



SCABRO

IDEËN KRIJGEN VORM

TECHNISCH DATABLAD
SIKA BIRESIN G48

PROTOTYPING

MALLENBOUW

COMPOSITEN

Biresin® G48

PUR- and Backfill-Casting resin

Areas of Application

- Front casting layer for metal sheet forming tools and foundry patterns
- With fillers for manufacture of cores for front casting resp. backfill casting

Product Benefits

- Very good flowability of unfilled resins
- High abrasion and impact resistance
- High filler addition possible
- Filled compounds thick castable with high compressive strength
- Cured mouldings mechanically workable

Description

- Basis Two-component-PUR-system
- Resin **Biresin® G48**, polyol, opaque, unfilled
- Hardener **Biresin® G55**, MDI-based isocyanate, colourless, unfilled
- Hardener **TE-Füller**, Aluminium hydroxide powder, white, grain 0-0.032 mm
- Hardener **Aluminiumpulver (Sprühgrieß)**, grey powder, grain 0-0.07 mm

Processing Data		Resin	Hardener	Filler	
Individual components		Biresin® G48	Biresin® G55	TE-Füller	Al-Pulver
Viscosity, 25°C	mPas	appr. 3,000	approx. 250	-	-
Density	g/ml	1.06	1.22	2.4	2.7
Mixing ratio	in parts by weight	100	100	350	250
Mixtures					
Mixed viscosity, 25°C	mPas		appr. 1.500	castable	castable
Potlife, 500 g, RT	min		45 - 60	45 - 60	45 - 60
Demoulding time, RT	h		16 - 24	16 - 24	16 - 24

Physical Data (approx.-values)

Biresin® G48 resin		with hardener with filler	Biresin® G55		
			without	TE - Füller	Al - Pulver
Colour			opaque	beige	grey
Density	ISO 1183	g/cm³	1.15	1.7	1.7
Shore hardness	ISO 868	-	D 80	D 86	D 84
E-Modulus	ISO 178	MPa	2,300	9,500	8,800
Flexural strength	ISO 178	MPa	100	60	85
Compressive strength	ISO 604	MPa	94	104	90
Tensile strength	ISO	MPa	60	30	45
Elongation at break	ISO	%	3 - 5	1	2,5
Impact resistance	ISO 179	kJ/m²	70	6	17
Heat distortion temperature	ISO 75B	°C	75	-	-
Linear shrinkage	internal	%	0.17	0.12	0.11

Packaging

Individual components	Biresin® G48 resin	20 kg; 5 kg net
	Biresin® G55 hardener	5 kg; 1 kg net
	TE-Füller	25 kg net
	Al-Pulver	25 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.
- Any filler addition is possible into the resin-hardener-mixture.
- After mixing allow some minutes for the product to naturally degas prior to casting.
- Porous surfaces (wood) have to be well sealed before.
- 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 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 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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