

ADDITIVE MANUFACTURING POWDER

L718 AMPO / NI-BASED ALLOYS

Available Product Shapes

| | |
|------------|------------|
| 15 - 45 µm | 45 - 90 µm |
|------------|------------|

Product Description

The BÖHLER L718 AMPO is a hardenable nickel-base super alloy. This high heat-resistant material shows good strength properties at elevated temperatures up to 750 °C, as well as excellent creep resistance up to 700 °C. In addition, it shows excellent corrosion resistance and good printability. Essentially, the same properties can be achieved with printed components made from this powder as with bar material.

Properties

Particle size distribution 15 - 45 µm:

Apparent density* 3.96 g/cm³

* Measurement of particle size distribution is based on ISO 13322-2 (Dynamic image analysis methods); Flowability and apparent density are based on DIN EN ISO 4490 resp. DIN EN ISO 3923-1.

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

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

Achievable mechanical properties of printed part after heat treatment*:

| | |
|-------------------------------------|---------------|
| Tensile strength (Rm) | 1400 ± 50 MPa |
| Yield strength (RP _{0.2}) | 1180 ± 50 MPa |
| Elongation (%) | 18 ± 3 |
| Hardness | 46 ± 3 HRc |

*Mechanical strength according to heat treatment AMS5663 RT

Particle size distribution 45 - 90 µm:

Details on request

Applications

- > 3D Printing - direct metal deposition
- > Automotive
- > Comp. for Industrial Gas Compressors
- > Oth. Automotive components (Turbochargers, Piston Rings, Sensors, etc.)
- > 3D Printing - selective laser melting
- > Automotive Racing
- > CPI (inc. LNG, Urea)
- > Other Aerospace Comps.
- > Other Oil and Gas + CPI comps.
- > Powder for additive manufacturing
- > Aerospace
- > Civil and mechanical engineering
- > Oil & Gas
- > Other Components
- > Other Power Generation Components
- > Unknown Components Application

Material designation

| | |
|--------|-----|
| 2.4668 | SEL |
|--------|-----|

Chemical composition

| C | Cr | Mo | Ni | Ti | Al | Nb | B | Fe |
|------|-------|------|-------|------|------|------|-------|------|
| 0.04 | 19.00 | 3.05 | 52.50 | 0.90 | 0.50 | 5.13 | 0.004 | Rest |

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

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ONE STEP AHEAD.