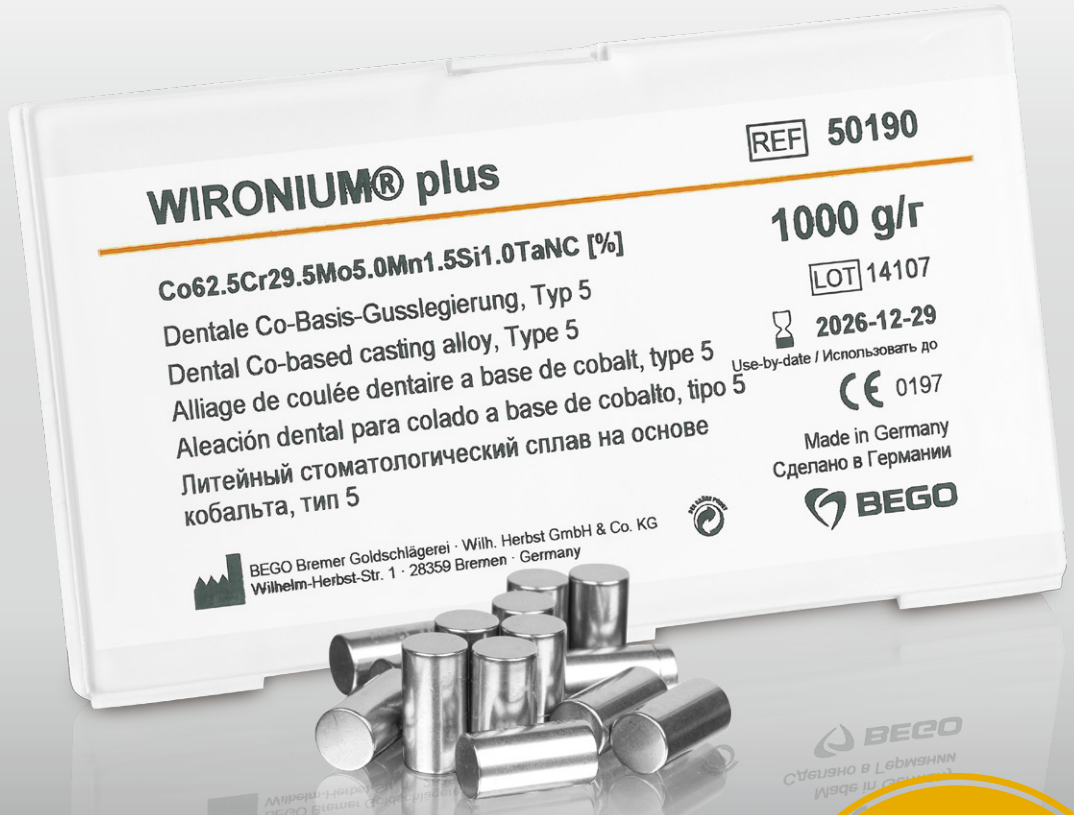

Exclusive for our IWC laboratories

WIRONIUM® plus

I.W.C.

Premium Cobalt-chrome partial denture alloy

- Enhanced version of the top-quality alloy WIRONIUM®
- Can be used universally in the field of combination work and clasp partial denture
- Very low thermal conductivity means high wearing comfort for the patient
- Increased elongation limit and high modulus of elasticity for high resistance to possible deformations caused by masticatory forces
- The high elongation limit minimises the danger of clasp fractures
- Controlled carbon content ensures excellent laser welding properties
- Biocompatible and corrosion-resistant

Partners in Progress

BEGO

A reliable universal alloy

WIRONIUM® plus cobalt-chrome alloy demonstrates that something "good" can still be improved upon. WIRONIUM® plus is the result of our research and development activities.
This universal alloy was systematically further developed from proven WIRONIUM® and is equally suitable for fixed/removable restorations and clasp dentures.

Enhanced properties

We achieved the outstanding properties by using a special alloy technique in the continuous casting process and the addition of tantalum. The proof strength and ultimate strength were increased without significantly altering the superior elongation at rupture. A denture fabricated using WIRONIUM® plus has a high resistance to deformation, whereby clasps can be easily activated. All aspects of the ISO 22674 requirements have been greatly exceeded.
WIRONIUM® plus is biocompatible and has no cytotoxic potential. The biocompatibility has been determined by our research department and confirmed with a biocertificate. The biocertificate is available at www.bego.com.
WIRONIUM® plus is ideal for laser-welding with Wiroweld due to its reduced carbon content.

Easy processing

This alloy is also basically processed using the proven BEGO system in exactly the same way as the other WIRONIUM® alloys. The system with WiroFine or Wiroplus® S investment and the Wirosil® duplicating flasks is advantageous. There is only a slight difference in the melting process and recognition of the casting point.

Flame melting:
When the molten metal is uniformly light and moves slightly due to the pressure of the flame.

Fornax® or other high-frequency casting machines:
2 seconds after dissipation of the dull film.

Nautilus®:
When the oxide film has completely dissipated, heat the alloy for a further 7 seconds and then cast.
Alternatively use the alloy programme. If alloy programme 154 is used, "Ready to cast" appears on the display.

WIRONIUM® plus is exclusively processed by the member laboratories of the I.W.C. – INTERNATIONAL WIRONIUM® CIRCLE.

Product details

Alloy characteristics	**Standard values**
• Alloy type (ISO 22674)	5
• Density	8.2 g/cm³
• Preheating temperature	950–1050 °C
• Solidus, liquidus temperature	1345, 1390 °C
• Casting temperature approx.	1440 °C
• Young's modulus	240 GPa
• Proof strength ($R_{p0.2}$)	715 MPa
• Ultimate strength (R_m)	1010 MPa
• Elongation after fracture (A_5)	14 %
• Vickers hardness (HV10)	350 HV10

Composition in % by mass

• Co 62.5 · Cr 29.5 · Mo 5.0 · Mn 1.5 · Si 1.0 · C · N · Ta

Availability	**Presentation**	**Content**	**REF**
• WIRONIUM® plus (is only supplied to I.W.C. laboratories)	1 Pack	1000 g	50190
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

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.

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