



forAM[®] 316L 15-45 VG

Austenitic stainless steel powder for Additive Manufacturing

forAM 316L VG is a vacuum induction melted, argon gas atomized, and spherical powder for additive manufacturing. It is a general-purpose stainless steel alloy with good resistance to atmospheric corrosion and many organic and inorganic chemicals. The 316L alloy withstands the normal corrosive attack of the everyday environment that people experience.

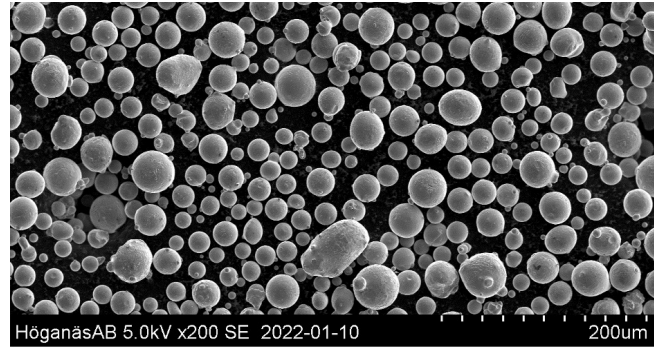
Equivalent materials:

- » X2CrNiMo17-12-2
- » X2CrNiMo17-12-3
- » 1.4404
- » AISI 316L

For more information on forAM product line and other of Höganäs products, please contact your local sales representative.

Powder properties

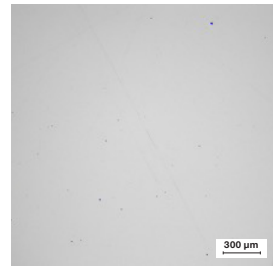
Chemical composition, (typical values)	
Element	Content, %
Cr	17.5
Ni	12
Mo	2.2
Mn	1.5
Si	0.2
Fe	Balance



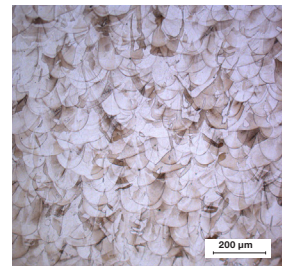
Typical powder properties		
Nominal particle range	15-45 μm (max 5% over and under size)	MPIF05, ASTM B214, ISO4497
Hall flow	16 s/50 g	MPIF03, ASTM B213, ISO4490
Apparent density	4.0 g/cm ³	MPIF04, ASTM B212, ISO3923/1
Tap density	4.8 g/cm ³	ASTM B527, DIN3953, ISO3953

Mechanical properties

Surface condition is machined		
Heat treatment	SR ⁽¹⁾	SA ⁽²⁾
Printed in Z-direction – Build direction		
UTS (MPa)	530	495
YS (MPa)	430	320
Elongation (%)	53	64
IE Notch in Y direction (J)	145	160



As Polished



As Printed – Build direction

Heat treatment	SR ⁽¹⁾	SA ⁽²⁾
Printed in X/Y-direction – Perpendicular		
UTS (MPa)	610	565
YS (MPa)	490	330
Elongation (%)	38	46
IE Notch in Z direction (J)	150	195
Hardness (HV10)	205	170

(1) Stress relieved at 300 °C in air for 1h

(2) Solution Annealed at 1,050 °C in Ar followed by oil quench

Standard packaging:

40 kg (4x10 kg, 3.6 L PE drums packed in cardboard box)

200 kg / 500 kg Flexbag

(Other tailored particle sizes and packaging are available under conditions)