

## Instructions for use

Dental Pd based precious casting alloy for metal ceramic, Type 4 BegoPal® 300 is available as ingot.

BegoPal® 300 complies to ISO 22674 and ISO 9693-1. REF 61105

### Alloy characteristics

According to ISO 22674 free of nickel, cadmium, beryllium and lead

Type (accord. to ISO 22674)	4
Density g/cm <sup>3</sup>	11.0
Preheating temperature °C	850
Solidus, liquidus temperature °C	1175, 1320
Casting temperature °C	1390
Young's modulus GPa	135
Proof strength (R <sub>p0.2</sub> ) MPa	520
Ultimate strength (R <sub>m</sub> ) MPa	910/915
Elongation after fracture (A <sub>5</sub> ) %	28
Vickers hardness (HV5)	240
BEGO color code	8

Coefficient of thermal expansion (CTE)	
25 – 500 °C, 10 <sup>-6</sup> * K <sup>-1</sup>	13.8
20 – 600 °C, 10 <sup>-6</sup> * K <sup>-1</sup>	14.0

Hardening: 500 °C für 15 min

Softening annealing (if desired): 750 °C for 10 min, than quenching in water (20 °C)

Investment material:	phosphate bonded, e. g. Bellavest SH (REF 54252)
Crucible material	Ker, Gla (with Ker: ceramic; Gra: graphite; Gla: glassy carbon)
Veneering ceramic	VMK Master/VITA
Oxidation firing	960 °C/2–3 min/ – (vac: under vacuum)
Heating rate	recommended max. 55 °C/min
Flux	e. g. Minoxid (REF 52530)
Brazing material before firing:	BegoStar® - Lot (REF 61081)
Brazing material after firing:	BEGO Gold-Lot I (REF 61017)
Laser wire:	BegoPal® 300-Draht (REF 61165)
Melting powder	Auromelt (REF 52525)

**Intended Use:** BegoPal® 300 is indicated for casting of dental restorations.

**Indications for use:** BegoPal® 300 is an Pd based alloy for dental casting and suitable for porcelain-fused-to-metal (PFM) crown and bridges.

**Contraindications:** No contraindications are known. However, unwanted biological reactions such as allergies to contents of the alloy or electrochemically based reactions may very rarely occur. In case of known incompatibilities and allergies to contents of the metallic material it should not be used.

**Warnings:** Metal dust is harmful to your health. When grinding and blasting use suitable air extraction system / ventilation at the workplace and breathing mask type FFP3-EN149!

**Precautions:** In case of occlusal or approximal contact with a different alloy electrochemically based reactions may very rarely occur. Safety and effectiveness in treatment of children or treatment of pregnant or nursing woman have not been established. BegoPal® 300 may influence negatively the interpretation of MRI investigations.

**Adverse reactions:** No adverse reactions are known. Nevertheless, the rare case of occurrence of individual reactions against single components of BegoPal® 300 can never be excluded completely.

In this case, the application of BegoPal® 300 should not be continued.

**Prescription device:** Caution: US Federal law restricts this device to sale by or on the order of a licensed dentist.

**Wax up:** Minimum metal thickness (after grinding) 0.4 mm. Avoid sharp edges and corners. Framework should be anatomic reduced. Connectors should be modeled as strong and high as possible (height: min. 3.5 mm, width: min. 2.5 mm). In case of bruxism stronger modulation is required.

Use wax or plastic hollow sticks. Do not taper the spruing.

**Investing:** Use only phosphate bonded investment material for crown and bridge technique.

**Casting:** Do not overheat alloy. Use only pure alloy in own crucibles. For an explicit batch tracing the use of only fresh alloy is recommended. In case of re-casting use only identical alloys. Re-casted material must be blasted thoroughly. Use min. 50 % fresh alloy. If applicable use Auromelt HF melting powder (REF 52525). Follow the instructions of the manufacturers of the casting devices for parameters and casting procedures. After casting the mould should cool down slowly.

**Grinding:** use tungsten carbide burs

**Polishing:** To ease polishing blasting with Perblast® micro (REF 46092, lead free soda glass) may be suitable. Afterwards polish with rubber polisher and brushes with suitable polishing paste.

**Ceramic veneering:** Use veneering ceramics with suitable CTE (ISO 9693-1). Follow instructions of use of ceramic manufacturers. The oxides must be etched off or blasted (110 µm/2 bar; e. g. with Korox 110, REF 46044). Clean surface thoroughly by steam cleaning or boiling in aqua dest. Do not touch surfaces afterwards with hands. Use artery clamps or similar devices.

Support the frameworks adequately during firing cycles.

**Acrylic veneering:** For veneering with acrylic material follow the recommendations of the manufacturers

**Soldering/brazing:** Fixate the parts with soldering investment material (e. g. Bellatherm® REF 51105). The prepared gab shall not exceed 0.2 mm with parallel walls. Use a suitable BEGO flux. The flux residues and oxides must be etched off. Clean surface thoroughly by steam cleaning or boiling in aqua dest.

**Laser welding:** If applicable use V-seam and filler material

Follow manufacturer's instructions for use and hazard notes of the laser welding devices.

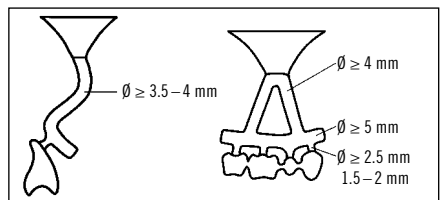
**Limit of Liability:** Except where prohibited by law, BEGO Bremer Goldschlägerei Wilh. Herbst GmbH & Co. KG will not be liable for any loss or damage arising from this product, whether direct, indirect, special, incidental or consequential, regardless of the theory asserted, including warranty, contract, negligence or strict liability.

**Storage conditions:** none

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

**US Labeling requirements:** The device labeling meets the recommendations of FDA applicable guidance documents.

Any serious incident that has occurred in relation to BegoPal® 300 should be reported to BEGO Bremer Goldschlägerei Wilh. Herbst GmbH & Co. KG and the competent authority.



Consult instructions for use



Caution



Use-by-date



Batch code



Non-sterile

**Rx only**  
For professional use only



Catalogue number



Manufacturer

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