CSS Canada
SPECIAL STEEL INC

17 - 4 PH

ROUND BAR

Applications

Motor Shafts, Aircraft Structural parts, Valve Stems, Gears

Features

- The 17-4 PH is a martensitic precipitation-hardening stainless steel with excellent corrosion resistance and outstanding mechanical properties. Conforming to the stringent AMS 5604, AMS 5622, and AMS 5643 specifications, this alloy is meticulously engineered to meet the most demanding industrial requirements.
- The exceptional corrosion resistance of the 17-4 PH alloy stems from its carefully crafted chemical composition, blending chromium, nickel, and copper in precise proportions, this unique formulation imbues the material with an unrivaled ability to withstand a broad spectrum of corrosive environments.
- Moreover, the alloy's precipitation hardening capabilities allow for precise control over its mechanical properties, through a carefully controlled heat treatment process, 17-4 PH can achieve remarkable strength and hardness levels while maintaining excellent toughness and ductility.

Standard

AMS 5604 / AMS 5622 / AMS 5643

Material

17-4 PH / UNS S17400 / W.Nr 1.4548

Chemical composition *(Nominal)* %

Grade	C	Mn	Si	P	S	Cr
17-4 PH	0.07 max	1.00 max	1.00 max	0.040 max	0.030 max	15.00-17.50

Ni	Nb	Cu	Mo	Fe
3.00-5.00	5xC%-0.45	3.00-5.00	0.50 max	Bal

Physical properties

Density	7.74 g/cm^3

Size range

Product	Material	WD Range	Length Range
ROUND BAR	17-4 PH	Φ5mm ~ Φ500mm	3000~6000mm

Mechanical properties

Condition	Tensile Strength, min, MPa	Yield Strength, min. *(0.2 % offset)*, min, MPa	Elongation in 2 in. or 50 mm *(or 4D)*, %	Reduction of Area, min,%	Hardness, HB	Hardness, HRC
H900	1310	1172	10	40	388-444	40-47
H925	1172	1069	10	44	375-429	38-45
H1025	1069	1000	12	45	331-401	34-42
H1075	1000	862	13	45	311-375	31-38
H1100	965	793	14	45	302-363	30-37
H1150	931	724	16	50	277-352	28-37

OSS CANADA SPECIAL STEEL INC
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