

17-4PH Stainless Steel

Typical Material Properties

Material Properties	Test Method	17-4PH H900
Tensile Strength		
Ultimate Strength	ASTM E8	X & Y: 1317 MPa Z: 1310 MPa
Yield Strength (0.2% offset)		X & Y: 1034 MPa Z: 1020 MPa
Elongation		X & Y: 12% Z: 11%
Elastic Modulus		X & Y: 193 GPa Z: 200 GPa
Hardness	ASTM E18	41 HRC
Impact	ASTM E23	65J
Poisson's Ratio		0.290
Relative Density		98%
Density		7.7 g/cc
Surface Roughness		3.0 µm Ra

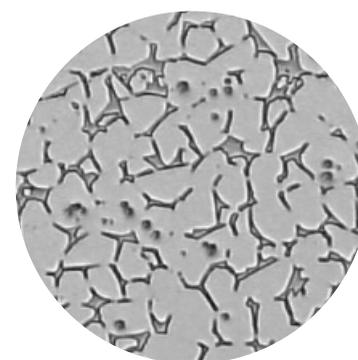


17-4PH Printed Part

Note: Typical expected properties of 17-4PH H900. Other heat treatments are available upon request.

Material Composition			
Iron	bal	Niobium + Tantalum	0.15-0.45%
Nickel	3-5%	Manganese	1.0% max
Chromium	15.5-17.5%	Silicon	1.0% max
Carbon	0.07% max		
Copper	3-5%		

Geometric Capability	
Corner Radius	Max. as design allows, .254 mm. (0.010 in.) min.
Chamfer	> .1 mm. (0.039 in.)
Wall Thickness	> 1.5 mm. (0.059 in.)
Holes	> .38 mm. (0.014 in.) depending on hole length
Accepted file formats	STL, STEP



Microstructure

Note: Preferred part size <50 x 50 x 25mm. Parts up to 150 x 150 x 150mm are subject to engineering review.

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