

# GIALLOY CB-N / CB-NH



Dental

Non – precious dental alloys

CE 0297

Ceramic bonding alloy on Nickel basis

- **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-N** or **Gialloy CB-NH**

### **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°C, sandblast with 110 µm aluminum oxide and clean carefully 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-N / CB-NH

## Typical chemical compositions and physical properties of Gialloy

	<b>Gialloy CB-N</b> Ceramic bonding alloy on Nickel basis, Type 3  Beryllium free	<b>Gialloy CB-NH</b> Ceramic bonding alloy on Nickel basis Type 4  Beryllium free
Norm	EN ISO 22674	EN ISO 22674
Ni	~ 63	~ 60
C	< 0,1	< 0,1
Cr	25	26
Mo	11	12
Si	1,5	1,8
Mn	< 0,1	< 0,1
Hardness: (HV 10)	185	221
Elongation: (%)	15	10
Tensile strength: (MPa)	580	880
0,2% Elastic limit: (MPa)	340	470
Modulus of elasticity (GPa)	ca. 170	ca. 200
Coeff. of thermal Expansion (20° - 600° C) (10 <sup>-6</sup> /K)	14,1	14,1
Melting range (°C) (Solidus/Liquidus)	1325 – 1350	1310 – 1405
Pre-heating temp. of ring (°C)	900 - 920	910 - 920
Density (g/cm <sup>3</sup> )	8,2	8,2
	<b>Recommendation:</b> Before applying the ceramic, fire at 960°C	<b>Recommendation:</b> Before applying the ceramic, fire at 960°C

Warning: **Gialloy CB-N** and **CB-NH** contains Nickel. Nickel may cause allergic reactions.