

ADDITIVE MANUFACTURING POWDER

N700 AMPO / FE-BASED ALLOYS

Available Product Shapes

45 - 90 µm

Product Description

BÖHLER N700 AMPO (17-4 PH) is a precipitation hardening nickel martensitic steel. Thanks to its alloying system, this material has excellent corrosion resistance. Can be printed very easily without additional heating of the platform or chamber and, after solution annealing and aging, hardens up to approx. 40 HRC.

Properties

Particle size distribution 15 - 45 µm:

| | |
|-------------------|-------------------------|
| D10[µm] | 18 - 24 |
| D50[µm] | 29 - 35 |
| D90[µm] | 42 - 50 |
| Apparent density* | ≥ 3.4 g/cm ³ |

Measurement of particle size distribution according to ISO 13322-2 (Dynamic image analysis methods);

* Measurement of apparent density is based on ASTM B964 resp. DIN EN ISO 3923-1 and relates to our typical measured values

Achievable mechanical properties of printed part after heat treatment:

| | |
|-------------------------------------|----------------|
| Tensile strength (Rm) | 1150 ± 150 MPa |
| Yield strength (RP _{0.2}) | 1050 ± 150 MPa |
| Elongation (%) | 18 ± 3 |
| Hardness | 36 to 43 HRC |
| Impact toughness (ISO V) | 75 - 230 J |

Particle size distribution 45 - 90 µm:

Details on request

| Material designation | |
|----------------------|--------------|
| 1.4542 | SEL |
| 17-4 PH | Market grade |

Chemical composition

| C | Cr | Ni | Cu | Nb |
|------|-------|------|------|------|
| 0.04 | 16.25 | 4.00 | 4.00 | 0.34 |

For more information see www.voestalpine.com/boehler-edelstahl

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