



Additive Metal Alloys, Ltd
 427 West Dussel, #105
 Maumee, Ohio 43537
 800.687.6110 Phone
 419.865.9919 Fax
 additivemetalalloys.com
 sales@additivemetalalloys.com

AM 174ph Data Sheet

AM 174ph is an age-hardening martensitic alloy combining high strength with the corrosion resistance of stainless steel. Hardening is achieved by a short-time simple low-temperature treatment. The strength, corrosion resistance and simplified fabrication can make AM174ph a cost-effective replacement for high strength carbon steels as well as other stainless grades.

Alloy Highlights

- Precipitation hardening
- High Strength
- Corrosion resistance
- Excellent oxidation resistance

Typical Applications

- Turbine components
- Chemical & Petrochemical
- Medical Devices
- Tooling

Mechanical Properties (as Sintered)		
Test	Horizontal	Vertical
Tensile Strength	150 +/-5 ksi	140 +/-5 ksi
Yield Strength	80 +/-5 ksi	75 +/-5 ksi
Elongation at break	25 +/-5 %	
Hardness (HRC)	23 (42*)	
Density (lb/in ³)	0.282	

*After H900 Heat Treatment

Chemistry		
Element	Range (%)	
	Min	Max
Cr	15.00	17.50
Mo		0.05
Ni	3.00	5.00
Fe	Balance	
C		0.07
Si		1.00
Mn		1.00
Cu	3.00	5.00
S		0.03
P		0.04
Nb (Cb)+Ta	0.15	0.45

Applicable Chemistry Specifications

AMS 5604	AMS 5643	ASTM S705
ASTM A564	ASTM A693	DIN 1.4548
ISO 15156-3	UNS S17400	AMS 5825