

# Mediloy M-Co

Co63.8Cr24.8W5.3Mo5.1Si1.0 [%]

CE 0197

## Instructions for use

Dental Co-based metal-ceramic milling material, Type 4  
Mediloy M-Co is supplied in disc form for the milling process.  
Mediloy M-Co complies with ISO 22674 and ISO 9693-1.

### REF

Blanks, Ø 98 mm

Height (mm)	8	10	12	14	18
without shoulder	50939	50940	50941	50942	50944
Height (mm)	8	10	12	14	16
With shoulder	–	–	50951	50952	50953
Height (mm)	18	20	22	25	
With shoulder	50954	50955	50956	50957	

### Alloy characteristics

According to ISO 22674 free of nickel, beryllium cadmium and lead

Type (accord. to ISO 22674)	4	
Density	g/cm <sup>3</sup>	8.6
Young's modulus	GPa	235/240*
Proof strength (R <sub>p0.2</sub> )	MPa	375/370*
Ultimate strength (R <sub>m</sub> )	MPa	920/835*
Elongation after fracture (A <sub>5</sub> )	%	27/20*
Vickers hardness	HV10	290/285*
BEGO color code	8 (white)	

Coefficient of thermal expansion (CTE)  
25 – 500 °C, 10<sup>-6</sup> K<sup>-1</sup> 14.4\*

(as machined / \* simulated ceramic firings)

Veneering ceramic	Ceramic with suitable CTE, e. g.: VITA VMK Master
Oxidation firing	not recommended, but if control firing is wished: 5 min at 900 °C/preferably under vacuum
Highest recommended firing temperature	980 °C
Heating rate	recommended max. 55 °C/min
Flux	e. g. Minoxyd (REF 52530)
Brazing material before firing:	Wirobond®-Lot (REF 52622)
Brazing material after firing:	–
Laser wire:	Wiroweld (REF 50003, 50005)

**Intended use:** Mediloy M-Co is indicated for the fabrication of dental restorations by milling.

**Indication:** Mediloy M-Co is a cobalt-based dental alloy for milling. It is suitable for the fabrication of crowns and bridges or metal-ceramic crowns and bridges, as well as implant prosthetics.

**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 women have not been established. Mediloy M-Co 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 Mediloy M-Co cannot be excluded completely. In this case, the application of Mediloy M-Co should not be continued.

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

**Digital wax up:** Use appropriate CAD software and follow the common dental design rules. Minimum metal thickness (after grinding) 0.3 mm, implant prosthetics with screw channels 0.5 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).

**Storage conditions:** Dry.

**Milling process:** Mediloy M-Co is compatible with following milling machines: Røders (e.g. RXD5, RXD5C). Please follow the instructions of the manufacturer of the devices.

**Caution when removing blanks:** The material may be hot or sharp-edged. When using cooling/lubricating agents for milling, ensure complete final cleaning of surfaces!

**Removal of restorations from blanks:** Avoid dust formation! After cooling down, remove the restorations using e. g. a rotary cutter.

**Caution:** Do not rework abutment interfaces.

**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 and clean surface thoroughly by steam cleaning or boiling in aqua dest.

**Caution:** The cast-on technique is not applicable for Mediloy M-Co.

**Ceramic veneering:** For abutments and implant-supported screw-retained bridges, ceramic firings must not be carried out.

Use veneering ceramics with suitable CTE (ISO 9693-1). Follow instructions of use of ceramic manufacturers. Before ceramic firings the framework must be blasted (250 µm/3-4 bar; e. g. with Korox® 250, REF 46014). Where applicable the oxides after control firing 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:** Objects with implant interfaces shall not be soldered!

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 be etched off. Clean surface thoroughly by steam cleaning or boiling in aqua dest.

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

**No reuse of milled material:** Already milled material (e. g. a bridge, a bar or remaining material) shall not be used for re-fabrication of dental restorations (e. g. by casting). The blanks may be used after several clampings until no more dental restorations can be milled from the remaining material.

**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.

**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 guidance documents.

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



Consult instructions for use



Caution



Catalogue number



Serial number



Use-by-date



Non-sterile

**Rx only**  
For professional use only



Batch code



Keep dry



Manufacturer

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