

MATERIAL NUMBER 1.0540 · CLASS 1.0

C50

Material no. 1.0540

Chemical composition, mechanical and physical property values, and 25 standard designations from 13 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 25 in 13 regions	PROPERTY VALUES 9 on file
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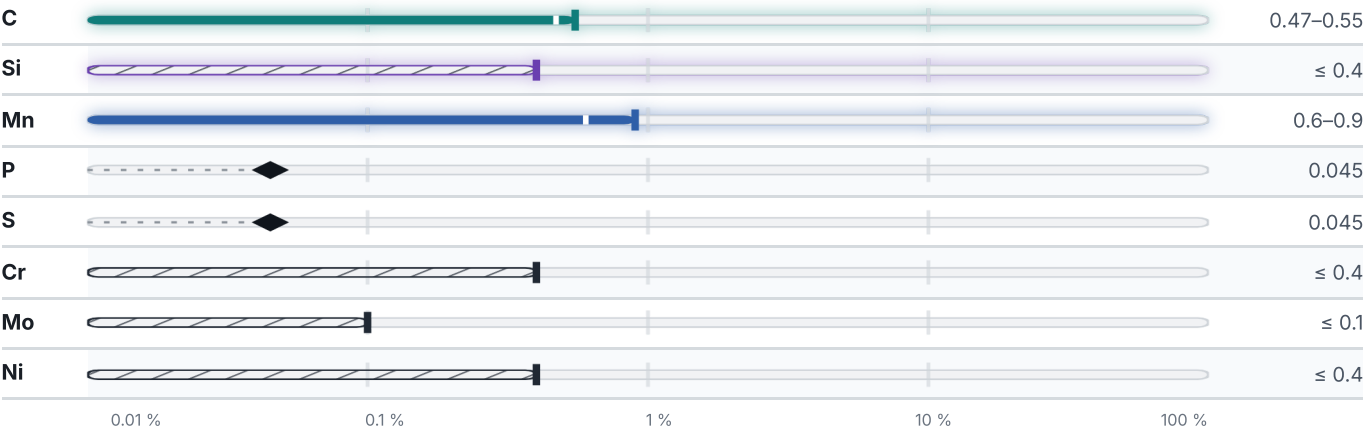
Chemical composition

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

computed from composition · °C

PREDICTED AE3 753 °C	PREDICTED AE1 723 °C	PREDICTED ACM 663 °C	PREDICTED BS 550 °C
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Mechanical properties

4 values across 1 conditions

NORMALIZED	RM N/mm ²	A %
≤ 100	610	14
100 – 250	590	14

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

25 designations · 5 documented as identical

United States	4	France	2
G10490 This grade's own name	uns	XC48H1	afnor
G10500 This grade's own name	uns	XC50	afnor
1049 This grade's own name	aisi-sae	Japan	1
1050 This grade's own name	aisi-sae	S50C	jis
United Kingdom	4	China	1
070M50	bs	50	gb
080M50	bs		
080M50 C50 C50E C50R	bs	Russia / CIS	1
C50 C50E C50R	bs	50	gost
International	3	Sweden	1
C50	iso	1674	ss
C50 C50E4 C50M2	iso	Czechia	1
C50E4	iso	12051	csn
Italy	3	Slovakia	1
1C50	uni	12 051	stn
C50	uni		
C50E	uni	Romania	1
Europe	2	OLC50X	stas
C50 This grade's own name	din-en		
Ck50	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 C50

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

[Start an enquiry](#)

DATASHEET ONLINE

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GRADE SEARCH

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ISSUED

Aug 20, 2026