Wiroplus® S

Conventionally heatable phosphate-bonded precision casting investment material for the Silicone Duplicating Technique.

en

Wiroplus® S, phosphate-bonded dental casting investment material: Type 2
(for the production of complete or partial dentures or other removable restorations), Class 1
(recommended for burning out during slow or gradual heating up)

Danger

Safety instructions Please read and follow the instructions in the insert

"Safety instructions and general instructions for BEGO investment materials"! This material contains quartz which causes lung damage when breathed in during prolonged or repeated exposure. We recommend suitable protection measures such as sufficient ventilation and wearing a FFP2 protective mask.

General instructions

- Liquid: BegoSol® (storage and transport temperature: –10 °C to +35 °C / 14 °F to 95 °F)
- Before mixing, rinse out the clean mixing bowl with water and wipe off.
  Mixing bowls that are not clean or are dry withdraw moisture from the investment material!
- Processing width at 21 °C / 68 – 70 °F: approx. 3 minutes.
- Firstly, put in liquid and add powder, mix thoroughly with a spatula by hand for **10–15 seconds**.
  After that mix for **60 seconds** in a mixing unit under a vacuum.
  (Processing without mixer: mix for **2 minutes** on the vibrator.)

Duplication

- When working with a pressure compaction unit, silicone moulds (e. g. *Wirosil*®)/polyether moulds and the duplicate model must be made under the same conditions!
- Fill duplication mould on the vibrator and then remove it immediately from the vibrator. Recommendation: Allow to cure under pressure for 10 minutes.
- Removal from mould: after 30 to 40 minutes.
- Surface treatment of the duplicate models after removal from mould:
  – dry 10 minutes at 70 – 100 °C (160 – 210 °F),
  – spray weakly with *Durofluid* model spray,
  – drying.

Mixing	Wiroplus® S	BegoSol®	Dist. water	Total liquid	Concentration of liquid
Ratio	100 g			16 ml	
for 2 duplicate models	1 x 400 g	51 ml	13 ml	64 ml	**80 %***

* Our recommendation, based on our own experiences and can only be seen as guideline.
Higher liquid concentration = more expansion enlarge the casting
Less liquid concentration = less expansion, scale down the casting

Investment

- Before investing, prepare the wax-up with *Aurofilm* wetting agent (please follow the processing instructions).
- Fill mould ring on the vibrator. Then remove immediately from the vibrator.
- Setting time: 30 minutes. Recommendation: Allow to cure for 10 minutes under pressure, then allow to set for 20 minutes.

Mixing	Wiroplus® S	BegoSol®	Dist. water	Total liquid	Concentration of liquid
Ratio	100 g			16 ml	
for 1 mould	1 x 400 g	0 ml 19 ml	64 ml 45 ml	64 ml 64 ml	**0 %**** **30 %**

** 30 % BegoSol® prevents cracks in the mould, which may occur due to rapid heating.
As a rule, distilled water is used for mixing.

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Preheating

Insertion temperature	Room temparature	
Holding levels	250°C/500 °F (5 °C/min/9°F/min) 570°C – 600°C/1060 °F – 1110 °F (7 °C/min/12 °F/min)*	(Heating rates only applies to furnaces with computer control)
Final temperature	see table	
Holding times	30 – 60 minutes (depending on the size and number of moulds)	

* optional for greater security

Final temperatures	Partial plates	Full plates
Vacuum pressure casting machine (*Nautilus® T/CC plus*)	950 °C (1,740 °F) / 7 °C/min (12 °F min)	950 °C (1,740 °F)
Induction casting machine (*Fornax® T*)	1000 °C (1,830 °F)	1000 °C (1,830 °F)

After casting

After casting allow the moulds to cool down until warm to the touch – in a protected and designated location –, **do not quench in water!** To avoid dust during deflasking, place the moulds in water after they have cooled down completely after casting until they are thoroughly moistened.

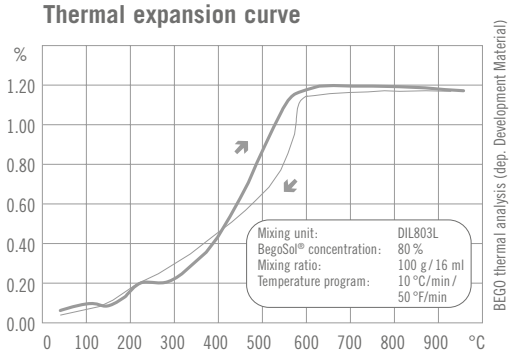
Data

Processing time at 20 °C / 70 °F	approx. 3 min
Total expansion with 80 % mixing liquid	approx. 2.3 %

Characteristic material values in accordance with DIN EN ISO 15912

Beginning of setting (Vicat time)	approx. 5.5 min
Compressive strength	approx. 15 MPa
Linear thermal expansion	approx. 1.2 %
Flowability	approx. 130 mm

Thermal expansion curve



This product was made according to the specifications of DIN EN ISO 15912 and meets its requirements in all respects.

Availability and recommendations

Wiroplus® S	1 carton 18 kg = 45 400 g bags	– **REF 50248**
BegoSol®	1 bottle = 1000 ml	– **REF 51090**
	1 canister = 5000 ml	– **REF 51091**

Wirosil®	52001 (2 kg)	*Wiropaint plus*	51100 (200 ml)	*Nautilus® CC plus*	26475 (230 V)
Wirosil® plus	54854 (2 kg)			*Fornax® T*	26480 (230 V)
Durofluid	52008 (100 ml)	*Aurofilm*	52019 (100 ml)	*Nautilus® T*	26470 (230 V)

Whether given verbally, in writing or by practical instructions, our recommendations for use are based upon our own experience and trials and can only be considered as standard values.
Our products are subject to a constant further development. Therefore alterations in construction and composition are reserved.

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Manufacturer
Article number
Use by
Warning
Date of manufacture
Batch number
Observe the instructions for use

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