



Used  
successfully  
worldwide for  
over 25 years

# Wirobond® C

## Cobalt-chrome metal-ceramic alloy

- Nickel- and beryllium-free
- Simple processing due to reliable casting point recognition
- Carbon-free composition – particularly well suited for laser welding
- The element cerium ensures a high bond strength with the ceramic, minimising the risk of subsequent flaking or chipping
- Modulus of elasticity twice as high as precious metal – twice the reliability against distortion by masticatory forces
- Low thermal conductivity – protects the pulp and ensures high wearing comfort for the patient
- Biocompatible and corrosion-resistant thanks to a firmly-adhering passive layer

## Wirobond® C – metal-ceramic alloy used successfully worldwide

Wirobond® C a metal-ceramic alloy, free of nickel and beryllium, is an example of the exceptional expertise that makes us specialists in the metal-ceramic sector. Wirobond® C has been processed successfully worldwide for over 25 years and as a Type 4 alloy fulfils all the criteria of the ISO 22674 and ISO 9693-1 Standard.

### The advantages for you:

- Reliable recognition of the casting point both with centrifugal casting machines and vacuum-pressure casting machines, e.g. Nautilus® or Fornax® – due to its special composition
- Easy casting and reliable further processing
- A wide range of dental restorations are covered with only one alloy, e.g. veneered crowns or removable partial dentures
- Due to the high strength of the alloy you are always on the safe side, even with problematic situations such as long-span bridges

## Porcelain veneering

Wirobond® C can be veneered using composite or porcelain. All conventional veneering porcelains with corresponding CTE values can be used.

### The advantages for you:

- The element cerium contained in the alloy ensures a high bond strength with the porcelain
- No expensive bonder is required for producing a reliable metal-ceramic bond
- The durable, reliable bond minimises the risk of splitting off intraorally at a later date
- High degree of aesthetics with the porcelain of your choice

## Optimised for laser-welding technology

Wirobond® C is ideal for laser-welding due to the optimal, carbon-free composition. Solder and welding joints can be polished very easily and are no longer visible after polishing.

### The advantages for you:

- When welded correctly, a strength value can be attained that reaches the inherent strength of Wirobond® C
- A reliable, durable and biocompatible joint is possible by soldering and laser-welding



Exceptionally good bond strength with all leading ceramic materials

## Biocompatibility

The optimised chrome, molybdenum and tungsten content guarantees the excellent corrosion behaviour of Wirobond® C. These high purity elements produce a dense, adhering passive layer after casting that reliably protects against corrosion.

### The advantages for you:

- No cytotoxic potential, no skin irritations or allergic sensitisation
- Guarantee of biocompatibility
- Safety for the dentist and patient (biocertificate available at [www.bego.com](http://www.bego.com))

### Product details

Alloy characteristics	Standard values
• Alloy type (ISO 22674)	4
• Density	8.5 g/cm <sup>3</sup>
• Preheating temperature	900–1000 °C
• Solidus, liquidus temperature	1360, 1420 °C
• Casting temperature approx.	1500 °C
• Young's modulus	180 GPa
• Proof strength (R <sub>p0.2</sub> )	440 MPa
• Ultimate strength (R <sub>m</sub> )	780 MPa
• Elongation after fracture (A <sub>5</sub> )	16 %
• Vickers hardness (HV10)	315 HV10
• Coefficient of thermal expansion (CTE) 25–500 °C, 10 <sup>-6</sup> K <sup>-1</sup>	14.3

### Composition in % by mass

• Co 63.3 · Cr 24.8 · W 5.3 · Mo 5.1 · Si 1.0 · Ce

Availability	Presentation	Content	REF
• Wirobond® C	1 Pack	1000 g	50115
• Wirobond® C	1 Pack	250 g	50116

### Accessories

• Wiroweld CoCr laser wire, carbon-free			
Ø 0.5 mm	1 Pack	1.5 m – 2 g	50005
Ø 0.35 mm	1 Pack	2 m – 1.5 g	50003
• Wirobond® soldering rods	1 Pack	4 g	52622

ISO 22674 · ISO 9693-1

We reserve the right to make changes in the design, pack contents and composition. Statements and recommendations on technique are based on our experience and tests and should be regarded as guidelines. Date of issue: March 2017