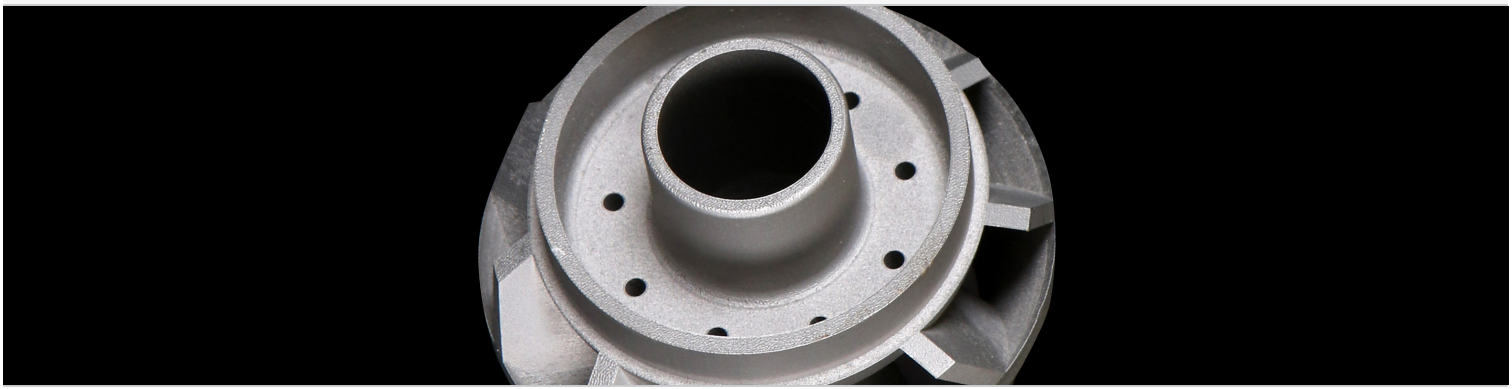
CoCrMo alloy

for ProX™ 100, 200 and 300 Direct Metal Printers

Metal powder for additive manufacturing of highly corrosion-resistant industrial parts that require high temperature resistance

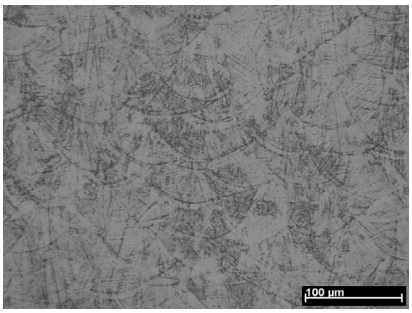


Technical Data

Chemical Composition

Ni-free alloy.[1]

Element	% of weight
Co	Balance
Cr	28.0 - 30.0
Mo	5.0 - 6.0
Si	0.0 - 1.0
Mn	0.0 - 1.0
Fe	0.0 - 0.50
C	0.0 - 0.02



CoCrMo part microstructure after recommended heat treatment

Mechanical Properties[2]

	Condition	As-built[3]	After post heat treatment[4]
Ultimate Tensile Strength, MPa	ASTM E8	1200 ± 100	1260 ± 100
Yield Strength, MPa	ASTM E8	850 ± 100	900 ± 100
Elongation at break, %	ASTM E8	10 ± 2	15 ± 2
Hardness		na	500 ± 20 HV5
Density		approx. 100%	

[1] This chemical composition is suitable for biomedical applications
[2] Parts built on a ProX 200 Direct Metal Production Printer
[3] As-built refers to the state of components built on the ProX 200 Direct Metal Printer before any post processing except removal from the build platform
[4] Recommended post heat treatment at 800 °C for 1h (exact time dependent on part volume)

Applications

- Turbine and engine components
- Design and watchmaking products
- Parts with thin walls or fine features
- Mechanical components needing wear and corrosion resistance

Features

- High strength
- Excellent wear resistance
- Good elasticity
- Good corrosion resistance
- High temperature resistance

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