Technical data sheet

Fast cast resin (orthodontic models)

Biresin® G28

Manufacturer

SIKA Deutschland GmbH
Kornwestheimer Str. 103-107
70439 Stuttgart
Germany

SIKA GmbH is certified according to:

- **ISO 9001**
- **ISO 14001**

Description

Fast casting resin***Biresin® G28***
(hardener to be used in conjunction Biresin® G27, white - see applicable data sheet

Description

Biresin® G28 is an unfilled fast cast resin that can be combined with various other hardeners. Resin G28 consists of polyol, it is of beige colour and is unfilled. Fast cast resins are relatively easy-to-process products used for impressions and models which do not have to be processed under vacuum. Cast resins are synthetic resins, which are processed into the end product in liquid form and are solidified by adding a hardener. In contrast to meltable casting compounds, the solidification is effected by the chemical reaction (cross-linking reaction) of the added hardener. This reaction is irreversible. The resin, which is still liquid, is formed into a reusable or lost mould. The process step of filling or component technology is referred to as dental casting.

The most important features are:

- Very good flowability and longer pot life (time when the resin to which a hardener is applied becomes
- workable) high wetting capacity for filling materials
- when using the hardener **Biresin® G27 white,** higher flowability and brighter coloured moulded parts can be achieved
- low shrinkage and excellent dimensional stability
- easy to work with

Indication

The hardener is used for cast models, core moulds, negatives, control casts and sample parts of medium to large sizes. **The main indication at CADstar is the production of orthodontic models.** To do this, blanks are poured into prefabricated moulds. A
model is created by taking an impression of the patient's teeth. Subsequently, this dental cast is scanned. As an alternative, oral scanners can be used. This omits creating a model for scanning purposes. The scanning data are prepared, and finally the cast blanks are processed in the milling machine to arrive at the finished orthodontic model.

Technical data sheet

Fast cast resin (orthodontic models)

Biresin® G28

Manufacturer

SIKA Deutschland GmbH
Kornwestheimer Str. 103-107
70439 Stuttgart
Germany

SIKA GmbH is certified according to:

- **ISO 9001**
- **ISO 14001**

Processing

- Material and processing temperature should be between 18°C and 25°C Before
- processing, both components (resin and hardener) should be well shaken During
- the processing, observe the dry conditions and mould surfaces Care should be
- taken when pouring the mixture into the pre-treated moulds.

Compliance with the manufacturer's processing instructions is mandatory. The mixing ratio is indicated in these instructions. Furthermore, the pot life is indicated which describes the processing period until the viscosity increases. The curing regulations indicate times and temperatures after which the final properties are achieved.

See product data sheet - *SIKA Biresin® G28 Resin*
http://deaddconst01.webdms.sika.com/fileshow.do?documentID=1542

Potential dangers

In the non-cured state, fast casting resins are hazardous to the aquatic environment and must not be allowed to enter the sewage system, into bodies of water or into the ground.

According to Directive 1999/45/EC and its Annexes, the product is classified as not dangerous.

According to the supplier's current state of knowledge there are no ingredients (and no additives) that are classified as harmful to the health or the environment in the relevant concentrations and therefore should be indicated in this section.

See safety data sheet - *SIKA Biresin® G28 Resin*
http://deaddconst01.webdms.sika.com/fileshow.do?documentID=3059

Technical data sheet

Fast cast resin (orthodontic models)
Biresin® G28

Manufacturer

SIKA Deutschland GmbH
Kornwestheimer Str. 103-107
70439 Stuttgart
Germany

SIKA GmbH is certified according to:

- **ISO 9001**
- **ISO 14001**

Processing data

	Resin	Hardening agent
Single components	**Biresin® G28**	**Biresin® G27 white**
Viscosity, 25°C [mPa * s]	~ 150	~ 13
Density ρ [g/ml]	1.0	1.13
Resin & hardener	**Mixture**	
Mixture viscosity, 25°C [mPa * s]	~ 80	
Pot life, 200g, RT [h]	6 - 7	
Demoulding time, RT [h]	2 - 3	
Curing time, RT [h]	3	

Physical data (guidelines)

		Biresin® G28 Resin with hardener	**Biresin® G27 white**
Colour			White
Density **ρ**	ISO 1183	[g/cm³]	1.1
Shore hardness	ISO 868	——	D 68
E-module	ISO 178	[MPa]	900
Flex resistance β_B	ISO 178	[MPa]	35
Tear load β_Z	ISO 527	[MPa]	19
Elongation at rupture Δ	ISO 527	[%]	18
Impact strength **W**	ISO 179	[kJ/m²]	40
Dimensional stability under heat	ISO 75B	[°C]	75
Linear shrinkage		[%]	0.28

CADstar Digital Dental Solutions