

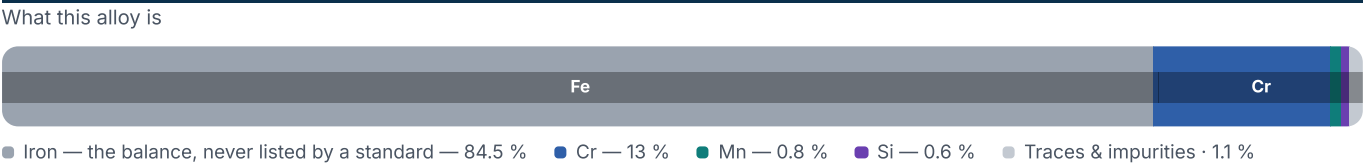
40Cr13

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

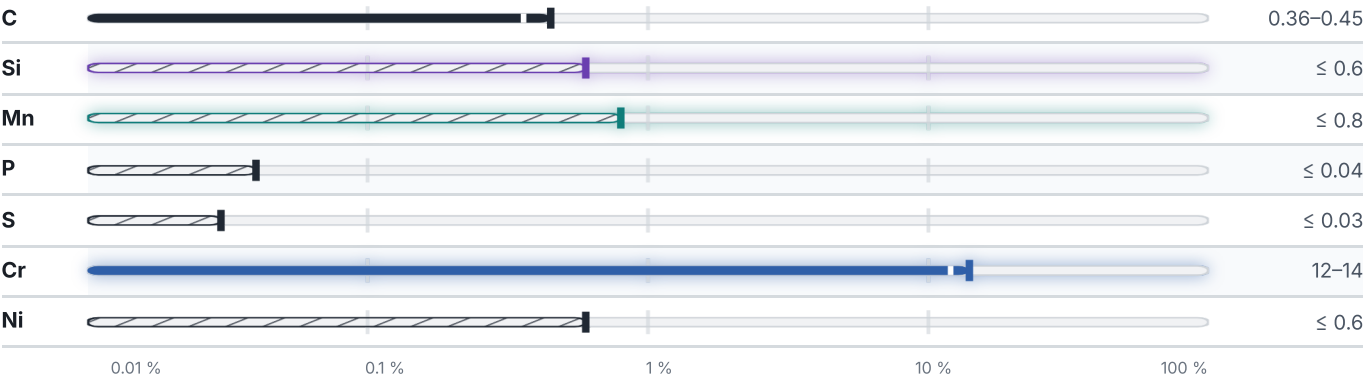
ELASTIC MODULUS 215 GPa	OTHER DESIGNATIONS 1 in 1 regions	PROPERTY VALUES 12 on file
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Chemical composition

Mass fraction in %



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: Mo.

Physical properties

5 values

CONDITION · DIMENSION	E GPa	ALPHA 10 ^{^-6} /K	LAMBDA W/(m·K)	CP J/(kg·K)
20	215	—	—	—

CONDITION · DIMENSION	E GPa	ALPHA 10^-6/K	LAMBDA W/(m·K)	CP J/(kg·K)
100	212	10.5	28.1	—
200	205	11	—	—
300	200	11	—	—
400	190	11.5	—	—
500	180	12	28.9	460
PROPERTY		VALUE	UNIT	
Elastic modulus		215	GPa	
Thermal expansion coefficient		10.5	10^-6/K	
Thermal conductivity		30	W/(m·K)	
Specific heat capacity		460	J/(kg·K)	
Electrical resistivity		550	nΩ·m	

Heat treatment

5 regimes

STEP	TEMPERATURE	MEDIUM
Annealing	Temperature not stated	—
Annealing	Temperature not stated	—
source joins the operations with + / procedural order		
Quenching	Temperature not stated	—
Tempering	Temperature not stated	—
source joins the operations with + / procedural order		
Quenching	Temperature not stated	—
Solution annealing	1050–1100 °C	Oil
Tempering	Temperature not stated	—
Ageing	200–300 °C	Air
Annealing	Temperature not stated	—

Designations across standards

1 designations · 1 documented as identical

China	1
40Cr13 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 40Cr13

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

[Start an enquiry](#)

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GRADE SEARCH
Search all grades

MATERIAL NO.
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ISSUED
Aug 15, 2026