

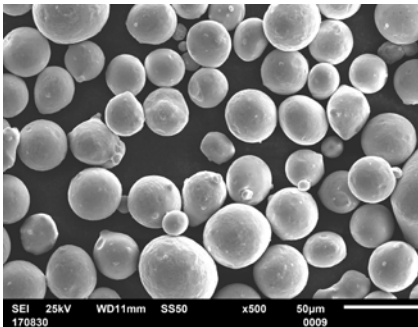
m4p 316L

Stainless steel powder for laser-based powder bed fusion

Description and properties

m4p™ 316L is a corrosion-resistant austenitic alloy. The common abbreviation 316L comes from the AISI standard. In the European standardization the material 1.4404 has the highest possible conformity to the AISI standard of the 316L. Carbon contents <0.03% limit the tendency for intergranular corrosion effectively. The alloying element molybdenum contributes to further improvement of pitting corrosion resistance. As austenitic material, it has good deformation properties even at low temperatures.

Powder characteristics



Chemical analysis [wt%]

Element	Min	Max
C		<0,03
Si		<1,0
Mn		<2,0
Cr	16,0	18,0
Ni	10,5	14,0
Mo	2,0	3,0
Fe		Base

Particle size Laser PBF

Additive manufacturing and strength properties



Typical characteristics of the tensile test

(Parameter=99,95% rel. Density, as-built)

Tensile strength	R _m =	574 N/mm ²
Yield strength	R _e =	428 N/mm ²
Elongation at break	A =	52%

Test cube:

10x10x10mm,
metallographically
determined density:
99,95%

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