

The enclosed BEGO-GOLD card is part of these processing instructions!

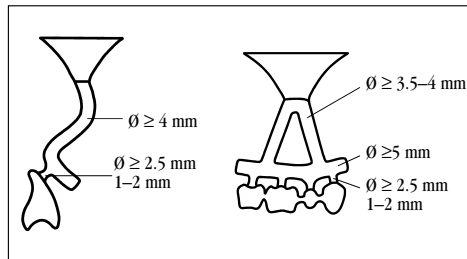
## Alloy characteristics

Biocertificate	<input checked="" type="checkbox"/>	Preheating temperature [°C]	** 850–950
Type	extra-hard (4)	CTE 20–600 °C (25–500 °C)	
BEGO-GOLD colour code	white 8	[10 <sup>-6</sup> K <sup>-1</sup> ]	13.9 (13.7)
Density [g/cm <sup>3</sup> ]	14.3	Heat treatment	600 °C 15 min.
Average grain size [µm]	40	Soft annealing	750 °C 10 min.
Vickers hardness (HV 5)	* 190/220/230	(then quenching in water at 20 °C)	
Elongation limit (Rp 0.2) [MPa]	* 475/520/550	* soft / after firing / hardened	
Ductile yield (A5) [%]	* 19/16/12	** The temperature depends on	
Modulus of elast. approx. [MPa]	125,000	– the casting unit used	
Melting interval [°C]	1310–1155	– the ratio between old and new alloy	
Casting temperature [°C]	** 1450–1500	– the wax-up thickness	

## Processing instructions

### Modelling:

- Minimum metal thickness (after grinding):  
for ceramic veneering 0.4 mm, for acrylic veneering with retention pearls 0.3 mm.
- Connecting parts between the pontics should be as thick and high as possible (at least 3.5 mm high and 2.5 mm wide).
- Spruing of single crowns: provide casting reservoir.



**Investing:** Use phosphate-bonded crown and bridge investment materials (e. g. Bellavest®).

**Casting and finishing:** General: Do not overheat alloy. Use only clean crucibles, one crucible per alloy. Recommendation: to enable an exact identification of each case cast new metal only.

- In case of re-casting: only re-cast identical alloys. Blast old material. Add at least 50 % of new material.
- Use ceramic crucibles and sprinkle some Auromelt HF melting powder on the casting ingots.
- Continue to heat after complete melting of the casting pieces!  
Flame melting: 10–15 seconds  
HF induction heating: approx. 15 seconds  
Resistance heating: 3–4 minutes.

Use fine carbide or BEGO sintered diamond milling tools for finishing.

**Ceramic:** Use ceramics in accordance with DIN EN ISO 9693 with firing temperatures of up to approx. 980 °C (e. g. Carat, Biodent, Duceram, IPS-Classica, Omega, Omega 900, VMK 95). Always follow the ceramic manufacturer's instructions!

- Always blast the surface to be veneered (Korox® 110, 2 – max. 3 bar) and clean the frame thoroughly (steam clean or boil in aqua dest.).
- Allow to cool down normally after firing.

### Oxide firing:

- Maintain oxide firing at 960 °C without vacuum for 2–3 minutes (Omega 900: 900 °C).
- The oxide can be blasted again prior to application of the ceramics.

### Soldering:

- Support object in a soldering block of Bellatherm®. Prepare a gap of max. 0.2 mm with parallel walls.
- Soldering before firing with the flame (1125 °C): BegoStar®-Solder (order no. 61081) and Minoxid or Fluxsol.
- Soldering after firing in furnace (810 °C): BEGO-Gold-Solder I (order no. 61017) and Minoxid. Allow to cool normally.
- Acid-treat residual flux in Aurocid (60 °C, approx. 1 minute). Clean thoroughly (steam clean or boil in aqua dest.).

**Laser welding:** Filler material: BegoCer® G wire diameter 0.4 mm (order no. 61164) or accurately fitting, custom-ground casting pieces.

**Secondary effects:** Such as allergies to contents of the alloy or electrochemically based reactions may very rarely occur.

**Reciprocal actions:** In case of occlusal or approximal contact of different alloys electrochemically based reactions may very rarely occur.

**Reactions:** In case of known incompatibilities and allergies to contents of the alloy.

**Warranty:** 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 undergo constant further development and are therefore subject to modification regarding design and composition.