

Biresin® G30

EP-Casting resin, all-purpose applicable

Application

- Manufacture of foundry patterns and metal sheet forming tools
- Manufacture of appliances and other tools

Properties

- Good true-to-size properties and low shrinkage
- Good surface quality, dense structure and good temperature resistance
- With hardener Biresin® G30 for true-to-size mouldings with relatively short demoulding time with casting thickness from approx. 1.5 up to 35 mm
- With hardener Biresin® F3 for casting thickness up to approx. 50 mm, possibly with extended demoulding time
- With hardener Biresin® F4 for good flowable mixtures with decreased viscosity
- With hardener Biresin® S10 for fast gelling gelcoats with good spreading properties

Description

- Basis Two-component-epoxy-system
- Resin Biresin® G30, epoxy resin, black, filled, approx. 40,000 mPas
- Hardener Biresin® G30, standard hardener, amine, colourless, unfilled, approx. 3,500 mPas
- Hardener Biresin® F3, amine, yellowish unfilled, 20 mPas
- Hardener Biresin® F4, amine, colourless, unfilled, 10 mPas
- Hardener Biresin® S10, amine, amber, unfilled, approx. 4,400 mPas

Processing Data

Mixing ratio Biresin® G30 resin	to hardener	Biresin® G30	Biresin® F3	Biresin® F4	Biresin® S10
		in parts by weight			
		100 : 10	100 : 5	100 : 5	100 : 5
Mixing viscosity, 25°C	mPas	40,000	40,000	30,000	50,000
Potlife, 500 g, RT	min	60	60	45	20
Demoulding time, RT	h	12 - 16	24 - 48	24 - 48	> 12

Physical Data (approx.-values)

Biresin® G30 resin			with hardener	Biresin® G30	Biresin® F3	Biresin® F4	Biresin® S10
Density	ISO 1183	g/cm³		2.1			
Shore hardness	ISO 868	-		D 87	D 90	D 88	D 88
E-Modulus	ISO 178	MPa		6,800	9,600	8,500	8,500
Flexural strength	ISO 178	MPa		54	61	53	51
Compressive strength	ISO 604	MPa		96	141	109	139
Impact resistance	ISO 179	kJ/m²		6	6	7	4
Heat distortion temperature	ISO 75B	°C		67	85	63	65
Linear shrinkage	internal	%		0.05	0.035	0.03	-

Tooling



Delivery

Working packages	Biresin® G30 A+B Pack	6 x 1.5 kg net resin + 6 x 0.15 kg net Biresin® G30 hardener in a box
Individual components	Biresin® G30 resin	25 kg; 5 kg; 1.5 kg net
	Biresin® G30 hardener	2.5 kg; 0.5 kg; 0.15 kg net
	Biresin® F3 hardener	2.5 kg net
	Biresin® F4 hardener	2.5 kg net
	Biresin® S10 hardener	2.5 kg; 0.5 kg; 0.04 kg net

Processing

- The material temperature must be 18 - 25°C.
- The resin component must be mixed thoroughly before use.
- Take care that resin and hardener is mixed thoroughly without air entrapment.
- The resin mix can be poured, beginning at the lowest point into previously released moulds (e. g. with Sika® Trennmittel 810, 815 Quick resp. Sika® Trennwachs 818, for more information see Technical Data Sheet).
- For cleaning of cured mouldings from wax residues we recommend Sika® Reinigungsmittel 5. Before application of other cleaners test their compatibility with resin.

Storage

- Minimum shelf life of Biresin® S10 hardener is 24 month, of Biresin® G30 resin and G30 hardener resp. of Biresin® F3 and F4 hardener 12 month under room condition (18 - 25°C), when stored in original un-opened containers.
- After prolonged storage at low temperature, crystallisation of components may occur. This is easily removed by warming sufficient time to a maximum of 70°C. Allow to cool to room temperature before use.
- Containers must be closed water tight immediately after use and prevented from moisture. The residual material has to be used up as soon as possible.

Precautions

For information and advice on the safe handling and storage of products, users should refer to the current Safety Data Sheet containing physical, ecological, toxicological and other safety related data.

Disposal considerations

Product

Recommendations: Must be disposed of in a special waste disposal unit in accordance with the corresponding regulations.

Packaging

Recommendations: Completely emptied packagings can be given for recycling. Packaging that cannot be cleaned should be disposed of as product waste.

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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied upon request.

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