

MATERIAL NUMBER 1.4041 · CLASS 1.4

1.4041

Chemical composition, mechanical and physical property values, and 15 standard designations from 5 regions.

DENSITY 7.85 g/cm ³	ELASTIC MODULUS 200 GPa	OTHER DESIGNATIONS 15 in 5 regions	PROPERTY VALUES 14 on file
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Chemical composition

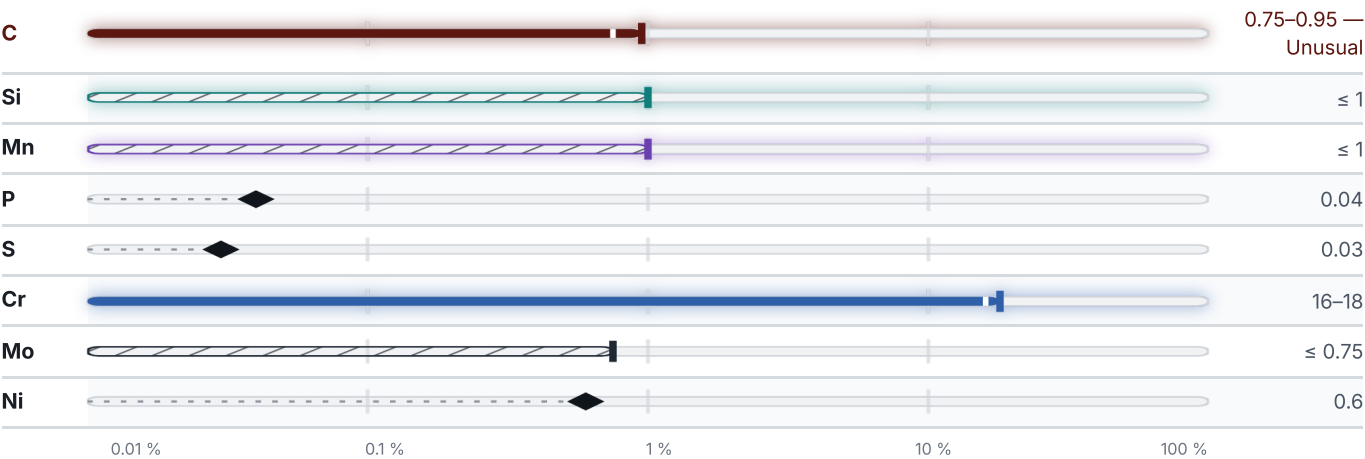
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 78.7 % ● Cr — 17 % ● Si — 1 % ● Mn — 1 % ● Traces & impurities · 2.3 %

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

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no transformation temperature is predicted here.

Physical properties

6 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Elastic modulus	200	GPa
Thermal expansion coefficient	10.2	10 ⁻⁶ /K
Thermal conductivity	24.2–100	W/(m·K)
Specific heat capacity	460	J/(kg·K)
Electrical resistivity	600	nΩ·m

Heat treatment

3 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	—

Designations across standards

15 designations · 3 documented as identical

United States		11	Europe		1
S44003	This grade's own name	uns	X85Cr17	This grade's own name	din-en
440B	This grade's own name	aisi-sae			
51440B		aisi-sae	United States / Aerospace		
A276		astm	7445		ams
A314		astm			
A473		astm	Japan		
A580		astm	SUS 440B		jis
F116		astm			
F1613		astm	China		
F2215		astm	8Cr17		gb
F899		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 1.4041

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

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ISSUED

Aug 20, 2026