

# 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 <sub>0.2</sub> ) (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 <sub>0.2</sub> ) (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
-------------	---------------------	--------

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.