

## 17-4PH - UNS S17400 – Condition A Solution Annealed

### MATERIAL DESCRIPTION

UNS S17400 is a grade of martensitic precipitation hardened stainless steel. The name comes from the chemical makeup which is approximately 17% chromium and 4% nickel. 17-4 can be heat treated to high levels of strength and hardness, and features corrosion resistance and machinability comparable to austenitic 304 stainless. Being martensitic, 17-4 is magnetic.

### APPLICABLE SPECIFICATIONS

ASTM A564/A564M Type 630, ASME SA564/SA564M

NACE MR-0175/ISO 15156

### HEAT TREATMENT

CONDITION	Temperature °C (°F)	Quench
A Solution Annealed	1040 ±15 (1900 ±25)	Oil, Water, Polymer or Air Cool below 32°C (90 °F)

### CHEMICAL ANALYSIS RANGE

ELEMENT	WEIGHT %	ELEMENT	WEIGHT %
C	0.07 Max	Cr	15.00 to 17.50
Si	1.00 Max	Cu	3.00 to 5.00
Mn	1.00 Max	Ni	3.00 to 5.00
S	0.03 Max	P	0.04 Max

### TYPICAL MECHANICAL PROPERTIES (Min Unless Stated)

Condition	0.2% Yield ksi (MPa)	UTS ksi (MPa)	Ductility		Full size (10mm x 10mm) Charpy V Notch @ -46°C	Hardness HBW (HRC)
			%El 4D	%RA	Ft-lbs (J)	
A	-	-	-	-	-	363 (38) Max

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