

MATERIAL NUMBER 1.4542 · CLASS 1.4

1.4542

Chemical composition, mechanical and physical property values, and 48 standard designations from 6 regions.

DENSITY 7.8 g/cm³	OTHER DESIGNATIONS 48 in 6 regions	PROPERTY VALUES 10 on file
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Chemical composition

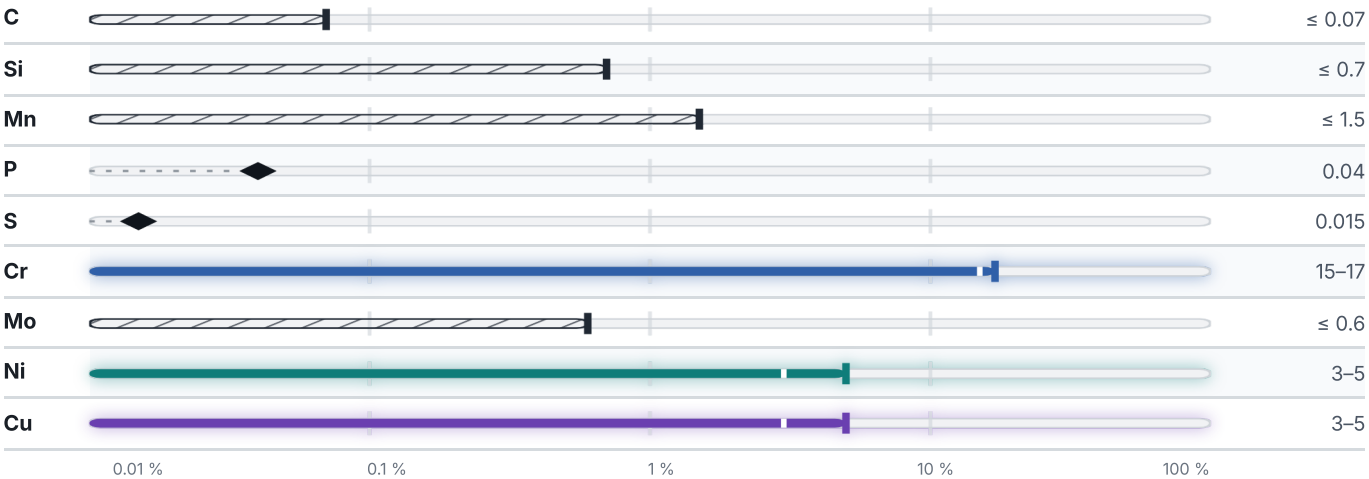
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 73.1 % ● Cr — 16 % ● Ni — 4 % ● Cu — 4 % ● Traces & impurities · 2.9 %

Logarithmic scale, 0.01 % to 100 % — every value here compares directly, decade by decade.



The scale is logarithmic, not the element's raw share of the alloy — the only honest way to fit 0.01 % and 100 % in one picture, and it means every value here can be compared with every other.

Predicted transformation temperatures

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no transformation temperature is predicted here.

Mechanical properties

4 values across 2 conditions

SOLUTION ANNEALED			HB
Solution annealed			360
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %
Casting Precipitation hardening treatment	850–1240	665–1030	6–10

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.8	g/cm ³

Designations across standards

48 designations · 9 documented as identical

United States		22	France		8	
S17400	This grade's own name	uns	17-4 DP		afnor	
17-4 PH	This grade's own name	aisi-sae	174 PH		afnor	
630		aisi-sae	X17U4		afnor	
AISI630	This grade's own name	aisi-sae	Z67CNU15.05		afnor	
S17400		aisi-sae	Z6CNU1704		afnor	
17-4 PH		astm	Z7CNU15-05	This grade's own name	afnor	
A 484		astm	Z7CNU16-04		afnor	
A 564		astm	Z7CNU17-04	This grade's own name	afnor	
A 564 630	This grade's own name	astm	United States / Aerospace			6
A 564 T 630		astm	5604		ams	
A 693		astm	5622		ams	
A1028		astm	5642		ams	
A56		astm	5643		ams	
A564 Grade 630		astm	5825		ams	
A564 Type 630		astm	5827		ams	
A705		astm	Russia / CIS			6
A982		astm	05Ch16N4D2B		gost	
F593		astm	05X16H4Д2Б		gost	
F594		astm	07Ch14N4DB		gost	
F738		astm	07Ch16N4D4B-Sh		gost	
F836		astm	07X14H4ДБ		gost	
F899		astm	07X16H4Д4Б-Ш		gost	
			Japan			4
			SCS 24	This grade's own name	jis	
			SUS 630	This grade's own name	jis	
			SUS 630FB		jis	
			SUS F 630		jis	

Europe	2
1.4542	din-en
X5CrNiCuNb16-4 This grade's own name	din-en

Note on use. The data is compiled to the best of our knowledge from publicly available standards and manufacturer documentation. It replaces neither material testing nor an inspection document to EN 10204. Please request a mill certificate to EN 10204 2.1, 3.1 or 3.2 together with your enquiry. The standard in its current valid edition always prevails.

Enquiry about 1.4542

Quotation, availability, mill certificate or a technical question — directly on the material page.

[Start an enquiry](#)

DATASHEET ONLINE	GRADE SEARCH	MATERIAL NO.	ISSUED
View the material page	Search all grades	1.4542	Aug 20, 2026