

MATERIAL NUMBER 1.4581 · CLASS 1.4

1.4581

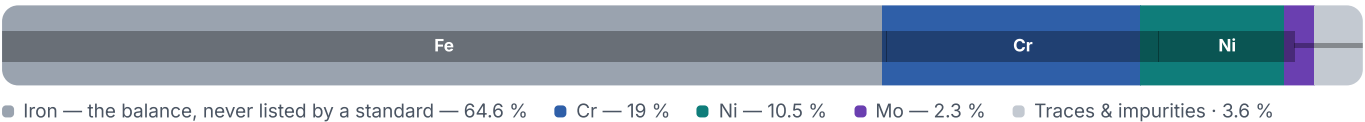
Chemical composition, mechanical and physical property values, and 16 standard designations from 9 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 16 in 9 regions	PROPERTY VALUES 10 on file
--	--	--------------------------------------

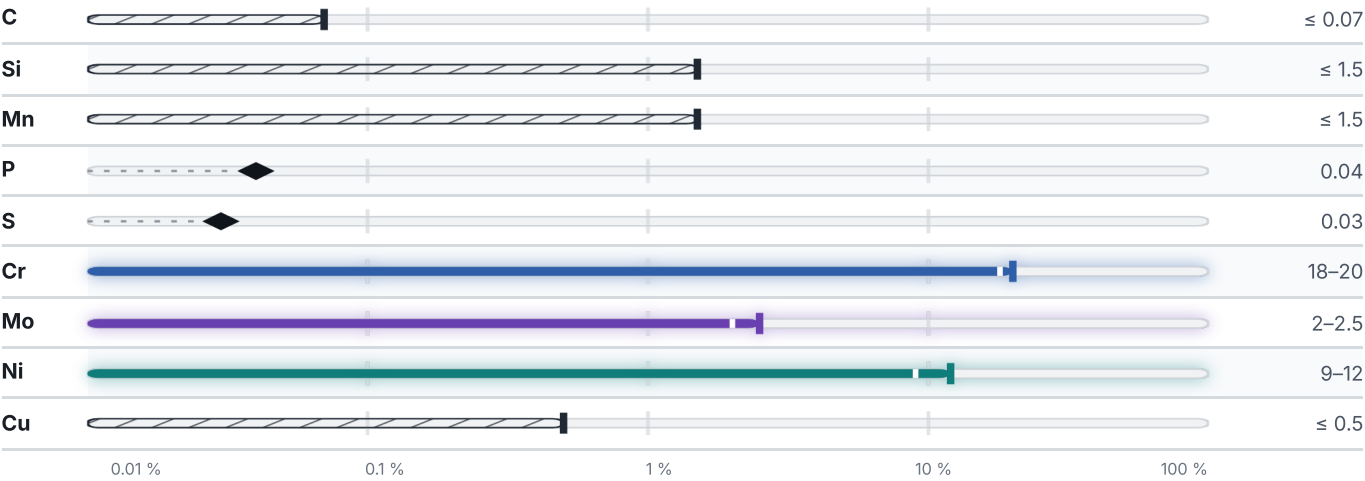
Chemical composition

Mass fraction in %

What this alloy is



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

9 values across 2 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %	HB
Casting	440	205	28	–
Solution heat treatment	–	–	–	183

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Casting, GOST 977-88	441	216	25	30	590

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

16 designations · 3 documented as identical

Europe	3	Russia / CIS	2
1.4581	din-en	12KH18N12M3TL	gost
G-X 5 CrNiMoNb 18 10	This grade's own name din-en	12X18H12M3TЛ	gost
GX5CrNiMoNb19-11-2	This grade's own name din-en		
United Kingdom	3	France	1
318C17	bs	Z4CNDNb1812M	afnor
845 grade Nb	bs	Italy	1
ANC 4 grade C	bs	XG8CrNiMo1811	uni
United States	2	Hungary	1
J92900	This grade's own name uns	AoX10CrNiMoTi18-12	msz
J92971	aisi-sae	Romania	1
Japan	2	T12TiMoNiCr175	stas
SCS20	jis		
SCS22	jis		

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 1.4581

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

Start an enquiry

DATASHEET ONLINE

View the material page

GRADE SEARCH

Search all grades

MATERIAL NO.

1.4581

ISSUED

Aug 20, 2026