

## PRODUCT DATA SHEET

# SikaBiresin® CR137

Filled epoxy resin system with high thermal conductivity

## TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	Component A SikaBiresin® CR137	Component B SikaBiresin® CH137-2 (B)
Chemical base	Epoxy resin	Amine hardener
Color	Grey	Whitish
Density	1.80 kg/l	1.01 kg/l
	cured	1.76 kg/l
Mixing ratio	by weight	100 : 10
	by volume	100 : 18
Viscosity (CQP029-4)	35 000 mPa·s	Thixotropic
	mixed	26 500 mPa·s
Application temperature	18 – 25 °C	
Pot life (CQP021-3 / Gel Timer TECAM)	55 minutes	
Curing conditions	8 hours	100 °C
Tensile strength (CQP036-2 / ISO 527)	51 MPa	
Tensile modulus (CQP036-2 / ISO 527)	8200 MPa	
Tensile elongation (CQP036-2 / ISO 527)	0.9 %	
Flexural strength (CQP027-2 / ISO 178)	82 MPa	
Flexural modulus (CQP027-2 / ISO 178)	8700 MPa	
Compressive strength (CQP028-5 / ISO 604)	114 MPa	
Shore D hardness (CQP023-1 / ISO 868)	90	
Impact resistance (CQP038-2 / ISO 179)	12 kJ/m <sup>2</sup>	
Specific heat conductivity (CQP116-1 / ISO 8301)	1.42 W/(m·K)	
Glass transition temperature (CQP301-5 / ISO 11357)	97 °C	
Heat deflection temperature (CQP030-1 / ISO 75A)	94 °C	
Shelf life	12 months	

CQP = Corporate Quality Procedure

## DESCRIPTION

SikaBiresin® CR137 is a filled epoxy resin system with high thermal conductivity. It is designed to give homogeneous heat distribution around the heating elements of FRP tools.

## PRODUCT BENEFITS

- High thermal conductivity
- Optimized properties for RT processing
- Tailor-made for water-heated molds
- Very good adhesion to the mold laminate

## AREAS OF APPLICATION

SikaBiresin® CR137 is used as casting resin to embed water-heated pipes on the backside of composite molds.

This product is suitable for experienced professional users only.

Tests under actual processing conditions and with additional materials such as fibers and release agents must be performed to proof material compatibility.

## METHOD OF APPLICATION

### Mixing process

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.

### Application

The resin system is optimized for processing temperatures between 18 °C – 25 °C. Consider the change in processing parameters if the resin system is processed at different temperatures. The curing must be performed at temperature  $\geq 18$  °C.

Prior to application, check both components for crystallization. The crystallization process can be reversed by heating the product to 60 °C – 70 °C until the crystals are no longer visible.

Containers must be closed tightly immediately after each use to prevent moisture ingress.

### Postcuring

Mechanical and thermal values of the laminated part depend on various factors, such as laminate thickness, fiber volume content, reactivity of the resin system as well as chosen curing cycle.

For information concerning suitable curing cycles consult the General Guideline for Composite Resins.

Parts produced with SikaBiresin® CR137 must undergo a pre-curing of at least 4 hours at 40 °C before removing the full mold from the master model.

### Removal

Uncured SikaBiresin® CR137 can be removed from tools and equipment with Sika® Reini-gungsmittel 5 or another suitable solvent. Once cured, the material can only be removed mechanically. Hands and exposed skin shall be washed immediately using industrial hand cleaner and water.

Do not use solvents on skin.

### STORAGE CONDITIONS

All components must be stored between 15 °C – 30 °C.

Prior to use check the material for homogeneity and crystallization and make sure to temper it to processing temperature.

### 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 Sheets
- General Guideline  
For Composite Resins

### PACKAGING INFORMATION

SikaBiresin® CR137 (A)

Pail	10 kg
Drum	230 kg

SikaBiresin® CH137-2 (B)

Hobbock	23 kg
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## 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

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## PRODUCT DATA SHEET

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