
Tensile elongation (CQP036-2 / ISO 527)			5 % [A, D]	5 % [A, D]
Flexural strength (CQP027-2 / ISO 178)			130 MPa [A, D]	130 MPa [A, D]
Flexural modulus (CQP027-2 / ISO 178)			3400 MPa [A, D]	3400 MPa [A, D]
Compressive strength (CQP028-5 / ISO 604)			110 MPa [A, D]	115 MPa [A, D]
Shore D hardness (CQP023-1 / ISO 868)			85 [A, D]	85 [A, D]
Glass transition temperature (CQP301-5 / ISO 11357)			95 °C [D]	95 °C [D]
Shelf life (CQP016-1)		24 months	24 months	24 months

CQP = Corporate Quality Procedure
[A] 23 °C / 50 % r.h.
[B] 25 °C / 50 % r.h.
[C] rotation, PP40, 0.5 mm, 150 min^{-1}
[D] cured for 2 hours at 80 °C

DESCRIPTION

SikaBiresin® CR910 is a high T_g composite resin system for wet lay-up processing.
It is used where fast curing products for repair of wind blades are requested. Depending on required potlife the slow or fast hardener has to be used.

PRODUCT BENEFITS

- Good impregnation and non-draining properties
- High glass transition temperature
- Fast curing
- High stiffness and strength
- Direct curing without waiting gel-time
- Usable for hand lay-up in production and field repair
- Resistant to crystallization at low temperature
- Light weight packaging (MixPax)

AREAS OF APPLICATION

SikaBiresin® CR910 is designed for repair of damaged laminate structures of rotor blades.
It is optimized for hand lay-up but can also be used for repair of patches by vacuum infusion.
This product is suitable for experienced professional users only. Tests with actual substrates and conditions have to be performed ensuring adhesion and material compatibility.

CURE MECHANISM
The curing of SikaBiresin® CR910 takes place by chemical reaction of the two components. Higher temperatures speed up the curing process and lower slow it down.

CHEMICAL RESISTANCE
In case of chemical or thermal exposure conduct project related testing.

METHOD OF APPLICATION
Surface preparation
It is necessary to prepare the substrates prior to lamination to ensure optimal adhesion and strength. Surfaces must be clean, dry and free from grease, oil, dust and contaminants. After the cleaning process, a physical or chemical pretreatment might be required, depending on the surface and type of material.

Mixing process
Pail/can: The components must be mixed homogeneously by using the common mixing techniques for composite resins. To get full performance, the indicated mixing ratio must be respected precisely.
The temperature of the mixture has a direct influence on the viscosity and pot life of the resin system.
Note: Release agents or other additives can influence the material properties and performance.
MixPax: Open packaging and remove sealing strip. Retain plastic clip and use it to move resin (A) into the section containing the hardener (B). Repeat 4 - 6 times. Squeeze packaging vigorously for 30 s to properly mix the two components. Carefully cut off the corner of the packaging and pour the resin into a cup. Apply SikaBiresin® CR910 within pot life.

Application
For information concerning application consult the Application Manual SikaBiresin® CR910 Blade Repair.

Removal
Uncured SikaBiresin® CR910 may be removed from tools and equipment with Sika® Cleaner P. Once cured, the material can only be removed mechanically.
Hands and exposed skin have to be washed immediately using hand wipes such as Sika® Cleaner-350H or a suitable industrial hand cleaner and water.
Do not use solvents on skin.

STORAGE CONDITIONS
All components must be stored between 15 °C and 30 °C in a dry place.
Prior to use check the material for homogeneity and crystallization and make sure to temper it to processing temperature. If crystallization of resin occurs, heat the MixPax to 60 °C until crystallization has disappeared (maximum 2 hours).
During transportation, a short term temperature of 60 °C must not be exceeded. Do not expose to direct sunlight.

FURTHER INFORMATION
The information herein is offered for general guidance only. Advice on specific applications is available on request from the Technical Department of Sika Industry.
Copies of the following publications are available on request:
- Safety Data Sheet
- Application Manual SikaBiresin® CR910 Blade Repair

PACKAGING INFORMATION
SikaBiresin® CR910 (A)

Pail	10 kg

SikaBiresin® CH910-1 (B)

Can	2.0 kg

SikaBiresin® CH910-5 (B)

Can	4.0 kg

SikaBiresin® CR910 (A+B)

MixPax	300 g
Cartridge	940 ml

BASIS OF PRODUCT DATA
All technical data stated in this document are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

HEALTH AND SAFETY INFORMATION
For information and advice regarding transportation, handling, storage and disposal of chemical products, users shall refer to the actual Safety Data Sheets containing physical, ecological, toxicological and other safety-related data.

DISCLAIMER
The information, and in particular, the recommendations relating to the application and enduse of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.

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