Instructions for use & technical data
Arum CoCr Disc

PRODUCT : MOGUCERA C

Cobalt-Chromium bonding alloy for the manufacturing of removable and fixed restorations by CAM Milling.
The alloy is a type 4 alloy according to ISO22647. Free of beryllium and nickel.
This alloy is to be used by qualified and trained staff for the designated applications.

INDICATIONS :
Individual crowns as well as multi-unit front-teeth and posterior bridges, crown and bridge frames for metal ceramics, telescopic and conical crowns, supraconstructions on implants, abutments.

NOMINAL ANALYSIS IN MASS PERCENT:

Nominal values of the alloy composition			
Co	Cr	Mo	Other constituents: C, Si, Nb, Mn, Fe
65.0%	29.0%	5.0%	< 1.0%

PROPERTIES (TARGET VALUES):

Nominal values of the alloy porperties			
Technical properties		Other properties	
Properties	Standard values	Properties	Standard values
Proof stress (Rp0.2)	413 MPa	Density	8.3 g/cm^3
Ultimate tensile strength	597 MPa	Thermal expansion coefficient	
Tensile elongation	12%	25 - 500'C 25 - 600'C	14.5 x 10^{-6} K^{-1} 14.8 x 10^{-6} K^{-1}
Elastic modulus	206 GPa	Biocertificate	Yes
Vickers hardness	288 HV 10	Laser weldable	Yes

MODEL:
The crown walls of the virtual model shall be at least 0.4 mm so that the final wall thickness after finishing or before ceramic and acrylic veneering will be at least 0.3mm. Avoid sharp edges and undercut areas. Pontics are to be designed as thick and high as possible.

GENERAL INFORMATION:
The processing tools required are clean carbide burs according to the specifications of the manufacturer of the CAM-unit.

FRAMEWORK SEPARATION:
Separate machined frameworks from blanks with suitable cutting discs or crosscut carbide burs.

FINISHING AND CLEANING:
Sandblast frameworks after separation using aluminium oxide (approx. 110 - 25 µm). Trim frameworks withclean carbide burs suitable for CoCr alloys or with diamond burs. Only trim in one direction in order to avoid overlapping that might result in bubbles during the subsequent ceramic build-up. Also obey to themaximum r.p.m. (revolutions per minute) recommended. Clean the surfaces to be veneered afterwards with fresh aluminium oxide (approx. 110 - 250µm) at a pressure of 2-4 bar. Thoroughly steam clean framework or clean under running tap water. Degrease with ethl alcohol.

OXIDE-FIRING:
No oxide-firing necessary. If oxide-firing is optionally performed in order to visually check the metal surface. Sandblast again with fresh aluminium oxide (approx. 110-250 µm). Clean framework again.

VENEERING:
It is recommended to fire the opaque in two stages. The ceramic build-up should be performed according to the ceramic manufacturer's instructions, especially what the cooling-time after firing is concerned.

SOLDERING (IF NECESSARY):
The soldering model should be kept as small as possible; preheat model in furnace for 10min at 600’C. Already before heating, the surfaces to be soldered should be covered with flux. The gap should not be larger than 0.2mm. Let soldered objects cool down slowly. After opaque firing no soldering should be performed anymore.

LASER WELDING:
As filler wire commonly available laser welding wires suitable for the alloy are to be used (e.g. S&S Schefter StarWire). Obey to the welding parameters recommended by the manufacturer of the welding laser.

POLISHING:
Smooth out the visible metal surfaces by grinding with ceramic bonded stones. Finish with rubber polishers, pre-polish with S&S Schefner Black Diamond pre-polishing paste and polish with suitable polishing paste until high-polish effect is reached.
Finally carefully steamclean or clean with unltrasonic cleaner.

PACKAGING:

with deging			without edging		
REF	thickness/diameter	content	REF	thickness/diameter	content
138108	8 mm ø 98.3 mm	1pc.	138008	8 mm ø 99.5 mm	1pc.
138110	10 mm ø 98.3 mm	1pc.	138010	10mm ø 99.5 mm	1pc.
138112	12 mm ø 98.3 mm	1pc.	138012	12mm ø 99.5 mm	1pc.
138113	13.5 mm ø 98.3 mm	1pc.	138013	13mm ø 99.5 mm	1pc.
138115	15 mm ø 98.3 mm	1pc.	138015	15mm ø 99.5 mm	1pc.
138116	16 mm ø 98.3 mm	1pc.	138016	16mm ø 99.5 mm	1pc.
138118	18 mm ø 98.3 mm	1pc.	138018	18mm ø 99.5 mm	1pc.
138125	25 mm ø 98.3 mm	1pc.	138025	25mm ø 99.5 mm	1pc.
138130	30 mm ø 98.3 mm	1pc.	138030	30mm ø 99.5 mm	1pc.

APPLIED STANDARDS:
DIN EN ISO 14971, DIN EN ISO 22674, DIN EN ISO 15223, DINEN ISO 1041, DIN EN ISO1641