



Dental

GIALLOY CB

CE 0297

Non-Precious Cobalt Based Dental Casting Alloy, Type 4

Gialloy CB

- Is suitable for the following casting techniques: centrifuge, vacuum pressure systems and torch
- Is highly corrosion resistant.
- Is qualified for laser-processing.

Directions for use

Modellation

To achieve complete flow out of wax copies the wall thickness must not be less than. 0,5 mm.

Investing

For casting **Gialloy CB** we recommend our phosphate bonded investment compound **Gilvest HS**

Casting

For the melting process use ceramic crucibles only.
Cast as fast as possible before oxide layer is mixed with the molten mass. Cool down slowly after casting. Do not quench in water.

Porcelain

Before applying the ceramic fire at 960-980 °C, sandblast with 110 µm aluminium oxide and clean carefully with steam. The minimum thickness of alloy before firing porcelain is 0.2 mm. Long term cooling after firing is generally recommended.

Soldering / welding

In case of necessary corrections or repair work please use **Gialloy** solder or **Gialloy** laser wire.

Polishing

The polishing is easy due to reduced surface-hardness of the alloy.

Caution

Never put **Gialloy** in acid bath!

Safety instructions

Inhalation of metal powder is harmful!
When sandblasting use suction with fine dust filter. Wearing of suitable personal protection equipment is recommended.

All data and recommendations are guidelines only and based on our technical experience. The above recommendations are given to the best of our knowledge. We grant the quality of our products according to our specification. Any further liability cannot be accepted since the proper application of our products is outside our control.



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**Chemical composition and physical properties
according to DIN EN ISO 22674 : 2006**

Gialloy CB Non-Precious Cobalt Based Dental Casting Alloy, Type 4 Nickel und Beryllium free	
Co	approx. 61,6 %
Cr	approx. 27,8 %
W	approx. 8,5 %
Si	approx. 1,6 %
Mn	approx. 0,3%
Fe	approx. 0,2 %
Hardness: (HV 10)	285
Elongation: (%)	14,7
Tensile Strength: (MPa)	525
0,2% Yield Strength: (MPa)	375
Young's Module (GPa)	240
Corrosion resistance ($\mu\text{g}/\text{cm}^3$)	< 200
Coefficient of Thermal Expansion (25° - 500 °C) ($10^{-6}/\text{K}$)	14,5
Melting Interval (°C) (Solidus – Liquidus)	1410 – 1418
Pre-heating temperature of ring (°C)	910 – 940
Density (g/cm^3)	8,5

Recommendation: firing at 960 – 980 °C