

17-4PH Stainless Steel

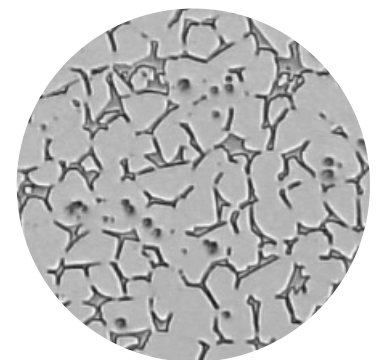
Typical Material Properties

Material Properties	Test Method	17-4PH H900
Tensile Strength		
Ultimate Strength	ASTM E8	X & Y: 1070 - 1310 MPa Z: 1070 - 1310 MPa
Yield Strength (0.2% offset)		X & Y: 970 - 1030 MPa Z: 970 - 1020 MPa
Elongation		X & Y: 4% - 12% Z: 4% - 11%
Elastic Modulus		X & Y: 180 - 190 GPa Z: 180 - 200 GPa
Hardness	ASTM E18	35 - 41 HRC
Impact	ASTM E23	55 - 75 J
Poisson's Ratio		0.28 - 0.30
Relative Density		96 - 99%
Density		7.5 - 7.7 g/cc
Surface Roughness		3 - 12 $\mu\text{m Ra}$



17-4PH Printed Part

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%		



Microstructure

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