

PRODEC® (PRODUCTION Economy), is a special quality of austenitic stainless steel. The uniformity and optimal machinability of PRODEC allows fabricators to machine at higher speeds and feeds, producing superior quality parts at the lowest total cost. It should be considered for automatic screw machines where extensive machining is required.

PRODEC 17-4 is a newly developed enhanced machining version of 17-4 stainless PH. Trials have shown PRODEC 17-4 to provide up to 30% faster machining speeds without sacrificing tool life when compared to standard 17-4. This enhanced machinability is a result of the PRODEC melting process which reduces the quantity, size, and distribution of hard oxide inclusions. As a result, improved machining properties are realized in all heat treated conditions (Condition A, H1150, H1025, etc.) PRODEC 17-4 round bar is produced in diameters ranging from 9/16" to 6-1/2".

17-4 is also commonly referred to as type 630 stainless. It is a martensitic, precipitation hardening stainless steel. A low temperature heat treatment can provide unusually high strength and hardness, with corrosion resistance similar to that of Type 304 austenitic stainless steel.

Specifications

UNS: S17400 W. Nr./EN: 1.4548 ASTM: A 484, A 564, F 899, Type 630 AMS: 2303, 5643 ASME: SA 564, Type 630

Chemical Composition, %

	Ni	Cr	Mo	Mn	Cu	Si	C	Cb+Ta	S	P	Fe
MIN	3.0	15.0	—	—	3.0	—	—	5 x C	—	—	—
MAX	5.0	17.5	0.50	1.0	5.0	1.0	0.07	0.45	0.03	0.04	balance

Features

- Melted and processed to maximize machinability
- Improved machinability over 17-4

Applications

- Automatic screw machines

Physical Properties

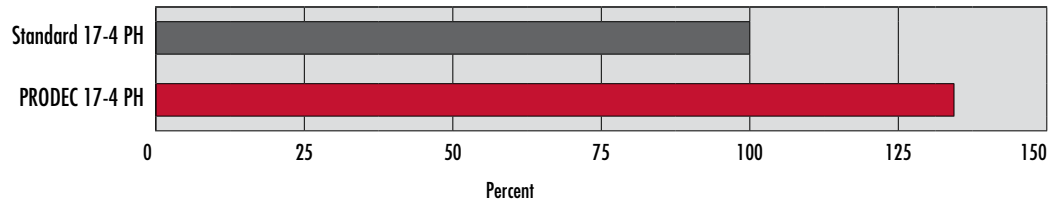
Density: 0.282 lb/in³ Melting Range: 2560-2625°F Poisson's Ratio: 0.272 Electrical Resistivity: 463 Ohm-circ mil/ft

Mechanical Properties

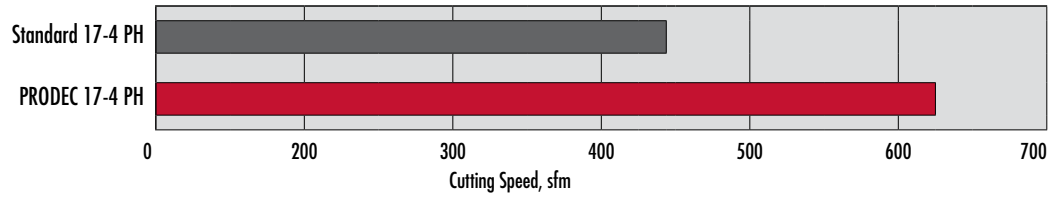
Condition	Tensile Strength, ksi	0.2% Yield Strength, ksi	Elongation in 2 in, %	Reduction of area, %	Hardness, Rc	Charpy V-Notch Impact Strength, ft. lb.
H900	198	183	15	52	44	16
H1025	168	162	16	58	38	40
H1075	164	148	17	59	36	46
H1150	144	126	20	60	33	55
H1150M	123	87	22	66	29	110
H1150D	150	110	20	60	29	50

Machining

Relative Machinability



Average Turning Speeds [Multiple V₁₅ Tests with Carbide Tooling]



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