

MATERIAL NUMBER 1.5710 · CLASS 1.5

40CrNi12

Material no. 1.5710

also listed as 36NiCr6

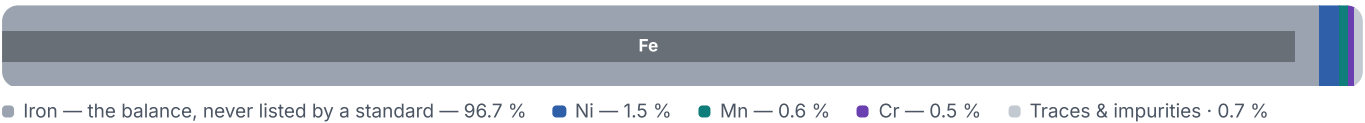
Chemical composition, mechanical and physical property values, and 26 standard designations from 13 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 26 in 13 regions	PROPERTY VALUES 15 on file
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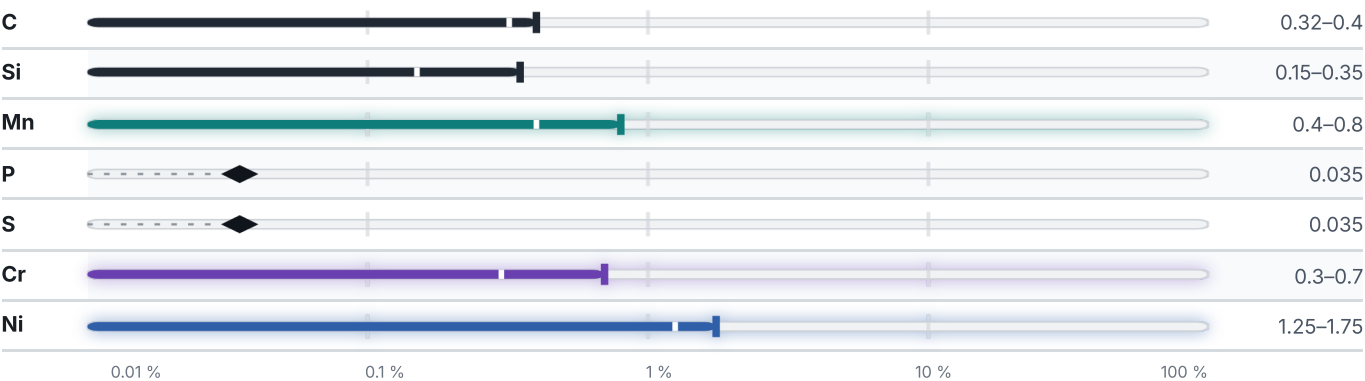
Chemical composition

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

Not enough recorded composition to predict a transformation temperature for this grade — missing: Mo.

Mechanical properties

7 values across 2 conditions

CONDITION · DIMENSION					HB
(annealing) , GOST 4543-71					207
Bar GOST 10702-78					179
QUENCHING AND DRAWING	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Ø 25	980	785	11	45	690

Physical properties

8 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)
20	7.82	200	–	–
100	7.8	–	11.8	44
200	7.77	–	12.3	43
300	7.74	–	13.4	41
400	7.7	–	14	39
500	–	–	–	37
PROPERTY			VALUE	UNIT
Density			7.85	g/cm ³
Transformation point Ac1			735	°C
Transformation point Ac3			768	°C
Transformation point Ar3			700	°C
Transformation point Ar1			660	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	hard weldability.	
Flake sensitivity	predisposed	
Temper brittleness	predisposed	

Designations across standards

26 designations · 3 documented as identical

United States		6	Australia / New Zealand		2
K22033	This grade's own name	uns	3140		as-nzs
3135	This grade's own name	aisi-sae	3140H		as-nzs
3140		aisi-sae			
3140H		aisi-sae			
G31400		aisi-sae	Romania		2
AMS 6330E		astm	40CrNi12		stas
			40CrNi12q		stas
United Kingdom		4	Japan		1
111A		bs	SNC236		jis
640A35		bs			
640M40		bs	China		1
EN111A		bs	40CrNi		gb
Europe		2	Sweden		1
1.5710		din-en	2530		ss
36NiCr6	This grade's own name	din-en			
France		2	Czechia		1
30NC6		afnor	16240		csn
35NC6		afnor			
Russia / CIS		2	Serbia		1
40KHN		gost	Č.5434		srps
40XH		gost	Bulgaria		1
			40ChN		bds

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 40CrNi12

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