

ADDITIVE MANUFACTURING POWDER

L175 AMPO / CO-BASED ALLOYS

Application Segments

Additive Manufacturing Application

Available Product Variants

15 - 45 µm

45 - 90 µm

Product Description

L175PA is characterized by a high tensile strength combined with very good ductility. Due to its biocompatibility and corrosion resistance, it is often used in orthopedic surgery as a joint replacement or as part of various implants, as well as in dental technology.

Properties

- > Corrosion resistance
- > high Elasticity
- > high Hardness

Process Melting

VIGA

Applications

- > 3D Printing - selective laser melting
- > Medical
- > Powder for additive manufacturing
- > Other Components
- > Aerospace
- > 3D Printing - direct metal deposition

Technical data

Material designation	
F75	Market grade
Co28Cr6Mo	EN
R30075	UNS
2.4979	SEL

Chemical composition (wt. %)

C	Si	Mn	Cr	Mo	Ni	Co	Fe
≤ 0.35	≤ 1.00	≤ 1.00	28.5	6	≤ 0.50	64	≤ 0.75

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);

Mechanical Properties

As Printed

Tensile strength (Rm) (MPa ksi)	1,150 to 1,250 167 to 182
Yield strength (RP _{0.2}) (MPa ksi)	730 to 830 106 to 121
Elongation (%)	19 to 21
Hardness (HRC)	34 to 36
Impact Toughness (ISO-V) (J)	25 to 27

We expressly point out that the values given are only guide values. The mechanical properties highly depends on the pressure parameters or heat treatment.

With according Heat Treatment

Tensile strength (Rm) (MPa ksi)	1,150 to 1,250 167 to 182
Yield strength (RP _{0.2}) (MPa ksi)	600 to 700 88 to 102
Elongation (%)	32 to 38
Impact Toughness (ISO-V) (J)	82 to 90

Heat treatment

Temperature	1,150 °C 2,102 °F	for 6h
-------------	---------------------	--------

For more information see <https://www.voestalpine.com/boehler-edelstahl/de/>

The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.