

BRODER METALS GROUP Alloy 17-4 PH

Specifications:

ASTM A564
AISI 630-17.4PH / Type 630
DIN 1.4542
UNS S17400
NACE MR0175/ISO15156
US nominal equivalent to DIN 1.4548, X5CrNiCuNb 17-4-4

Alloy 17-4 PH is a chromium-copper precipitation hardening martensitic stainless steel with Cu and Nb/Cb additions.

17-4PH Stainless Steel combines high strength, hardness (up to 572°F / 300°C), and moderate corrosion resistance. Alloy 17-4 PH withstands corrosive attacks better than any of the standard hardenable stainless steels and is comparable to Alloy 304 in most media. The alloy is subject to crevice or pitting attack if exposed to stagnant seawater for any length of time, although it is corrosion resistant in some chemical, petroleum, paper, dairy and food processing industries (equivalent to 304L grade).

Mechanical properties can be improved (high strength and superior corrosion resistance) when precipitation hardened from Condition A to one of the Condition H tempers. We supply 17-4 PH in the H1150D condition. This is double aged at a temperature between 1140° F and 1160° F for 3.75 hours to 4.25 hours, with the second ageing being used to bring down the hardness value.

Applications

Offshore (foils, helicopter deck platforms, etc.) Food
industry
Pulp and paper industry
Pump Shafts
Aerospace (turbine blades, etc.)
Mechanical components
Nuclear waste casks
Valve internal components



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Chemistry

Alloy	Cr	Ni	C	Mn	S	Cu	Others
17-4 PH H1150	15.0-17.5	3.0-5.0	0.07	1.0	0.03	3.0-5.0	0.15-0.45

Mechanical Properties

Condition	Ultimate Tensile Strength (PSI)	0.2% Yield Strength (PSI)	Elongation (% In 50mm.)	Reduction Of Area (%)	Hardness Brinell HB	Hardness Rockwell HRC
H1150D	135,000	105000	16	50	280-311	29-33

Size Range

We stock from 25.4 mm (1") to 152.4 mm (6"), although other sizes can be readily obtained if required.

Alloy 17-PH is just one of a range of corrosion resistant materials stocked by Broder Metals Group Ltd – please see our website for the full range stocked: www.broder-metals.com



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