

## GIALLOY CB / CB-H

### Non – precious dental alloys

#### Ceramic bonding alloy on Cobalt basis

**CE 0297**

- Gialloys can be melted by torch, Centrifuge and vacuum pressure systems
- Gialloys are highly corrosion resistant
- Gialloys can be lasered

#### Processing instructions

##### Modelation

For 100% flow out of wax copies, minimum wax thickness should be 0,5 mm

##### Investing

Gialloys can be casted with most of the investments usual in trade up to max. casting temperature of 1080 °C (1980°F). Recommended investments are Gilvest HS for Gialloy CB or Gialloy CB-H.

##### Casting

Use ceramic crucibles only. Cast as fast as possible before oxide layer is torn open. Do not force cool or quench the moulds. Cool down slowly after casting.

##### Porcelain

Minimum thickness of alloy before firing porcelain is 0.2 mm. Before applying the ceramic, fire at 960 – 980 °C, sandblast with steamer. Long term cooling after firing is generally recommended.

##### Caution

Never put Gialloys in acid bath.

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.

## Gialloy CB / CB-H

## Typical chemical compositions and physical properties of Gialloy

	<b>Gialloy CB</b>	<b>Gialloy CB-H</b>
	Ceramic bonding alloy on Cobalt basis, Type 5	Ceramic bonding alloy on Cobalt basis, Type 4
	Nickel and Beryllium free	Nickel and Beryllium free
<b>Norm</b>	<b>EN ISO 22674</b>	<b>EN ISO 22674</b>
<b>Co</b>	61,5 %	58 %
<b>C</b>	< 0,1 %	< 0,05 %
<b>Cr</b>	28 %	25 %
<b>Si</b>	1,7 %	1 %
<b>Mo</b>	-	1 %
<b>W</b>	8,5 %	9 %
<b>Fe</b>	<0,5 %	1 %
<b>Mn</b>	0,25 %	-
<b>Nb</b>	-	2 %
<b>V</b>	-	2 %
<b>Hardness: (HV 10)</b>	285	340
<b>Elongation: (%)</b>	10	5
<b>Tensile strength: (MPa)</b>	845	790
<b>0,2% Elastic limit: (MPa)</b>	620	510
<b>Modules of elasticity (GPa)</b>	Ca. 190	Ca. 180
<b>Coeff. Of thermal Expansion 20°-600°C) (10<sup>-6</sup>/K)</b>	14,1	14,1
<b>Melting range (°C) (Solidus/Liquidus)</b>	1390-1415	1370-1385
<b>Pre-heating temp. Of ring (°C)</b>	910-940	900-930
<b>Density (g/cm<sup>3</sup>)</b>	8,3	8,4
	<b>Recommendation:</b> Before applying the ceramic, fire at 960 °C	<b>Recommendation:</b> Before applying the ceramic, fire at 980 °C