

45CrNi

Chemical composition, mechanical and physical property values, and 1 standard designations from 1 regions.

OTHER DESIGNATIONS

1 in 1 regions

PROPERTY VALUES

9 on file

Chemical composition

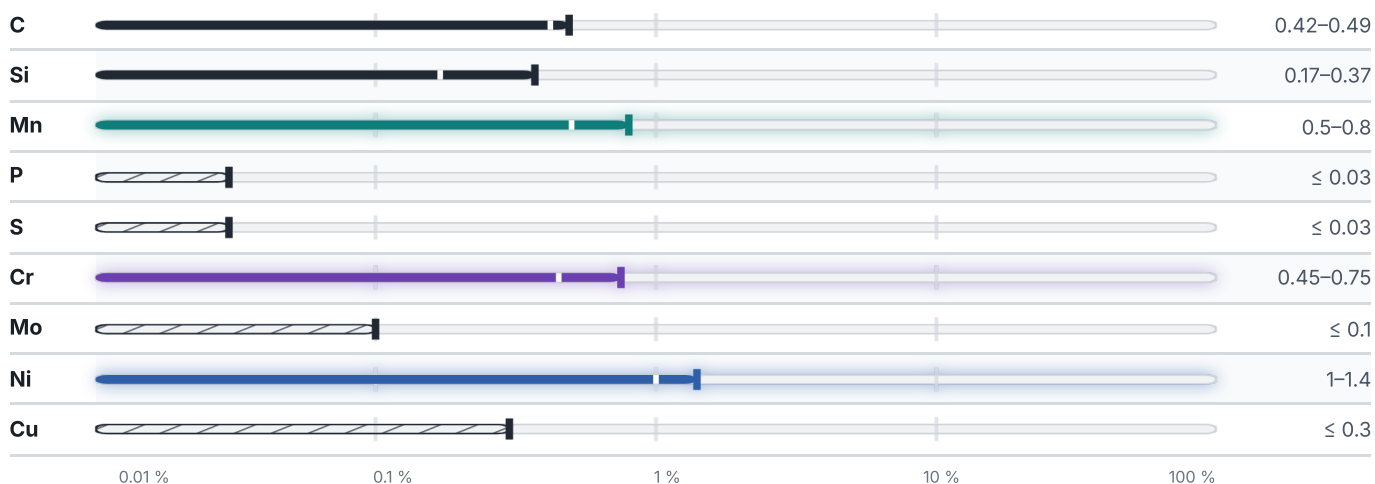
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 96.4 % ● Ni — 1.2 % ● Mn — 0.7 % ● Cr — 0.6 % ● Traces & impurities · 1.2 %

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

746 °C

PREDICTED AE1

717 °C

PREDICTED ACM

642 °C

PREDICTED BS

530 °C

Mechanical properties

4 values across 1 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %	HB
25 – 25	≥ 980	≥ 785	≥ 10	≤ 255

Heat treatment

1 regimes

STEP	TEMPERATURE	MEDIUM
source joins the operations with + / procedural order		
Quenching	Temperature not stated	—
Tempering	Temperature not stated	—

Designations across standards

1 designations · 1 documented as identical

China	1
45CrNi This grade's own name	gb

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 45CrNi

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

Start an enquiry

DATASHEET ONLINE

View the material page

GRADE SEARCH

Search all grades

MATERIAL NO.

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ISSUED

Aug 15, 2026