Instructions for use & technical data CopraBond K

Technical data

Manufacturer:	Whitepeaks Dental Solutions GmbH & Co. KG
	Langeheide 9 - 45239 Essen - Germany
Product/ Product type:	Metal alloy blanks for the production of individual dental restorations
Product form:	Metal blanks in different diameter and thickness
Material type:	Cobalt/ chrome alloy (type 4) – medical device class IIa
Circle of users:	Instructed users who produce individual dental restorations

Indication/ intended use

CopraBond K 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

CopraBond K 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:		Mechanical properties:	
Co	59,0% - 63,0%	**yield strength 0,2%**	~ 360 – 484 MPa
Cr	27,0% - 29,0%	**elongation at break in percent**	> 2 - 16 %
W	8,0% - 9,0%	**tensile strength**	~ 400 - 900 MPa
Mn	0,15% - 0,35%	**density**	~ 8 – 9 g /cm³
Fe	0,0% - 0,5%	**corrosion resistance**	< 200 µg cm^2
Si	1,5% - 1,8%	**tarnish resistance**	yes
C	0,0% - 0,1%	**Vickers hardness**	~ 270 - 450 HV 10/30
		coefficient of thermal expansion	14,1 x 10 $^{-6}$/K

Specification

CopraBond K is a nickel- and beryllium free cobalt/ chrome blank, specially designed for CAD/CAM applications. The material is very homogenous and easy to mill, also it is suitable for laser welding.

Instructions for use

Removal of frameworks

Cut out and smoothen the surfaces of milled frameworks with carbide burs or separating discs. Please use the same cutter 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´s 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. CopraBond K frames should not be soldered with gold or palladium solders. CopraBond K is easy to weld with a dental laser.

Safety instructions

Warning: Dust from CopraBond K can lead to skin/ eye irritation and damage the lung. Always wear a facemask (filter class FFP3), protective gloves and goggles while processing CopraBond K 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

| REF | Symbol for „item number" |

| LOT | Symbol for „LOT number" |

CE_{0483} Confirmation: The product complies with the applicable European directives.

Symbol for „number of products in package"

Symbol for „follow the instructions for use"

Rx only   Symbol for "Caution: US Federal law ristricts this device to sale by or on the order of a licensed physician or dentist."