

MATERIAL NUMBER 1.4040 · CLASS 1.4

X68Cr17

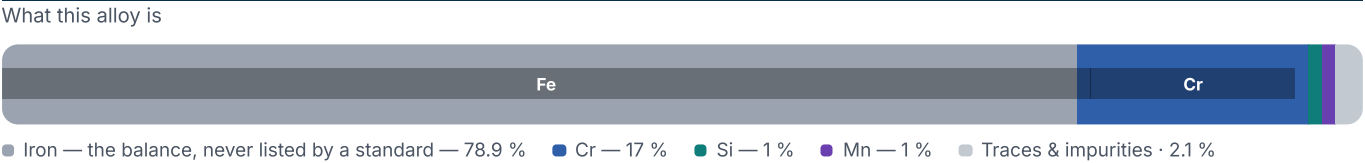
Material no. 1.4040

Chemical composition, mechanical and physical property values, and 18 standard designations from 5 regions.

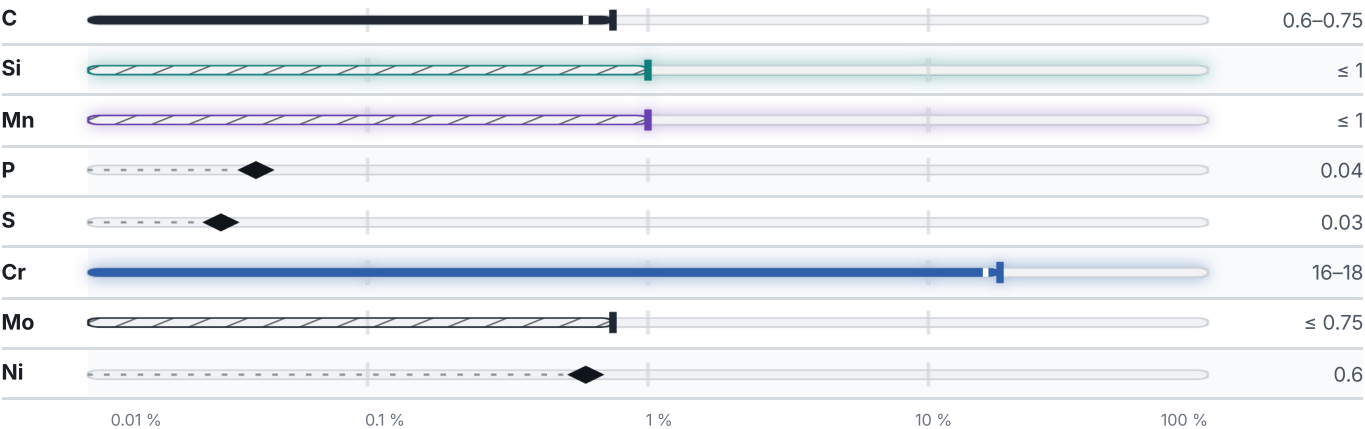
DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 18 in 5 regions	PROPERTY VALUES 9 on file
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Chemical composition

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

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

Mechanical properties

7 values across 1 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %	HB	HRC	HRB	HV
Plate/Sheet Hot-rolled	590	245	15	–	–	–	–
Hot-rolled	–	–	–	255	–	25	269
Quenched and tempered	–	–	–	–	40	–	–

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

18 designations · 3 documented as identical

United States		12	United States / Aerospace		3
S44002	This grade's own name	uns	5631		ams
440A	This grade's own name	aisi-sae	5632		ams
51440A		aisi-sae	7445		ams
A276		astm	Europe		1
A314		astm	X68Cr17		din-en
A473		astm	This grade's own name		
A484		astm	Japan		1
A511		astm	SUS 440A		jis
A580		astm	China		1
F116		astm	7Cr17		gb
F1613		astm			
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 X68Cr17

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

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ISSUED

Aug 20, 2026