

CobaltChrome SP2

CobaltChrome SP2 is cobalt based metal-ceramic alloy intended for production of Porcelain-Fused to Metal (PFM) dental restorations (crowns, bridges, etc.). CobaltChrome SP2 powder is class IIa medical device in accordance with annex IX rule 8 of the MDD 93/42/EEC. Composition corresponds to “type 4” CoCr dental material according to EN ISO 22674. CobaltChrome SP2 is contraindicated for patients and users with a history of sensitivity to one or more of the metals contained in the alloy. In case of occlusal or approximal contact of different alloys electrochemically based reactions may very rarely occur.

Technical data	
General process and geometrical data	
Smallest wall thickness	0.4 mm - 0.5 mm
Physical and chemical properties of the parts	
Material composition	Co (63.8 wt-%) Cr (24.7 wt-%) Mo (5.1 wt-%) W (5.4 wt-%) Si (1.0 wt-%) Fe (≤ 0.50 wt-%) Mn (≤ 0.10 wt-%) Free of Ni, Be and Cd
Relative density	approx. 100 %
Density	8.5 g/cm ³
Mechanical properties of the parts	
Proof strength (Rp 0.2%)	850 MPa
Ultimate tensile strength	1350 MPa
Percent elongation	3 %
Modulus of elasticity	approx. 200 GPa
Hardness (Vickers hardness)	420 HV
Thermal properties of parts	
Coefficient of thermal expansion	
- over 25 - 500 °C	14.3 x 10 ⁻⁶ m/m °C
- over 20 – 600 °C	14.5 x 10 ⁻⁶ m/m °C
Melting range	1410 - 1450 °C