en

Wiron® 99

Ni65.0Cr22.5Mo9.5Si1.0NbMnCe [%]

CE 0197

Instructions for use

Dental Ni-based metal-ceramic alloy, Type 3

Wiron® 99 is available as cylinders.

Wiron® 99 complies with ISO 22674 and ISO 9693-1.

REF 50225 – 1000 g; REF 50226 – 250 g

Alloy characteristics

Acccording to ISO 22674 free of cadmium, beryllium and lead		
Type (accord. to ISO 22674)		3
Density	g/cm³	8.2
Preheating temperature	°C	900–1000
Solidus, liquidus temperature	°C	1250, 1310
Casting temperatur	°C	1450
Young's modulus	GPa	200
Proof strength ($R_{p\,0,2}$)	MPa	330
Ultimate strength (R_m)	MPa	650
Elongation after fracture	%	45
Vickers hardness (HV10)		180
BEGO color code		8
(cast/after ceramic firings)		
Coefficient of thermal expansion (CTE)		
25 – 500 °C, 10^{-6} * K^{-1}		13.8
20 – 600 °C, 10^{-6} * K^{-1}		14.0
Investment material:	phosphat bonded, e. g. Bellavest SH (REF 54252)	
Crucible material	ceramic	
Melting powder	Wiromelt (REF 52526)	
Veneering ceramic	Ceramic with suitable CTE, e. g.: VITA VMK Master	
Oxidation firing	not recommended but if control firing is wished: 900 °C/5 min/ vac	
Heating rate	recommended max. 55 °C/min	
Flux	e. g. Minoxyd (REF 52530)	
Brazing material before firing:	Wiron®-Lot (REF 52625)	
Brazing material after firing:	–	
Laser wire:	Wiroweld NC (REF 50006)	

Intended use: Nickel-based metal-ceramic alloys are indicated for casting of dental restorations.

Indication: Wiron® 99 is a nickel-based dental casting alloy. It is suitable for the fabrication of crowns, bridges as well as metal-ceramic restorations.

Contraindications: No contraindications are known. However, unwanted biological reactions such as allergies to contents of the alloy or electrochemically based reactions may very rarely occur. In case of known incompatibilities and allergies to contents of the metallic material it should not be used.

Warnings: Metal dust is harmful to your health. When grinding and blasting use suitable air extraction system / ventilation at the workplace and breathing mask type FFP3-EN149!

Precautions: In case of occlusal or approximal contact with a different alloy electrochemically based reactions may very rarely occur. Safety and effectiveness in treatment of children or treatment of pregnant or nursing woman have not been established. Wiron® 99 may influence negatively the interpretation of MRI investigations.

Adverse reactions: No adverse reactions are known. Nevertheless, the rare case of occurrence of individual reactions against single components of Wiron® 99 can never be excluded completely. In this case, the application of Wiron® 99 should not be continued.

Prescription device: Caution: US Federal law restricts this device to sale by or on the order of a licensed dentist.

Wax up: Minimum metal thickness (after grinding) 0.3 mm. Avoid sharp edges and corners. Framework should be anatomic reduced. Connectors should be modeled as strong and high as possible (height: min. 3.5 mm, width: min. 2.5 mm). In case of bruxismn stronger modellation is required. Use wax or plastic hollow sticks. Do not taper the spruing.

Investing: Use only phosphate bonded investment material.

Casting: Do not overheat alloy. Use only pure alloy in own crucibles. For an explicit batch tracing the use of only fresh alloy is recommended. In case of re-casting use only identical alloys. Re-casted material must be blasted thoroughly. Use min. 50 % fresh alloy. If applicable use melting powder. Follow the instructions of the manufacturers of the casting devices for parameters and casting procedures. After casting the mould should cool down slowly.

Grinding: use tungsten carbid burs

Polishing: To ease polishing blasting with Perlablast® micro (REF 46092, lead free soda glas) may be suitable. Afterwards polish with rubber polisher and brushes with suitable polishing paste.

Ceramic veneering: Use veneering ceramics with suitable CTE (ISO 9693-1). Follow instructions of use of ceramic manufacturers. The oxides must be blasted (250 µm/3–4 bar; e. g. with Korox 250, REF 46014). Clean surface thoroughly by steam cleaning or boiling in aqua dest. Do not touch surfaces afterwards with hands. Use artery clamps or similar devices.

Support the frameworks adequately during firing cycles.

Acrylic veneering: For veneering with acrylic material follow the recommendations of the manufacturers

Soldering/brazing: Fixate the parts with soldering investment material (e. g. Bellatherm® REF 51105). The prepared gab shall not exceed 0.2 mm with parallel walls. Use a suitable BEGO flux. The flux residues and oxides must etched off. Clean surface thoroughly by steam cleaning or boiling in aqua dest.

Laser welding: If applicable use V-seam and filler material. Follow manufacturer's instructions for use and hazard notes of the laser welding devices.

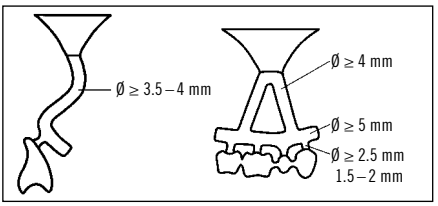
Limit of Liability: Except where prohibited by law, BEGO Bremer Goldschlägerei Wilh. Herbst GmbH & Co. KG will not be liable for any loss or damage arising from this product, whether direct, indirect, special, incidental or consequential, regardless of the theory asserted, including warranty, contract, negligence or strict liability.

Storage conditions: none

Warranty: Whether given verbally, in writing or by practical instructions, our recommendations for use are based upon our own experience and trials and can be considered as standard values. Our products are subject to a constant further development. Therefore alterations in construction and composition are reserved.

US Labeling requirements: The device labeling meets the recommendations of FDA applicable guidence documents.

Any serious incident that has occurred in relation to Wiron® 99 should be reported to BEGO Bremer Goldschlägerei Wilh. Herbst GmbH & Co. KG and the competent authority.



Consult instructions for use

Caution

Use-by-date

LOT
Batch code

NON STERILE
Non-sterile

Rx only
For professional use only

REF
Catalogue number

Manufacturer

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BEGO

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