

MIM-Material Specification and Applications

Composition

Material:	Precipitation hardening stainless steel Ferritic, magnetic
Standards:	AISI 17-4PH, DIN X5CrNiCuNb16-4, 1.4542

Typical composition::	<i>Element</i>	<i>Content (%)</i>
	C	≤ 0.07
	Cr	15.0 – 17.5
	Ni	3.00 – 5.00
	Si	≤ 1.00
	Mn	≤ 1.00
	Cu	3.00 – 5.00
	Fe	Balance
	Other	Nb+Ta: 0.15 – 0.45

Properties	As sintered	H-900	H-1000
Density	≥ 7.60 g/cm ³	≥ 7.60 g/cm ³	≥ 7.60 g/cm ³
Hardness	≥ 300 HV1	≥ 380 HV1	≥ 320 HV1
Yield strength R _{p0.2}	670 - 790 MPa	≥ 950 MPa	≥ 750 MPa
Tensile strength R _m	880 - 1020 MPa	≥ 1150 MPa	≥ 900 MPa
Elongation A	4 - 8 %	≥ 2 %	≥ 5 %
Surface quality R _a	≤ 1.6 μm	≤ 1.6 μm	≤ 1.6 μm

Application / remarks

Fasteners and structural components requiring high strength and corrosion resistance. Automotive, aircraft, and marine applications as well as parts for business machines, valves, household machines, medical and dental applications etc.

The data given are based on our experience to date. However, no liability can be assumed.