

MATERIAL NUMBER 1.2311 · CLASS 1.2

40CrMnMo7

Material no. 1.2311

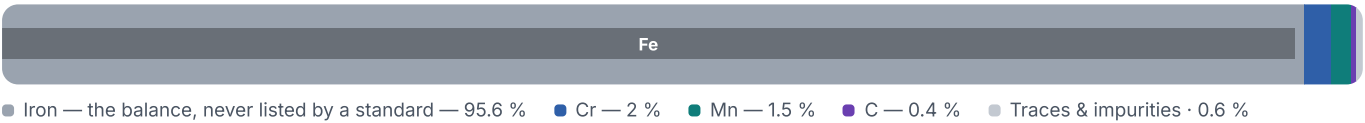
Chemical composition, mechanical and physical property values, and 13 standard designations from 12 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 13 in 12 regions	PROPERTY VALUES 8 on file
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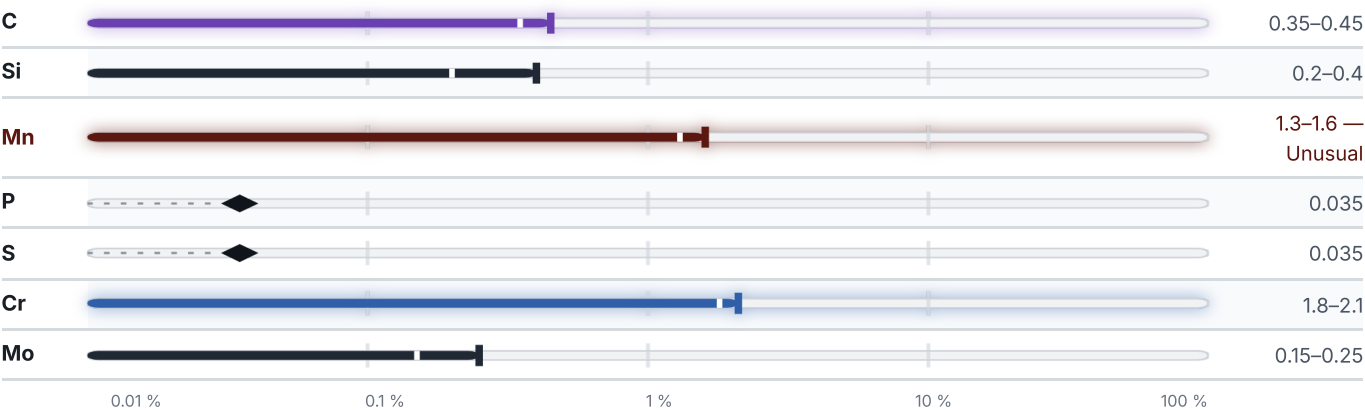
Chemical composition

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

Not enough recorded composition to predict a transformation temperature for this grade — missing: Ni.

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm³

Heat treatment

3 regimes

STEP	TEMPERATURE	MEDIUM
Quenching	Temperature not stated	—
Quenching	850–880 °C	Oil
Annealing	Temperature not stated	—

Designations across standards

13 designations · 1 documented as identical

United States	2	China	1
T51620	uns	3Cr2Mo	gb
P20	aisi-sae	Russia / CIS	1
Europe	1	40KhGM	gost
40CrMnMo7	This grade's own name din-en	Italy	1
United Kingdom	1	40CrMnMo7	uni
40CrMnMo8	bs	Sweden	1
France	1	2311	ss
40CMD8	afnor	Czechia	1
Spain	1	19520	csn
F.5318	une	Slovakia	1
Japan	1	19 520	stn
PDS3 / PX5 przybliż.	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 40CrMnMo7

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	1.2311	Aug 20, 2026