

PRODUCT DATA SHEET

SikaBiresin® G38

Epoxy casting resin with high heat resistance

TYPICAL PRODUCT DATA (FURTHER VALUES SEE SAFETY DATA SHEET)

Properties	SikaBiresin® G38 (A)	SikaBiresin® G38 (B)
Chemical base	Epoxy resin, filled	Amine, unfilled
Color	Grey	Amber
	mixed	Grey
Mixing ratio	by weight	100 : 7
Density		1.86 kg/l
	cured	1.8 kg/l ^{A, B}
Viscosity (CQP029-4)		40 000 mPa·s
	mixed	11 000 mPa·s
Pot life (CQP021-4)	500 g at 23 °C	120 minutes
Demolding time		24 hours
Maximum casting thickness		40 mm
Shore D hardness (CQP023-1 / ISO 868)		88 ^A 90 ^B
Flexural strength (CQP027-2 / ISO 178)		51 MPa ^A 68 MPa ^B
Impact resistance (CQP038-2 / ISO 179)		5 kJ/m ² ^A 8 kJ/m ² ^B
Compressive strength (CQP028-5 / ISO 604)		94 MPa ^A 112 MPa ^B
Linear shrinkage (CQP014-5)	500 x 40 x 25 mm	0.08 % ^A
Heat deflection temperature (CQP030-1 / ISO 75B)		54 °C ^A 126 °C ^B
Coefficient of thermal expansion (CQP053-1 / ISO 11359)		38 x 10 ⁻⁶ 1/K ^B
Shelf life	18 months	24 months

CQP = Corporate Quality Procedure

^A) curing condition: 23 °C for 14 days^B) post curing: 60 °C for 4 hours + 100 °C for 2 hours

DESCRIPTION

SikaBiresin® G38 is a 2-component epoxy casting resin with good flow behavior for manufacturing of heat resistant molds.

PRODUCT BENEFITS

- Good flow behavior and degassing
- Casting thickness up to 40 mm
- Low shrinkage
- Good mechanical properties also at elevated temperatures

AREAS OF APPLICATION

SikaBiresin® G38 is designed for manufacturing of heat resistant molds, e.g. vacuum forming molds.

The Product is also used for casting of heat resistant back fillings of foundry patterns. 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.
To secure homogeneous and complete mixing, pour the mixed product into another container and mix again shortly, considering the pot life.

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

Immediately after mixing pour the product into the mold starting at the deepest point. Demolding time may vary depending on casted thickness and room temperature. Further post curing of the demolded part can improve the final mechanical properties. Depending on the geometry and weight of the part, it is recommended to use a conformer while 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® G38 (A)

Pail	10 kg
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SikaBiresin® G38 (B)

Box with bottles	6 x 0.7 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

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.

