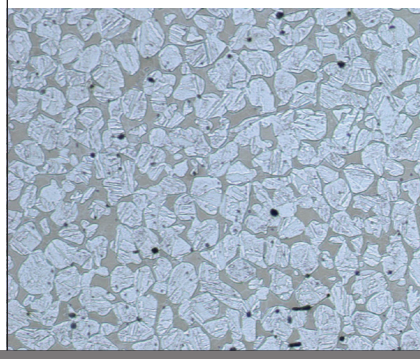
HP Metal Jet SS 17-4PH

HP Metal Jet Certified material

The HP Metal Jet 17-4PH Stainless Steel (SS) is a martensite precipitation hardening material used in applications that require a combination of high strength and mechanical properties with good corrosion and wear resistance. Properties can be tailored through heat treatment, making this versatile material valuable for a wide use of applications in the medical, aerospace, marine, food processing, and automotive industries.

Data courtesy of Endeavor 3D

Sintered / H900



Material Properties[1,2] (Nominal values)

		Test method	HP Metal Jet (H900)	Benchmark MPIF (H900)	HP Metal Jet (as-sintered)	Benchmark MPIF (as-sintered)
Ultimate Tensile Strength (MPa)	XYZ	ASTM E8	μ=1257, σ=10	≥1070	μ=945, σ=13.3	≥790
Yield Strength (MPa)	XYZ		μ=1072, σ=12	≥970	μ=713, σ=5	≥650
Elongation (%)	XYZ		μ=9%, σ=0.7	≥4%	μ=7.1%, σ=1.6	≥4%
Surface Roughness (Ra)	XYZ		6.4 μm, σ=0.9		7.11 μm, σ=1.6	
Hardness (HRC)		ASTM E18	μ=38, σ=1.0	35 (typical)	μ=22, σ=1.6	27 (typical)
Density	g/cc	ASTM B311	μ=7.66, σ=0.01	7.5 (typical)	μ=7.67, σ=0.02	7.5 (typical)
	%		≥ 98%		≥ 98%	

Chemical Composition [wt.-%]

	Fe	Ni	Cr	C	Cu	Nb + Ta	Mn	Si	P	S	Total Other
Min.	Bal	3.0%	15.5%	-	3.0%	0.15%	-	-	-	-	-
Max.		5.0%	17.5%	0.07%	5.0%	0.45%	1.0%	1.0%	0.04%	0.03%	1.0%

1. All reported values are typical properties at nominal composition and density.
2. All reported values are based on a finite sample size and for reference purposes only. Information contained herein is subject to change without notice and based on specific application designs. No warranty or guarantee is made against these values.

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