

MATERIAL NUMBER 1.8825 · CLASS 1.8

A945Gr.65

Material no. 1.8825

also listed as S420M

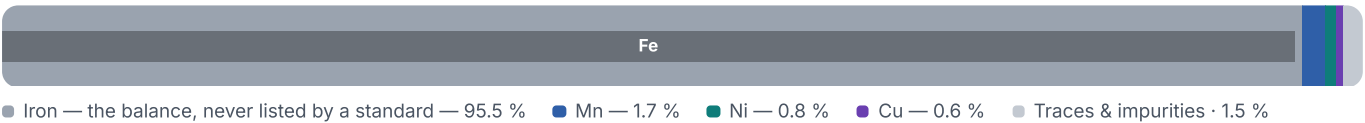
Chemical composition, mechanical and physical property values, and 7 standard designations from 3 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 7 in 3 regions	PROPERTY VALUES 15 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 810 °C	PREDICTED AE1 706 °C	PREDICTED ACM 403 °C	PREDICTED BS 538 °C
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Mechanical properties

11 values across 1 conditions

CONDITION · DIMENSION	REH N/mm²	RM N/mm²
≤ 16	420	–
16 – 40	400	–
≤ 40	–	520–680
40 – 63	390	500–660
63 – 80	380	480–640
80 – 100	370	470–630
100 – 120	365	460–620

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm³

Designations across standards

7 designations · 1 documented as identical

Europe	4	United States	2
A945Gr.65	din-en	A572Gr.60	aisi-sae
FeE420KGTM	din-en	A945Gr.65	aisi-sae
S420M This grade's own name	din-en		
StE 420 TM	din-en	France	1
		E420R	afnor

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 A945Gr.65

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

[Start an enquiry](#)