

MATERIAL NUMBER 1.8522 · CLASS 1.8

1.8522

Chemical composition, mechanical and physical property values, and 3 standard designations from 2 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 3 in 2 regions	PROPERTY VALUES 9 on file
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Chemical composition

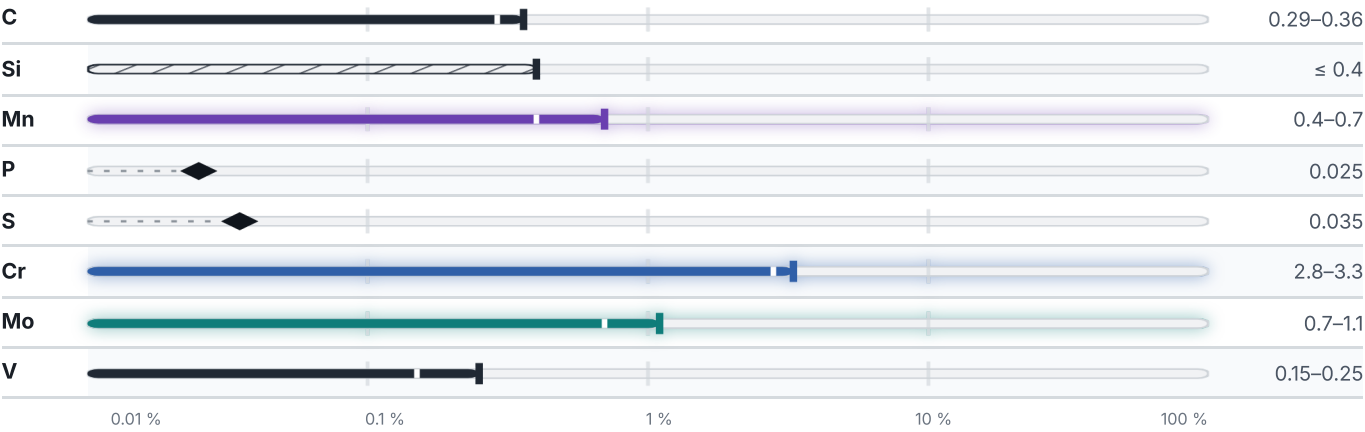
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 94.5 % ● Cr — 3.1 % ● Mo — 0.9 % ● Mn — 0.6 % ● Traces & impurities · 1 %

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.

Mechanical properties

9 values across 2 conditions

QUENCHED AND TEMPERED	RM N/mm ²	A %
16 – 40	1150–1350	11
40 – 100	1050–1250	12
100 – 160	950–1150	12
160 – 250	900–1100	13
SOFT ANNEALED		HB
Soft annealed		248

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

3 designations · 1 documented as identical

United States		2	Europe		1
K24340	uns		33CrMoV12-9	This grade's own name	din-en
AMS 6481	astm				

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 1.8522

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	1.8522	Aug 20, 2026