

MATERIAL NUMBER 1.6311 · CLASS 1.6

20MnMoNi4-5

Material no. 1.6311

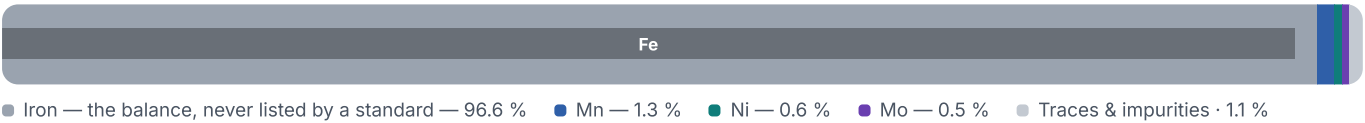
Chemical composition, mechanical and physical property values, and 5 standard designations from 2 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.85 g/cm³	5 in 2 regions	12 on file

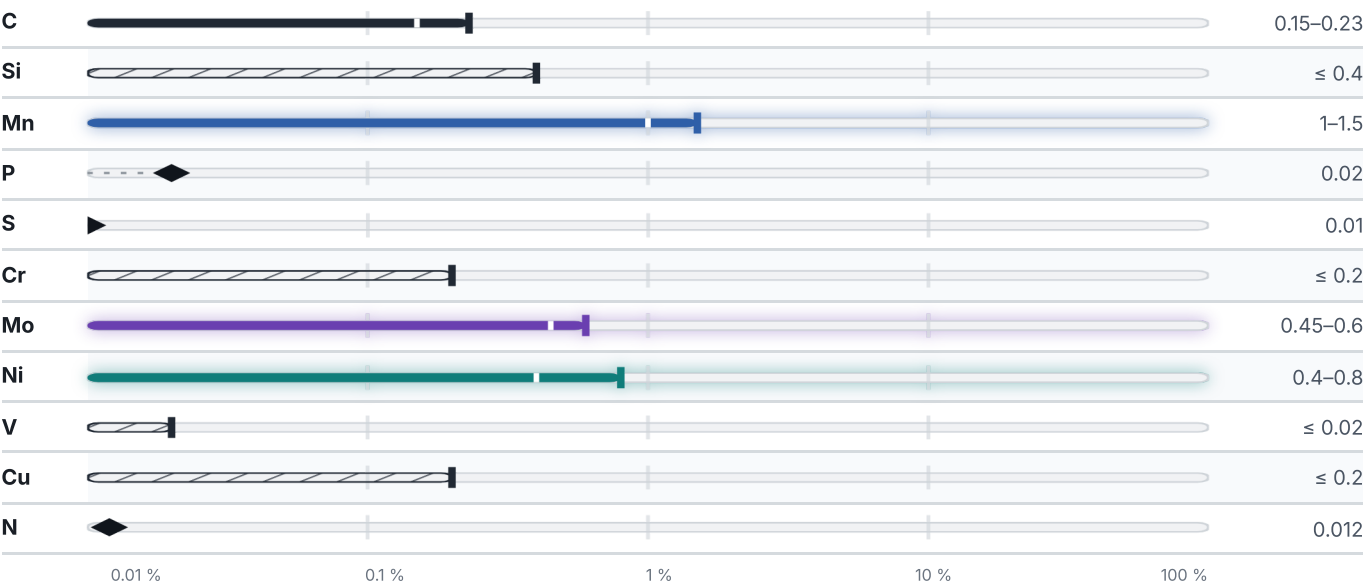
Chemical composition

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 796 °C	PREDICTED AE1 704 °C	PREDICTED ACM 457 °C	PREDICTED BS 528 °C
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Mechanical properties

9 values across 1 conditions

QUENCHED AND TEMPERED	REH N/mm²	RM N/mm²
≤ 40	470	590–750
40 – 60	460	590–730
60 – 150	–	570–710
60 – 100	450	–
100 – 150	440	–
150 – 250	400	560–700

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm³

Designations across standards

5 designations · 1 documented as identical

United States	4	Europe	1
K12042	uns	20MnMoNi4-5	This grade's own name
K12529	uns		din-en
K12539	uns		
K12554	uns		

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 20MnMoNi4-5

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	1.6311	Aug 20, 2026