

Ametek P316L P/M Stainless Steel, Sintered from 6.25 g/cc Green Density

Category : Metal , Ferrous Metal , Stainless Steel , T 300 Series Stainless Steel

Material Notes:

P316L offers a very high degree of corrosion protection for a standard P/M stainless steel grade. It provides excellent strength at extremely high temperatures. Key materials benefits of P316L include enhanced compressibility, and green strength, which is approximately 40% higher than comparables induction melted materials. For property data reported here: Compacting properties measured on powders with 1% lithium stearate. Sintering was done in dissociated ammonia at 1121°C (2050°F) for 45 minutes. Sintering in hydrogen vs. ammonia reduces strength and increases elongation. Compacting pressure 30 tsi. Green strength 400 psi. Sintered breaking strength 75,000 psi. Information provided by Ametek Specialty Metal Products.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ametek-P316L-PM-Stainless-Steel-Sintered-from-625-gcc-Green-Density.php

Physical Properties	Metric	English	Comments
Bulk Density	2.70 g/cc	0.0975 lb/in ³	Powder
Density	6.35 g/cc	0.229 lb/in ³	Sintered

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	41	41	
Tensile Strength, Ultimate	290 MPa	42000 psi	
Elongation at Break	3.6 %	3.6 %	

Thermal Properties	Metric	English	Comments
Shrinkage	0.53 %	0.53 %	versus die size

Component Elements Properties	Metric	English	Comments
Carbon, C	<= 0.030 %	<= 0.030 %	
Chromium, Cr	16 - 18 %	16 - 18 %	
Iron, Fe	61.895 - 72 %	61.895 - 72 %	As Remainder
Manganese, Mn	<= 2.0 %	<= 2.0 %	
Molybdenum, Mo	2.0 - 3.0 %	2.0 - 3.0 %	
Nickel, Ni	10 - 14 %	10 - 14 %	
Phosphorous, P	<= 0.045 %	<= 0.045 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	

Component Elements Properties	Metric	English	Comments
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Descriptive Properties	Value	Comments
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Powder Flow	30 sec/50 g	
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