



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 LaserForm 17-4PH (B)

| 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 Properties¹

| | 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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