

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/cm ³ ^A	0.98 g/cm ³ ^A 1.18 g/cm ³ ^A	0.94 g/cm ³ ^A 1.17 g/cm ³ ^A
Mixing ratio	by weight	100 : 20	100 : 20
Viscosity (CQP029-4)	2300 mPa·s ^{A, C}	50 mPa·s ^{B, C} 800 mPa·s ^{B, C}	12 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 by DSC (CQP301-5 / ISO 11357)		95 °C ^D	95 °C ^D
Shelf life	24 months	24 months	24 months

CQP = Corporate Quality Procedure
^C) rotation, PP40, 0.5 mm, 150 min⁻¹

^A) 23 °C / 50 % r.h.
^D) cured for 2 hours at 80 °C

^B) 25 °C / 50 % r.h.

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
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SikaBiresin® CH910-1 (B)

Can	2.0 kg
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SikaBiresin® CH910-5 (B)

Can	4.0 kg
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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

Any information or suggestions for use concerning Sika's products, which we either in writing or orally have given buyers or end-users of the product, have been given in good faith based on our own experiences and based on approved praxis and the technological and scientific knowledge on the time of giving such suggestions and information, which are given without any type of guarantees, and which do not lead to any further responsibility from Sika Danmark A/S, besides what is stated in the sales agreement in question. The buyer or end-user should themselves investigate or otherwise make sure, that our products are suitable for the use in question and further make sure that the products are kept and used correct and in agreement with the published rules and considering the actual conditions in order to avoid damages or less satisfactory results. Any order is accepted and any deliverance is affected according to the general terms of sales and delivery from Sika Danmark A/S, which are considered known and accepted, and which could be handed out when asked for. Our catalogues are not up-dated automatically. The present product data sheet is only for use in Denmark. Values stated in the present product data sheet should be seen as recommended, unless stated otherwise.

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