

Biresin® G36 EP-Casting resin, all-purpose applicable

Areas of Application

- Manufacture of heat resistant moulds and tools as well as backfillings of foundry patterns
- With hardener **Biresin® G36** or **Biresin® P7** casting of heat resistant moulds, e. g. vacuum-forming moulds
- With hardener **Biresin® L74** for manufacture of injection moulds for prototypes and small series

Product Benefits

- Good flowability and long potlife
- With hardener **Biresin® G36** up to 100 mm in open moulds, with hardener **Biresin® L74** up to 40 mm casting thickness
- With hardener **Biresin® P7** noticeable shorter potlife and faster curing
- Only low shrinkage
- Good mechanical properties after post curing, at elevated temperatures too
- Cured mouldings mechanically workable

Description

- Basis Two-component-epoxy-system
- Resin **Biresin® G36**, epoxy resin, grey, filled
- Hardener **Biresin® G36**, standard hardener, amine, amber, unfilled
- Hardener **Biresin® L74**, amine, colourless to amber, unfilled
- Hardener **Biresin® P7**, amine, yellowish, unfilled

Processing Data		Resin		Hardener	
Individual components		Biresin® G36	Biresin® G36	Biresin® L74	Biresin® P7
Viscosity, 25°C	mPas	appr. 80,000	approx. 35	< 10	appr. 20,000
Density	g/ml	1.79	0.96	0.94	1.09
Mixing ratio	in parts by weight	100	10	6	8
Mixtures					
Mixed viscosity, 25°C	mPas	appr. 18,000	appr. 6,700	pasty	
Potlife, 500 g, RT	min	60 - 120	60 - 120	30	
Demoulding time, RT	h	24*	24/RT + 3/60°C	16 - 24	

Physical Data (approx.-values)

Biresin® G36 resin		with hardener	Biresin® G36	Biresin® L74	Biresin® P7
Density	ISO 1183	g/cm³	1.7		
Curing conditions (heating rate of 10 K/h)			4 h / 100°C	3 h / 60°C + 3 h / 140°C	4 h / 60°C + 2 h / 100°C
Shore hardness	ISO 868	-	D 89	D 89	D 89
E-Modulus	ISO 178	MPa	7,300	8,700	
Flexural strength	ISO 178	MPa	80	89	
Compressive strength	ISO 604	MPa	130	135	130
Impact resistance	ISO 179	kJ/m²	11	12	
Heat distortion temperature	ISO 75B	°C	141*	> 220	141*
Linear shrinkage, Al-mould	internal	%	0,04		
CTE value, α_T	DIN 53 752	K ⁻¹	35 - 40 x 10 ⁻⁶	35 x 10 ⁻⁶	

* values after post curing: 4 h / 120°C

Packaging

Individual components	Biresin® G36 resin	20 kg; 5 kg net
	Biresin® G36 hardener	15 kg; 2 kg; 0.5 kg net
	Biresin® L74 hardener	4.25 kg; 0.3 kg net
	Biresin® P7 hardener	0.5 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.
- After mixing allow some minutes for the product to naturally degas prior to casting.
- Porous surfaces (wood) have to be well sealed before processing.
- The resin mix can be poured, beginning at the lowest point into previously released moulds (e. g. with Sika® Trennmittel 810, 815 Quick or Sika® Trennwachs 818, for more information see Technical Data Sheet).
- Before demoulding of surfaces with difficult geometry made of Biresin® G36 resin and Biresin® G36 hardener, or of surfaces made of Biresin® L74 hardener generally we recommend an additional pre curing of approx. 3 h at 60°C.
- After curing time 24 h at RT complete curing is realised with post curing of some hours at elevated temperatures.
- Add up to 50% Aluminium powder to Biresin® G36 resin and Biresin® L74 hardener to achieve maximum casting thickness.
- For frontcasting of Biresin® G36 resin and Biresin® L74 hardener the heat resistant gelcoat Biresin® S19 is applicable.
- 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 is 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 up for a sufficient time to a maximum of 70°C. Allow to cool to room temperature before use.
- Containers must be closed tightly immediately after use to prevent moisture ingress. The residual material needs 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.

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