

1.4542 (17 – 4 PH)

Precipitation hardening steels are chromium and nickel containing steels that provide an optimum combination of the properties of martensitic and austenitic grades. Like martensitic steels, they are known for their ability to gain high strength through heat treatment and they also have the corrosion resistance of austenitic steels.

1.4542
X5CrNiCuNb16-4
S17400
AISI 630

Cr	Mn	Si	C	P	S	Fe	Ni	Mo	Nb	Cu
15,0	max	max	Max	max	Max		3,0	Max	Max	3,0
17,0	1,5	0,7	0,07	0,04	0,03	balance	5,0	0,6	0,45	5,0

density (kg/dm³) 7.75
electrical resistivity at 20 °C (Ω mm² /m) 0.08
thermal conductivity at 20 °C (W/m K) 18,4
thermal expansion (K⁻¹)
20 – 100 °C: 10,9 x 10⁻⁶
20 – 300 °C: 11,1 x 10⁻⁶

Condition	Heat Treatment	Prep. Hardening	Min TS Mpa
H1150	Solution Annealed 1030 -1050 C oil / water	4h 620C / air	930
H1100		4h 595C / air	965
H1075		4h 580C / air	1000
H1025		4h 550C / air	1070