

PRODUCT DATA SHEET

SikaBiresin® CR168

Composite resin system for hand lay-up process with T_g up to 131 °C

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

| Properties | Component A SikaBiresin® CR168 | Component B SikaBiresin® CH132-5 |
|---|-----------------------------------|-------------------------------------|
| Chemical base | Epoxy resin | Amine hardener |
| Color | Translucent | Blue |
| Density | 1.17 kg/l | 0.94 kg/l |
| | cured | 1.16 kg/l |
| Mixing ratio | by weight | 100 : 27 |
| | by volume | 100 : 34 |
| Viscosity (CQP029-4) | 3650 mPa·s | 20 mPa·s |
| | mixed | 860 mPa·s |
| Application temperature | 18 – 25 °C | |
| Pot life (CQP021-3 / Gel Timer TECAM) | 160 minutes | |
| Curing conditions | 8 hours | 140 °C |
| Tensile strength (CQP036-2 / ISO 527) | 83 MPa | |
| Tensile modulus (CQP036-2 / ISO 527) | 2900 MPa | |
| Tensile elongation (CQP036-2 / ISO 527) | 6.0 % | |
| Flexural strength (CQP027-2 / ISO 178) | 130 MPa | |
| Flexural modulus (CQP027-2 / ISO 178) | 3100 MPa | |
| Compressive strength (CQP028-5 / ISO 604) | 120 MPa | |
| Shore D hardness (CQP023-1 / ISO 868) | 86 | |
| Impact resistance (CQP038-2 / ISO 179) | 40 kJ/m ² | |
| Glass transition temperature (CQP301-5 / ISO 11357) | 131 °C | |
| Heat deflection temperature (CQP030-1 / ISO 75A) | 124 °C | |
| Heat deflection temperature (CQP030-1 / ISO 75B) | 128 °C | |
| Heat deflection temperature (CQP030-1 / ISO 75C) | 113 °C | |
| Shelf life | 24 months | 12 months |

CQP = Corporate Quality Procedure

DESCRIPTION

SikaBiresin® CR168 is an epoxy resin system suited for the production of high performance FRP composite parts and molds by hand lay-up.

PRODUCT BENEFITS

- Optimized viscosity and good wetting characteristics
- Thixotropic modification prevents drainage from the fibers
- Glass transition temperature of up to 131 °C
- Hardener (B) pigmented blue to assist mixing

AREAS OF APPLICATION

SikaBiresin® CR168 is especially suited to the hand lay-up process for the production of large scale FRP molds with high temperature resistance. It is part of a product system dedicated to mold making (see section Further Information).

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.

PRODUCT DATA SHEET

SikaBiresin® CR168

Version 01.01 (08 - 2025), en_DE

013122031680001000

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 ≥ 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.

Produced parts must undergo a pre-curing of at least 4 hours at 60 °C before removing from the mold.

Removal

Uncured SikaBiresin® CR168 can be removed from tools and equipment with Sika® Reinigungsmittel 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
- Application Manual Composite Mold Making System with SikaBiresin® GC155

PACKAGING INFORMATION

SikaBiresin® CR168 (A)

| | |
|------|-------|
| Pail | 10 kg |
|------|-------|

SikaBiresin® CH132-5 (B)

| | |
|------|--------|
| Can | 2.8 kg |
| Drum | 180 kg |
| IBC | 900 kg |

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.

