Instructions for use & technical data
CopraSintec solid-K

technical data	date of issue: 2/2/2016
manufacturer:	Whitepeaks Dental Solutions GmbH & Co. KG Langeheide 9 - 45239 Essen - Germany
product / product type:	**alloy blank** for manufacturing dental restorations
product shape:	discs and blocks in different, partly with frames or holders
material type:	cobalt / chrome alloy in pressed powder compound (type 4 alloy)
CE-mark:	CE 0483
users:	educated users who manufacture dental restorations with CAD/CAM milling systems
veneering porcelain:	co/cr veneering porcelain (e.g. Vita*, Ivoclar*, DeTrey Dentsply*, Wieland*, Noritake* Wohlwend*, Ducera*, Ceramco*, etc.) the names marked with a * are registered names or trademarks of the respective manufacturers,
contra indikation:	do not use proven allergy or hypersensitivity agains the alloy or its components.

composition		**technical data** (data after final sintering with specified sintering parameters)			
cobalt	balance	0,2% yield strengths	480MPa	density	7,59g/cm^3
Chrome	26,5 – 30%	tensile strengths	864MPa	corrosion stability	< 200 µg/cm^2
molybdenum	4,5 – 7%	fracture elongation	22%	thermal coefficient rate	14,26x10^{-6} K^{-1}
silicium	0 – 1%	contraction at fracture	16%	vickers hardness HV1	224
manganese	0 – 1%	modulus of elasticity	178GPa	tarnish proofness	
iron	0 – 1%				
carbon	0 – 0,35%				
other	<1%				

description and intended use:
CopraSintec solid-K Blanks are isostatically pressed and hard sintered blanks made from biocompatible co/cr alloy for dental restorations. After sintering, the restorations are adjusted, polished as usual and can be veneered with porcelain or over pressed.
CopraSintec solid-K Blanks can be milled wet or dry.
CopraSintec K is a medical product class IIa.

Indications

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

removal of frameworks: Cut out, fettle 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 porcelain: 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 instruction for use of the manufacturer.

Soldering: We recommend a chrome cobalt soldering metal for soldering. CopraSintec solid-K frames should not be soldered with gold or palladium solders. CopraSintec solid-K is easy to weld with a dental laser.

Cleaning: Please clean framework made from CopraSintec solid-K by steam cleaning or in distilled water by using an ultrasonic unit.

Polishing: Remove oxides after firing by blasting with gloss pearls. Finish with rubber stones and polishing paste.