

Biresin® G37 EP-Casting resin, abrasion resistant

Areas of Application

- For frontcasting layers for foundry patterns and diverse moulds
- Working layer for metal sheet forming tools
- Vacuum forming and PUR-foam moulds

Product Benefits

- High true-to-size properties
- High abrasion resistance
- High thermal resistance
- Increasing of mechanical properties by post curing
- With hardener **Biresin® F1** for casting thickness up to approx. 35 mm, if necessary filled with Aluminium grit
- With hardener **Biresin® F4** for good flowing mixtures, casting thickness up to 30 mm
- With hardener **Biresin® S12** for casting thickness of 6 - 8 mm, on metal cores to 15 mm too, if necessary with post curing

Description

- Basis Two-component-epoxy-system
- Resin **Biresin® G37**, epoxy resin, grey, filled
- Hardener **Biresin® F1**, standard hardener, amine, colourless, unfilled
- Hardener **Biresin® F4**, amine, colourless, unfilled
- Hardener **Biresin® S12**, amine, amber, unfilled

Processing Data		Resin		Hardener	
Individual components		Biresin® G32	Biresin® F1	Biresin® F4	Biresin® S12
Viscosity, 23°C	mPas	approx. 27,000	approx. 4,200	< 10	approx. 180
Density	g/ml	2,3	0,97	0,87	1,0
Mixing ratio	in parts by weight	100	10	5	5
Mixtures					
Mixed viscosity, 23°C	mPas	approx. 23,000	approx. 4,500	approx. 15,000	
Potlife, 500 g, RT	min	90	90	60	
Demoulding time, RT	h	16 - 24	16 - 24	12	

Physical Data (approx.-values)

Biresin® G37 resin		with hardener	Biresin® F1		Biresin® F4		Biresin® S12	
Density	ISO 1183	g/cm³	2,3					
Curing conditions		time temperature	14 d RT	2 h 80°C	14 d RT	2 h 80°C	14 d RT	2 h 80°C
Shore hardness	ISO 868	-	D 89	D 91	D 88	D 90	D 90	D 91
E-Modulus	ISO 178	MPa	8,400	8,100	9,400	9,250	9,650	9,200
Flexural strength	ISO 178	MPa	70	80	83	94	80	89
Compressive strength	ISO 604	MPa	105	120	109	117	124	130
Impact resistance	ISO 179	kJ/m²	7	10	10	12	11	12
Heat distortion temperature	ISO 75B	°C	53	85	51	65	61	> 150
Linear shrinkage	internal	%	0.03		0.07		0.06	

Packaging

Individual components	Biresin® G37 resin	25 kg; 5 kg net
	Biresin® F1 hardener	2.5 kg net
	Biresin® F4 hardener	2.5 kg net
	Biresin® S12 hardener	15 kg; 2.5 kg; 0.4 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® F1 hardener is 24 month, of Biresin® G37 resin and of Biresin® F4 und S12 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.

Health and Safety Information

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.

Value Bases

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

Legal Notice

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