

Instructions for use & technical data

CopraEasyMill NP



Technical data

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Manufacturer: Whitepeaks Dental Solutions GmbH & Co. KG
Langeheide 9 - 45239 Essen – Germany

Product/ Product type: sintered, hard Co/Cr blanks for the production of individual dental restorations

Product form: discs and blocks in different sizes, partly with frames/ holders

Material type: Cobalt/ chrome alloy (type 4) - medical device class IIa

CE marking: **CE0483**

Circle of users: Instructed users who produce individual dental restorations

Indication/ intended use

CopraEasyMill NP is exclusively suitable for the production of dental products.

Indication

-) anatomical reduced copings and pontics in anterior and posterior area
-) bridges up to 14 units or bridges with small diameters
-) primary and secondary telescopic crowns
-) clasps, bars and retention constructions
-) full anatomical crowns and bridges in anterior and posterior area
-) restorations with small diameters which are exposed to high forces
-) free end bridge constructions with maximum 1 pontic
-) supra constructions for implant cases
-) removable prosthesis

CopraEasyMill NP is a type 4 co/cr alloy.

Contraindication

Do not use in case of proven hypersensitivity against the alloy or one of its components.

Veneer ceramics

Co/cr veneering porcelain

Material properties / technical data

Composition:

Co	balance
Cr	26,5 – 30%
Mo	4,5 – 7%
Si	0 – 1%
Mn	0 – 1%
Fe	0 – 1%
C	0 – 0,35%
others	< 1%

Mechanical properties:

yield strength 0,2%	475 MPa
tensile strength	731 MPa
elongation at break %	11%
contraction at break %	14%
elasticity modulus	186 GPa
density	7,8 g/cm ³
corrosion resistance	< 200 µg/cm ²
coefficient of thermal expansion	13,74 x 10 ⁻⁶ /K
Vickers hardness	220 HV1
tarnish resistance	yes

Specification

CopraEasyMill NP blanks are isostatically pressed and hard sintered blanks made from biocompatible co/cr alloy for dental restorations. They are made of an extremely fine powder, first axially pressed, then each blank is isostatically repressed. After that they go through a debinding process before being sintered to their final hardness.

No sintering process has to be done by the user.

Due to the manufacturing process of powder alloys, all disadvantages of cast alloy blanks can be eliminated. Cast blanks often tend to be inhomogeneous and have crystalline structures and hard dendrites within their microstructure. This is caused by the large amount of molten alloy cooling down, forming these imperfections.

CopraEasyMill NP blanks have an absolute homogeneous microstructure. They are easy to mill and polish. After milling they are adjusted and polished normally and can be veneered or over pressed with porcelain or ceramics. CopraEasyMill NP Blanks can be milled wet or dry.

Instructions for use

Processing of frameworks

CopraEasyMill NP blanks can be milled with all dental CAD/CAM milling machines suitable for co/cr milling.

Removal of frameworks

Cut out and smoothen the surfaces of milled frameworks with carbide burs or separating discs. Please use the same rotating instrument only for one alloy to avoid contamination.

Veneering with ceramic

All commercial veneering porcelains with a thermal expansion coefficient of 13,8 – 15,2 can be used. Please follow the instructions for use of your chosen veneering porcelain manufacturer.

The minimum thickness of the prepared coping should not be less than 0.3 mm. It is recommended to sandblast the frames with minimum 110 µm of aluminium oxide with 3-4 bar and clean with steam cleaner. Oxide firing is not mandatory but can be done as an option for 5 minutes at 980 °C with vacuum (cleaning firing). The frame needs to be sandblasted with aluminium oxide with about 110 µm and 3-4 bar to remove the present oxide layer thoroughly. In the end the cleaning by steam cleaner is mandatory. If you use a ceramic bonder please consider the instructions for use of the manufacturer.

Soldering

We recommend a chrome cobalt soldering metal for soldering. CopraEasyMill NP frames should not be soldered with gold or palladium solders. CopraEasyMill NP is easy to weld with a dental laser.

Safety instructions

Warning: Dust from CopraEasyMill NP can lead to skin/ eye irritation and damage the lung. Always wear a facemask (filter class FFP3), protective gloves and goggles while processing CopraEasyMill NP blanks. Turn on the extraction system with a filter class Hepa H at all times. Avoid contact with mucous membranes.

Storage

No special storage conditions

Disposal

See safety data sheet.

Explanation of the markings on the packaging



Symbol for „item number“



Symbol for „LOT number“

CE0483 Confirmation: The product complies with the applicable European directives.



Symbol for „number of products in package“



Symbol for „follow the instructions for use“