

Alloy characteristics

Bio certificate	<input checked="" type="checkbox"/>	Melting interval [°C]	1155 - 1310	Composition % by mass:
Type (ISO 22674)	4	Casting temp. [°C]	**1450 - 1500	Au 51.5 Pd 38.4 In 8.7
BEGO-GOLD colour code	white 8	Preheating temp. [°C]	**850 - 950	Ga 1.3 Ru
Density [g/cm ³]	14.3	CET 20 - 600 °C (25 - 500 °C)		
Average grain size [µm]	40	[10 ⁻⁶ K ⁻¹]	13.9 (13.7)	
Vickers hardness (HV5) * 190/220/230		Heat treatment	600 °C 15 min.	
Elongation limit (Rp 0.2) [MPa]		Soft annealing	750 °C 10 min.	
		(then quenching in water at 20 °C)		
Ductile yield (A5) [%]	* 19/16/12	* soft / after firing / hardened		
Modulus of elast. approx. [GPa]	125	** depends on casting machines, constructions of the units, re-casted material		

Safety hint

Metal dust is harmful to your health.
When deflasking and blasting use a suction extraction system and breathing mask type FFP3-EN149:2001!

CE 0197 ISO 9693 / ISO 22674

Instructions of use**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®, BellaStar®).

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, B ident, Duceram, IPS-Classic, 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 0.35 mm (REF 61164) or accurately fitting, custom-ground casting pieces.

Prescription only / For professional use only 

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

