



Grade	Code	AISI	Precipitation Hardening Stainless Steel
1.4542 (17-4 PH)	X5CrNiCuNb16-4	630	

### Steel Properties

Type 17-4 PH stainless steel is the most widely used of all the precipitation-hardening stainless steels. AISI 630's valuable combination of properties gives designers opportunities to add reliability to their products while simplifying fabrication and often reducing costs. Type 17-4 PH is a martensitic precipitation-hardening stainless steel that provides an outstanding combination of high strength, good corrosion resistance, and good mechanical properties at temperatures up to 316°C (600°F). AISI 630's unique combination of properties make this alloy an effective solution to many design and production problems.

### Chemical Composition (1.4542, 17-4 PH)

C %	P %	Si %	Mn %	S %	Cr %	Mo %	Ni %	Cu %	Nb %
0,07 max.	0,04 max.	1,00 max.	1,00 max.	0,03 max.	15,00 – 17,50	0,50 max.	3,00 – 5,00	3,00 – 5,00	5XC – 0,45

### Mechanical Properties

Condition	Rp0.2, Mpa	Rm, Mpa	Elongation [%]	Hardness [HB]
H900	1170	1310	8	440
H1150	725	860	16	331

### Suitable For

1.4542 (17-4 PH) is used in the wide fields of plant engineering; chemical industry, woodworking industry, shipbuilding, mechanical engineering, the exploration and production sector of oil and gas industry, medical technology, aerospace industry, agricultural- and food industry, energy production, construction and automotive engineering.

Typical parts of AISI 630 are in maritime environments, for steam turbine blades, valve blocks, pumps, shafts nozzle holder devices, joint rings (compressors units) and wear parts for packaging industry.

### Remarks

Type 17-4 PH is delivered most often after heat improvement – in H900, H1025, H1075 , H1100 and H1150 conditions.

### Specification

1.4542 (17-4 PH), AISI 630, X5CrNiCuNb16-4.