

Safety instructions

Please read and follow the instructions in the insert

“Safety instructions and general instructions for BEGO investment materials”!

Preparation



Pressable/Press-to-metal ceramics

- Fix and sprue the wax-up according to the instructions of the ceramics manufacturer.

- Plastic copings (e. g. Pattern Resin or Palavit G) must be thinly coated with wax.
- Use BEGO *fleecy inlay strips*:
1 strip for metal mould rings in sizes 1 + 3,
2 strips on top of each other for sizes 6 + 9 as well as for all non-precious alloys.

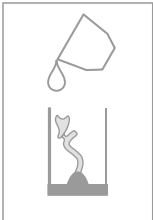
Handling:

The strips must be approx 1/2 cm longer than the circumference of the mould ring. Moisten strips slightly. Press strips in mould ring so that they overlap and are flush with the **top** edge of the mould ring. Slip over the wax-up and press the **lower** edge of the mould ring into the base socket mould former.

Crown and bridge alloys

- Wax the sprued copings on the BEGO *base socket mould former* so that the distance to the mould edge and top surface is at least 5 mm (1/4"). Spray a thin coat of *Aurofilm* wetting agent and blow completely dry.

Investment



- Liquid: BegoSol® HE (**Frost-sensitive!** Storage and transport temperature: **+5 °C to +35 °C / 10 °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!
- Firstly, put in liquid and add powder, mix thoroughly with a spatula by hand for **30 seconds** (or by machine using). Then mix for **60 seconds** in a mixing unit under a vacuum at 350 rpm. Keep under vacuum for additional **30 seconds** without stirring. (Mixing without mixing unit: 2 minutes on the vibrator.)
- Available working time: approx. 5 minutes (20 °C / 70 °F, 50 % liquid). At higher room temperatures the working time will be reduced!
- Fill crowns carefully with a fine instrument. Fill the mould ring on the vibrator at the lowest vibration level. **Do not vibrate any more after filling!**
- If heating is to be carried out without a ring, remove the ring used for investment as soon as possible after **complete** setting of the investment material (at 20 °C / 70 °F after approx. 15 minutes); metal mould rings cannot be removed. **Pressing moulds** must be left to cool for **25 – 30 mins** after their being filled until the investment material has completely set. Any deformation, caused, for example, by moving the mould or premature removal from the mould, can cause micro cracks in the investment material, which can cause the mould to break during pressing.
- For shock heating, comply with the time window foreseen for insertion (20 – 30 minutes after mixing is initiated) and the insertion temperature (900 °C)!

Mixing ratio

100 g Bellavest® SH : 25 ml liquid

Mould size	90 g bags	100 g bags	160 g bags
1	1/22,5 ml	1/25 ml	–
3	2/45 ml	2/50 ml	1/40 ml
6	4/90 ml	4/100 ml	2/80 ml
9	6/135 ml	5/125 ml	3/120 ml

Liquid concentration

- for **pressable ceramics** (layering and staining techniques)

Inlay MO and OD	60 – 70 %
Inlay MOD	70 – 80 %
Crowns, veneers and bridges	75 – 85 %

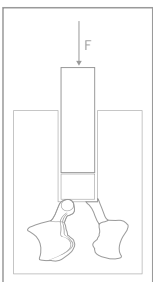
- Press-to-metal ceramic (Metal): 70 %** for all indications
- Press-on ceramics: (zirconium dioxide)** for all indications: **max. 40 %**

The concentrations are standard values and can be adapted according to the working conditions and object size. Never dilute to less than 20 %!

%	20 %	30 %	40 %	50 %	60 %	70 %	80 %	90 %
HE/H ₂ O	8/32 ml	12/28 ml	16/24 ml	20/20 ml	24/16 ml	28/12 ml	32/8 ml	36/4 ml

- for **crown and bridge alloys**

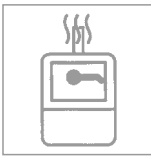
Modelling:	made of wax without pressure	made of wax with pressure (4 bar)	made of plastic without pressure (e. g. Pattern Resin)	made of plastic with pressure (4 bar)
Inlays and partial crowns	35 %	40 %	–	–
Crowns, bridges and primary parts				
in precious metal	45 %	50 %	–	–
in precious metal-to-ceramic alloys	50 %	60 %	–	–
Secondary parts in precious metal cone, ring telescope, full telescope, groove-shoulder attachment	–	–	45–75 %	50–80 %
Crowns and bridges				
in non-precious (Co-Cr)	75–85 %	80–90 %	–	–
metal-to-ceramic alloys (Ni-Cr)	70–75 %	75–80 %	–	–
Non-precious double crowns (external parts)	–	–	90–100 %	–



