LaserForm® 17-4PH (B)

for ProX® DMP 100, 200 and 300 Direct Metal Printers

General purpose metal powder with high strength, good corrosion resistance and thermal properties.

Chemical Composition

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ELEMENT	% OF WEIGHT
Fe	Balance
Cr	15 - 17.5
Ni	3 - 5
Cu	3 - 5
Si	< 1.0
Mn	< 1.0
Nb	0.15 - 0.45

Mechanical Properties[1]

	CONDITION	AS-BUILT[2]	AFTER POST HEAT TREATMENT[3]
Ultimate Tensile Strength, MPa	ASTM E8	1100 ± 50	1300 ± 50
Yield Strength, MPa	ASTM E8	620 ± 30	1100 ± 50
Elongation at break, %	ASTM E8	16 ± 2.0	10 ± 2.0
Hardness		300 ± 20 HV5	400 ± 20 HV5
Density		approx. 100%	

[1] Parts built on a ProX DMP 200 Direct Metal Production Printer

[2] As-built refers to the state of components built on the ProX DMP 200 Direct Metal Printer before any post processing except removal from the build platform

[3] Different post heat treatments might be applied for this type of alloy

Applications

Industrial grade prototypes, production parts or spare parts for:

- Aerospace
- Chemical and petrochemical industry
- Energy sector
- Surgical instruments
- High-wear components
- General metalworking

Features

- Outstanding combination of high strength and good corrosion resistance
- Excellent mechanical properties at elevated temperatures — up to 300 °C
- High hardness
- Good thermal properties

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