

MATERIAL NUMBER 1.1186 · CLASS 1.1

C40E

Material no. 1.1186

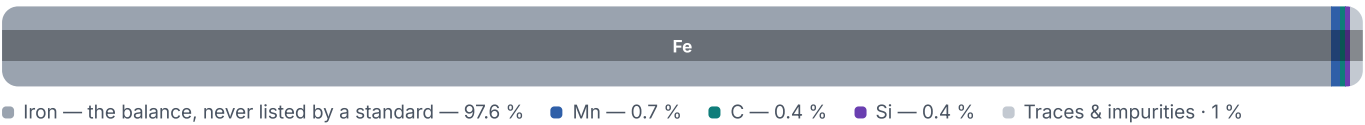
Chemical composition, mechanical and physical property values, and 25 standard designations from 16 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 25 in 16 regions	PROPERTY VALUES 9 on file
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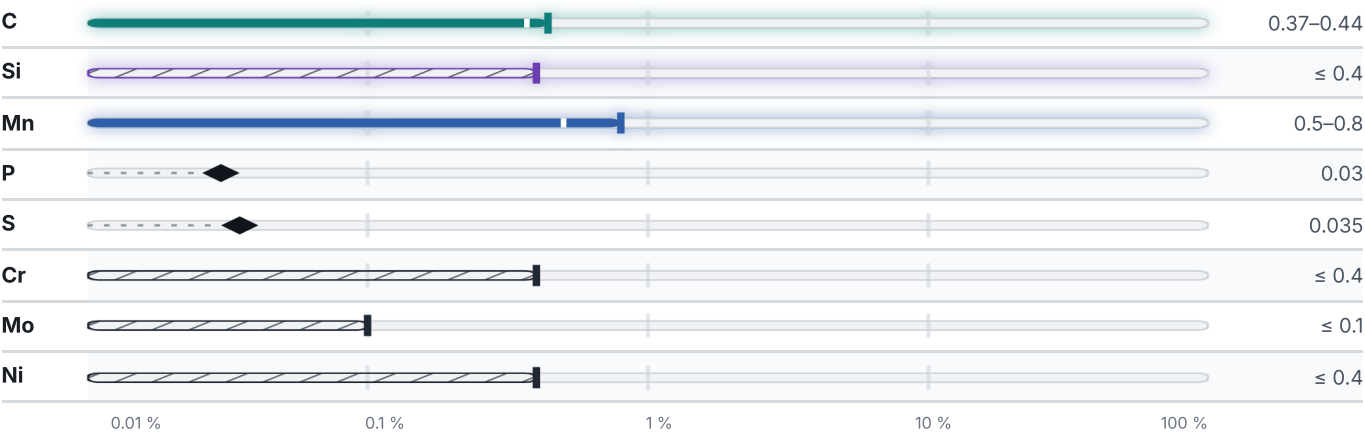
Chemical composition

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 774 °C	PREDICTED AE1 724 °C	PREDICTED ACM 603 °C	PREDICTED BS 560 °C
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Mechanical properties

22 values across 7 conditions

COLD DRAWN / HARD	RM N/mm ²	A %
5 – 10	700–1000	6
10 – 16	650–980	7
16 – 40	620–920	8
40 – 63	590–840	9
63 – 100	550–820	9
NORMALIZED	RM N/mm ²	A %
≤ 16	580	16
16 – 100	550	17
100 – 250	530	17
SOFT ANNEALED	RM N/mm ²	A80 %
0.3 – 3	550	18
COLD ROLLED	RM N/mm ²	
0.3 – 3		970
AS ROLLED AND TURNED		HB
As rolled and turned		163–211
COLD ROLLED		HV
Cold rolled		280
SOFT ANNEALED		HV
Soft annealed		170

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

25 designations · 4 documented as identical

United Kingdom	4	International	1
060A40	bs	C40E4	iso
080A40	bs		
080M40	bs	Japan	1
CS40	bs	S 40C	jis
France	4	Italy	1
C40E	afnor	C40	uni
XC 42	afnor		
XC38H1	afnor	Czechia	1
XC42H1	afnor	12041	csn
Europe	2	Latin America	1
C40E This grade's own name	din-en	1040	copant
Ck 40 This grade's own name	din-en		
United States	2	Slovakia	1
G10400 This grade's own name	uns	12 041	stn
1040 This grade's own name	aisi-sae	Poland	1
Russia / CIS	2	40	pn
40	gost	Türkiye	1
CT.40	gost	Ç 1040	mke
Spain	1	Hungary	1
C35k	une	C 40	msz
		Australia / New Zealand	1
		1040	as-nzs

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 C40E

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

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ISSUED

Aug 20, 2026