Shock-heat or conventionally heatable, phosphate-bonded precision casting investment material for all crowns, bridges and pressable/press-to-metal ceramics

en

Preheating



	Shock heating	Conventional heating
Setting time after investment	20 – 30 minutes	at least 30 minutes
Insertion temperature	900 °C / 1,650 °F	Room temperature (or 250 °C / 500 °F) *
Holding level	–	250 °C / 500 °F (with 5 °C (9 °F)/min)**0
Final temperature		250 °C / 500 °F (with 7 °C (12 °F)/min)**
Precious metal	700 °C / 1,290 °F	700 °C / 1,290 °F
Precious metal-to-ceramic alloys	850 °C / 1,560 °F	850 °C / 1,560 °F
Non-precious metal	900 °C / 1,650 °F	900 °C / 1,650 °F
Pressable ceramics	up to 900 °C / 1,650 °F (Follow manufacturer's instructions!)	
Hold times for holding level and final temperature	30 – 60 minutes (depending on size and number of moulds)	

*/** Only for furnaces with conventional control / with computer control.

Press-to-metal ceramics: for pressing to non-precious metal alloys, preheat Bellavest® SH moulds **rapidly only**; for precious-metal alloys, preheat **normally or rapidly!**

Shock heating

Only for mould sizes 1 to 6 • Roughen mould bottom slightly after setting • Place moulds upright in the furnace (funnel former facing down) and without direct contact to the heating source (use spacer or ceramic plate) • **Always comply with setting time and insertion temperature!**

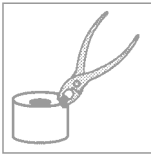


Risk of injury in connection with shock heating! Place all moulds in the furnace within 10 seconds and then keep the furnace door closed for 15 minutes!

Inserting further moulds leads to temperature decrease and thus to considerable extension of the preheating process.

After casting/pressing allow the moulds to cool down until warm to the touch, in a protected and designated location, **do not quench in water!** Investment materials contain quartz. Do not inhale dust! Danger of lung damage (silicosis, lung cancer). To avoid dust during deflasking, place the moulds in water, once they have cooled down completely after casting, until they are thoroughly moistened.

After casting



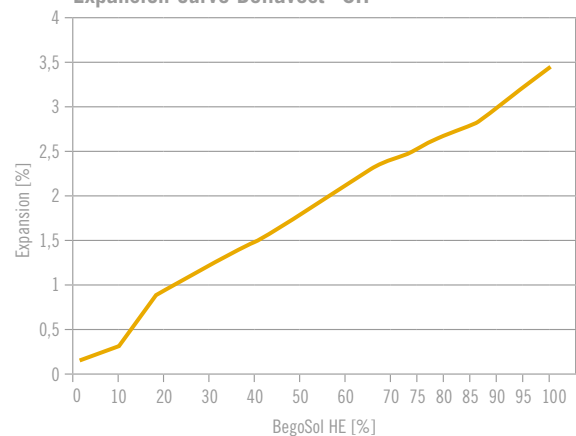
Data



	BegoSol® HE	
	50%	80%
Available working time at 20 °C / 70 °F	approx. 5 min	approx. 4.5 min
Total expansion	1.7%	2.2%
Minimum shelf life	2 years	
Characteristic material values in accordance with DIN EN ISO 15912		
Beginning of setting (Vicat time)	approx. 10.5 min	approx. 10 min
Compressive strength (after 2 hours)	4.2 MPa	5.1 MPa
Linear thermal expansion	0.8%	0.9%

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

Expansion curve Bellavest® SH



Availability and recommendations



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 constant further development. Therefore alterations in construction and composition are reserved.

Info: Phone +49 421 2028-282
www.bego.com

	Carton	Carton
Bellavest® SH	90 g bag	12.96 kg (144 bags) – 54257
	100 g bag	5.0 kg (50 bags) – 70060
	160 g bag	4.8 kg (30 bags) – 54247
BegoSol® HE	1000 ml (1 bottle) – 51095	5000 ml (1 canister) – 51096

<i>Aurofilm</i> (100 ml)	52019	<i>BEGO metal mould rings</i>		<i>SecuPress Mould System</i>	
<i>BEGO base socket former</i>		Size 3 (4 pieces)	52422	100 g / 12 mm (1 set)	70050
Size 3 (4 pieces)	52627	Size 6 (4 pieces)	52423	200 g / 12 mm (1 set)	70051
Size 6 (4 pieces)	52628	Size 9 (4 pieces)	52424	300 g / 12 mm (1 set)	70053
Size 9 (4 pieces)	52629	<i>BEGO fleecy inlay strip</i>		<i>SecuPress Mould Base</i>	
		40 mm (3 x 30 m)	52409	200 g / 16 mm (1 piece)	70052
		45 mm (3 x 30 m)	52408	300 g / 16 mm (1 piece)	70054

For particularly good results we recommend an alloy from the following groups, depending on the indication

Bio PontoStar®



Wirobond®