ADDITIVE MANUFACTURING POWDER

L718 API AMPO / NI-BASED ALLOYS

Application Segments

Additive Manufacturing Application

Available Product Variants

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.

Process Melting

VIGA

Applications

- 3D Printing - direct metal deposition
- Motorsport industry
- CPI (incl. LNG, Urea)
- Other Components
- Powder for additive manufacturing
- 3D Printing - selective laser melting
- Civil and mechanical engineering
- Oil & Gas / CPI
- Other Oil and Gas + CPI components
- Automotive
- Components for Industrial Gas Compressors
- Other Automotive Components (Turbochargers, Piston Rings, Sensors, etc.)
- Other Power Generation Components

Technical data

Material designation	
Alloy 718API	Market grade
NiCr19NbMo/ NiCr19Fe19Nb5Mo3	EN
N07718	UNS

BÖHLER L718API AMPO

Chemical composition (wt. %)

C	Cr	Mo	Ni	Ti	Al	Nb	B	Fe
0.02	18	3	Rest	0.95	0.5	5	0.003	18.5

Powder Properties

Particle Size Distribution 15-45µm*

Typical Values	D10	D50	D90
[µm]	18-24	29-35	42-50

* Measurement of particle size distribution is based on ISO 13322-2 (Dynamic image analysis methods);

Apparent density**	min. 3.5 g/cm^3

** Flowability and apparent density are based on DIN EN ISO 4490 resp. DIN EN ISO 3923-1.

Mechanical Properties

With according Heat Treatment

Tensile strength (Rm) (MPa)	1,290 to 1,390
Yield strength ($RP_{0,2}$) (MPa)	1,050 to 1,110
Elongation (%)	26 to 32
Hardness (HRc)	43 to 49
Impact Toughness (ISO-V)* (J)	58 to 68

* a -60 °C

Mechanical strength according to heat treatment API6acra - 150ksi

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ONE STEP AHEAD.