Tooling & Composites

Product Data Sheet
Version 04 / 2014

SCABRO
IDEAS TAKE SHAPE
scabro.com

Biresin® G27 LR - Variations with Filler
Fastcast resin, unfilled

Areas of Application

- Casting of master and core models, negatives and mouldings of medium up to big dimensions
- For casting of art and crafts articles with excellent detail reproduction
- Applicable unfilled (see separate Technical Data Sheet too) and filled

Product Benefits

- Very good flowability and longer potlife
- Good wetting of fillers
- Good adhesion to wooden materials
- Casting of higher thicknesses (> 20 mm) is possible with addition of 300 pbw fillers to 100 parts resin (A) and 100 parts hardener (B), for thinner layers up to 200 parts
- Low shrinkage and good dimensional stability
- Very good mechanically workable

Description

- Basis: Two-component-PUR-system
- Resin (A): **Biresin® G27 LR**, polyol, beige
- Hardener (B): **Biresin® G27**, standard hardener, MDI-based isocyanate, beige
- Filler: **TE-Füller**, Aluminium hydroxide powder, white, grain 0-0.032 mm
- Filler: **Aluminiumpulver (Sprühgrieß)**, grey aluminium powder, grain 0-0.07 mm
- Filler: **LF-Füller**, lightweight microsilicate powder, white, grain 0.01-0.25 mm

Processing Data		Resin (A)	Hardener (B)	Filler		
Individual components		**Biresin® G27 LR**	**Biresin® G27**	**TE-Füller**	**Al-Pulver**	**LF-Füller**
Viscosity, 25°C	mPas	~ 50	~ 60	-	-	-
Density	g/ml	1.02	1.14	2.4	2.7	0.7
Mixing ratio	in parts by weight	100	100	300	300	100
		Mixtures				
Mixed viscosity, 25°C	mPas	~ 50		castable	castable	castable
Potlife, 200 g, RT	min	4 - 5		7	6	5 - 6
Demoulding time, RT	min	> 70		> 70	> 70	> 70
Curing time, RT	d	3		3	3	3

Physical Data (approx. values)						
Biresin® G27 LR resin (A) with hardener (B) with filler			**Biresin® G27**			
			without	**TE-Füller**	**Al-Pulver**	**LF-Füller**
Colour			beige	light-beige	dark-grey	light-grey
Density	ISO 1183	g/cm³	1.1	1.65	1.7	0.9
Shore hardness	ISO 868	-	D 70	D 82	D 78	D 71
E-Modulus	ISO 178	MPa	730	3,000	3,200	1,500
Flexural strength	ISO 178	MPa	40	38	54	33
Compressive strength	ISO 604	MPa	35	39	42	35
Impact resistance	ISO 179	kJ/m²	40	5	16	4
Heat distortion temperature	ISO 75B	°C	75	75	75	75
Linear shrinkage	internal	%	0.4	0.16	0.10	0.3

Packaging

Individual components	**Biresin® G27 LR** resin (A)	5 kg net
	Biresin® G27 hardener (B)	20 kg; 5 kg; 6 x 1 kg in a box net
	TE-Füller	25 kg net
	Al-Pulver	25 kg net
	LF-Füller	20 kg net

Processing

- The material, processing and mould temperature must be from 18 to 25°C.
- Both components must be shaked well before use.
- Pay attention to dry conditions and dry mould surfaces while processing.
- Mix the fillers if necessary thorougly in the resin (A) or half in both components before mixing the components.
- 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® Liquid Wax-815 resp. Sika® Pasty Wax-818, for more information see Product 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 conditions (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, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safetyrelated 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