Cobalt Chrome CoCrMoW

CoCrMoW · Dental

Tungsten-bearing cobalt chrome powder for LPBF dental copings, frameworks, and partial-denture structures.

Designations: CoCrW · CoCrMoW · Dental cobalt chrome

Supply

Item	Value
Particle-size cuts	15–45 µm · 15–53 µm
Processes	LPBF
Minimum pack	1 kg (paid samples)
Packaging	Aluminium-foil bag · 1 kg sealed pack · Drum
Documents	Lot-specific COA · Particle-size report · Safety data sheet · Chemistry report
List price	Price on request

Chemical composition, wt.%

Element	Limit
Co	Balance
Cr	24.5–28.5
Mo	4.5–6.5
W	4.0–6.0
Si	≤2.0
Mn	≤1.0
C	≤0.35
Fe	<0.5
O	<0.1
N	<0.2

Typical partner-plant datasheet limits, wt.%. The quoted lot COA governs.

Powder properties · LPBF screening window

Property	Value	Note
D10	≥12 μm	
D50	25–40 μm	
D90	≤65 μm	
Sphericity	≥0.85	Method to be confirmed
Apparent density	≥4.0 g/cm³	
Tap density	≥4.5 g/cm³	
Flow	≤25 s/50 g	Method and conditioning to be confirmed

A partner-plant datasheet screening basis for this grade; the delivered lot COA remains controlling.

Typical mechanical properties

Condition	Temperature	Tensile	Yield	Elongation	Note
Heat treated	Room temperature	≥1000 MPa	≥750 MPa	≥8%	

Partner-plant datasheet values for LPBF test bars at room temperature unless stated. Printed-part properties depend on machine, parameters, orientation, and post-processing.

Dental-relevant datasheet values

Item	Value
Young's modulus	≥150 GPa
Coefficient of thermal expansion	14.1 ± 0.5 ×10^{-6} K^{-1}
Metal–ceramic bond strength	≥25 MPa
Vickers hardness	≥300 HV10

Partner-plant datasheet values for heat-treated specimens. Confirm the CTE temperature range and the metal–ceramic bond test method against the full datasheet; compatibility with a specific veneering ceramic is shown only by testing that combination (ISO 9693).

Typical values, not a lot certificate. The certificate of analysis for the quoted lot governs. Formal quotations and commercial terms are valid only when issued from our official corporate email.

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