

PRODUCT DATA SHEET

SikaBiresin® G30 GC11

Epoxy resin used as gelcoat for all-purpose applications

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	Component A SikaBiresin® G30	Component B SikaBiresin® GC11
Chemical base	Epoxy resin, filled	Amine, unfilled
Color	Black	Amber
	mixed	Black
Mixing ratio	by weight	100 : 6
Density		2.3 kg/l
	cured	2.1 kg/l
Viscosity (CQP029-4)		40 000 mPa·s
	mixed	1400 mPa·s
Pot life (CQP021-4)	at 23 °C	32 minutes
Demolding time		12 hours
Shore D hardness (CQP023-1 / ISO 868)		91 ^A
Flexural strength (CQP027-2 / ISO 178)		84 MPa ^A
Flexural modulus (CQP027-2 / ISO 178)		8950 MPa ^A
Impact resistance (CQP038-2 / ISO 179)		6 kJ/m ² ^A
Compressive strength (CQP028-5 / ISO 604)		139 MPa ^A
Heat deflection temperature (CQP030-1 / ISO 75B)		81 °C ^A
Shelf life	12 months	24 months

CQP = Corporate Quality Procedure

^A) curing condition: 23 °C for 7 days

DESCRIPTION

SikaBiresin® G30 GC11 is a 2-component epoxy resin used as a gelcoat mainly for manufacturing of all-purpose molds with good surface quality.

PRODUCT BENEFITS

- Good spreading properties
- Very good dimensional stability
- Good surface quality and dense structure
- Good temperature resistance

AREAS OF APPLICATION

SikaBiresin® G30 GC11 is designed for manufacturing of all-purpose molds, foundry patterns and metal sheet forming tools.

This product is suitable for experienced professional users only. Tests under actual processing conditions and with additional materials such as coatings and release agents must be performed to proof material compatibility.

METHOD OF APPLICATION

Surface preparation

The material, processing and mold or master-model temperature shall be between 18 °C and 25 °C.
Make sure the mold or master model is clean, dry, dust and grease free.
If mold or master-model surface is porous, it must be properly sealed prior applying the release agent.
Wax-based release agents are recommended. For further information regarding Sika release agent consult the corresponding Product Data Sheet.

Mixing process

Prior to use check the material for homogeneity and crystallization.
After prolonged storage at low temperature, crystallization of components may occur. This process can be easily reversed by heating the affected component to a maximum of 70 °C until the crystals have disappeared. Allow to cool down to requested processing temperature before use.
Prior to mixing, component A must be stirred thoroughly.
Both components must be mixed thoroughly respecting the defined mixing ratio. The mixing can be performed with a spatula or a machine stirrer at ≤ 300 rpm.
Note: Both containers must be closed tightly immediately after use to prevent moisture ingress.
Once opened the Product shall be used as soon as possible.

Application

Apply the gelcoat to the mold in a uniform thickness using a flat, short-haired brush. The material must be applied in a uniform direction to produce a homogeneous, gap-free surface layer.

A coupling layer or other backfill layer shall be applied as close as possible to the tacky phase to ensure proper adhesion and prevent bonding issues.
Further post curing of the demolded part can improve the final mechanical properties.
The duration of the post-curing process depends on the mass and thickness of the finished part.
Note: The post-curing requires a slow temperature increase and decrease process.
Depending on the geometry and weight of the part, it is recommended to use a counter-part (conformer) during post-curing.

STORAGE CONDITIONS

Both components must be stored at temperature between 15 °C and 25 °C in original unopened containers.

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

PACKAGING INFORMATION

SikaBiresin® G30 (A)

Pail	25 kg
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SikaBiresin® GC11 (B)

Box with bottles	12 x 0.05 kg
Bottle	0.5 kg
Canister	9 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 end-use 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.

