

MATERIAL NUMBER 1.0402 · CLASS 1.0

SM20CK

Material no. 1.0402

also listed as C22

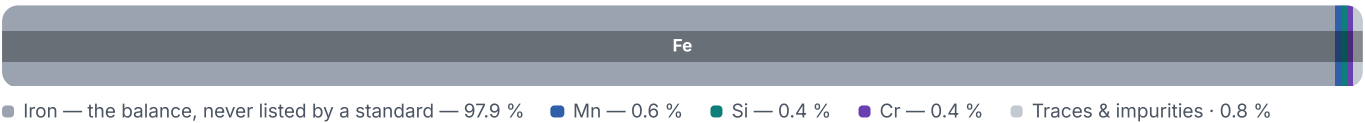
Chemical composition, mechanical and physical property values, and 94 standard designations from 24 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 94 in 24 regions	PROPERTY VALUES 9 on file
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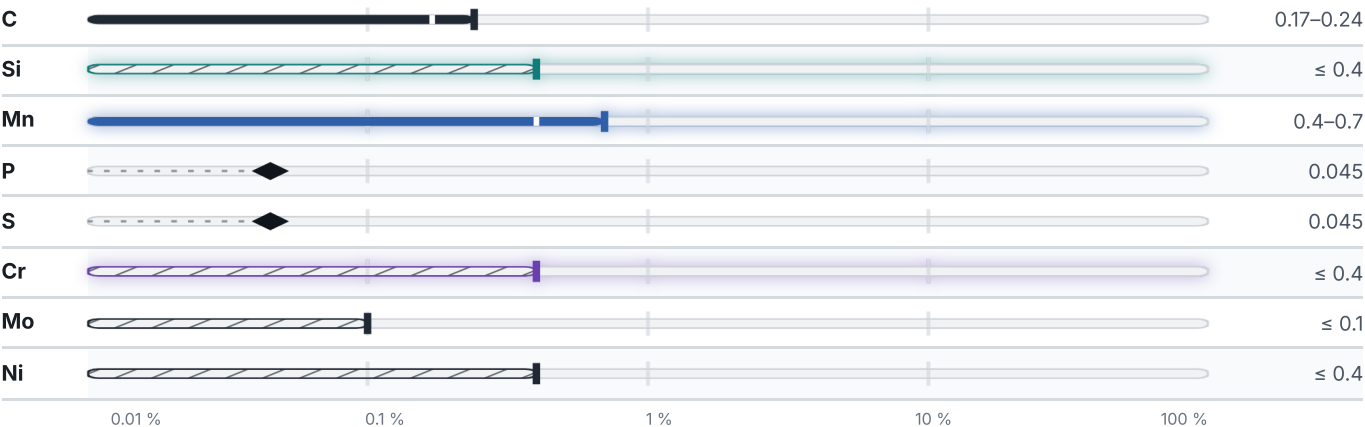
Chemical composition

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 812 °C	PREDICTED AE1 725 °C	PREDICTED ACM 465 °C	PREDICTED BS 575 °C
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Mechanical properties

2 values across 1 conditions

NORMALIZED	RM N/mm ²	A %
≤ 100	410	25

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

94 designations · 7 documented as identical

United Kingdom14		France12	
050A20	bs	1C22	afnor
055M15	bs	2C22	afnor
055M15-EN2C	bs	AF42	afnor
070M20	bs	AF42C20	afnor
070M26	bs	C20	afnor
1449-22CS	bs	C22	afnor
1449-22HS	bs	C22E	afnor
1C22	bs	C25E	afnor
22HS	bs	CC20	afnor
2C	bs	XC15	afnor
430	bs	XC18	afnor
C22	bs	XC25	afnor
C22E	bs		
EN2C	bs	Japan8	
		S20C	jis
United States13		S20CK	jis
G10200	This grade's own nameuns	S22C	jis
G10220	This grade's own nameuns	STB410	jis
G10230	This grade's own nameuns	STKM12A	jis
1020	This grade's own nameaisi-sae	STKM12A-S	jis
1022	This grade's own nameaisi-sae	STKM13B	jis
1023	This grade's own nameaisi-sae	STKM13B-W	jis
1024	aisi-sae		
G10200	aisi-sae	Italy8	
G10230	aisi-sae	C18	uni
H10200	aisi-sae	C20	uni
M1020	aisi-sae	C21	uni
M1023	aisi-sae	C22	uni
SAE1020	aisi-sae	C22E	uni
		C22R	uni
		C25	uni
		C25E	uni

Spain	5	Poland	2
1C22	une	20	pn
C22	une	K18	pn
C25k	une		
F.112	une	Hungary	2
F.1120	une	A45.47	msz
		C22E	msz
China	4		
20	gb	Romania	2
20G	gb	OLC20	stas
20R	gb	OLC20X	stas
20Z	gb		
Australia / New Zealand	3	Belgium	2
1020	as-nzs	C25-1	nbn
K1018	as-nzs	C25-2	nbn
M1020	as-nzs		
Bulgaria	3	International	1
20	bds	C25	iso
C22	bds		
C22E	bds	Sweden	1
		1450	ss
South Korea	3	Latin America	1
SM20C	ks	1020	copant
SM20CK	ks		
SM22C	ks	Slovakia	1
		12 024	stn
Europe	2	Serbia	1
1.0402	din-en	Č.1330	srps
C22 This grade's own name	din-en		
Russia / CIS	2	Croatia	1
20	gost	Č.1330	hrn
st 20	gost		
Czechia	2	Switzerland	1
12022	csn	Ck22	snv
12024	csn		

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 SM20CK

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

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DATASHEET ONLINE

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GRADE SEARCH

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ISSUED

Sep 8, 2026