

 ceramil sintron®



AMANNGIRRBACH

The non-precious
metal revolution.





Non-precious metal frameworks reproducible, predictable and precise

High innovation power is incorporated in the Ceramill Sintron CoCr sinter metal from Amann Girrbach. The non-precious metal revolutionises the manufacturing process, as the wax-like texture of the Ceramill Sintron blanks (CoCr blanks) allows them to be effortlessly dry milled on in-house desktop machines. Thanks to the use of CAD/CAM technology the error-prone manual casting process is frequently replaced by the highest degree of process reliability, reproducible, predictable fit and framework quality. In contrast to manually fabricated non-precious metal frameworks, Ceramill Sintron restorations are distortion-free, without contraction cavities and are of consistently homogeneous quality. Ceramill Sintron can be veneered using any CoCr framework porcelain.

Ceramill Sintron was developed in collaboration with the Fraunhofer IFAM Dresden, Germany (www.ifam.fraunhofer.de). Independent universities and accredited test laboratories were commissioned with relevant material and procedure testing of Ceramill Sintron. Based on the excellent test results and feedback, the process and material quality has been validated at the highest level and guarantees maximum safety for the user and patient.



The highlights of Ceramill Sintron

- _ Digital material processing using Ceramill CAD/CAM ensures consistently high framework quality**
- _ Free from contraction cavitation and distortion**
- _ Biocompatible and corrosion resistant**
- _ Reproducible, predictable fit and framework quality thanks to digital processing technology**
- _ Excellent veneering results due to a uniform, homogeneous surface texture**
- _ FDA certified**



Indications

Indications:

- _ Telescope and conical crowns
 - _ Customised abutments on titanium bases
 - _ Multi-unit, screw-retained restorations on titanium bases
 - _ Anatomically reduced and fully anatomical crown and bridge frameworks* in the anterior and posterior region
- (*Bridge frameworks with a maximum of two connected pontics in the anterior and posterior regions and a maximum anatomical length of 50 mm (max. 4 units))

Contraindications:

- _ Known incompatibility to the components

Corrosion resistance and biocompatibility

Results for corrosion tests and biocompatibility		
Test start	Standard	Fulfilled?
Corrosion	DIN EN ISO 10271:2001	✓
Tarnish resistance	DIN EN ISO 22674:2006, Pkt. 8.6	✓
Static immersion test	DIN EN ISO 10271:2011-10, Pkt. 4.1	✓
Static immersion test	DIN EN ISO 10271:2011-10, Pkt. 4.5	✓
Sensitisation (allergenicity)	DIN EN ISO 10993-10	✓
Cytotoxicity (after 24 h and 72 h)	DIN EN ISO 10993-5	✓
Systemic toxicity	DIN EN ISO 10993-11	✓
Intracutaneous reactivity	DIN EN ISO 10993-10	✓

Ceramill Sintron successfully passed all corrosion and biocompatibility tests.

Ceramill Sintron fulfils all standard requirements in relation to corrosion resistance and biocompatibility that are applicable for metal materials in dentistry

Source: BIOSERV Analytik und Medizinprodukte GmbH, Rostock, Germany



Chemical composition

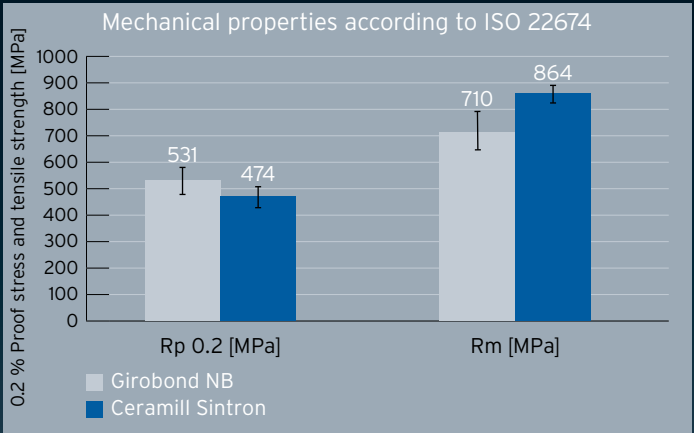
	Casting alloy	Sinter alloy
Components [%]	Girobond NB	Ceramill Sintron
Cobalt (Co)	62	66
Chrome (Cr)	25	28
Molybdenum (Mo)	5	5
Tungsten (W)	5	-
Silicon (Si)	1	< 1
Cerium (Ce)	< 1	-
Iron (Fe)	< 1	< 1
Niobium (Nb)	< 1	-
Manganese (Mn)	-	< 1

Both alloys are free of nickel, beryllium, gallium and cadmium in accordance with DIN EN ISO 22674:2007.

The chemical composition of Ceramill Sintron is comparable to that of CoCr casting alloys.

Source: Amann Girrbach R&D

Mechanical properties

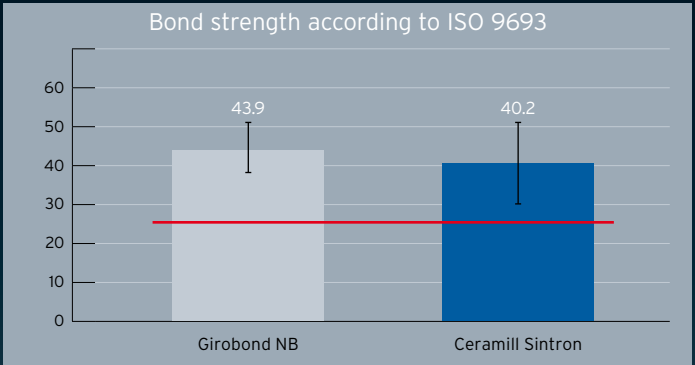


Ceramill Sintron greatly surpasses the strength requirements of ISO 22674 for Class 4 alloys (Rp 0.2 : 360 MPa).

The strength values are comparable with those of CoCr casting alloys.

Source: Amann Girrbach R&D

Bond strength



The coefficient of thermal expansion (25-500 °C) of Ceramill Sintron is $14,5 \times 10^{-6}/K$.

Ceramill Sintron can therefore be veneered with all conventional non-precious metal veneering porcelains.

The bond strength of Ceramill Sintron to veneering porcelain (in this case Creation CC) is comparable to the bond strength between CoCr casting alloys and veneering porcelain.

Source: Amann Girrbach R&D



Luting - conventional cementation

Conventional luting using commercially available cements is possible in the majority of cases due to the high strength and stability of Ceramill Sintron frameworks.

Care should be taken when cementing conventionally to ensure adequate retention and a corresponding minimum height of 3 mm for the prepared teeth.



Ceramill Sintron -
discover online!

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