

MATERIAL NUMBER 1.2080 · CLASS 1.2

D3 ASTM D3

Material no. 1.2080

also listed as X210Cr12

Chemical composition, mechanical and physical property values, and 32 standard designations from 18 regions.

DENSITY 7.6 g/cm³	OTHER DESIGNATIONS 32 in 18 regions	PROPERTY VALUES 11 on file
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Chemical composition

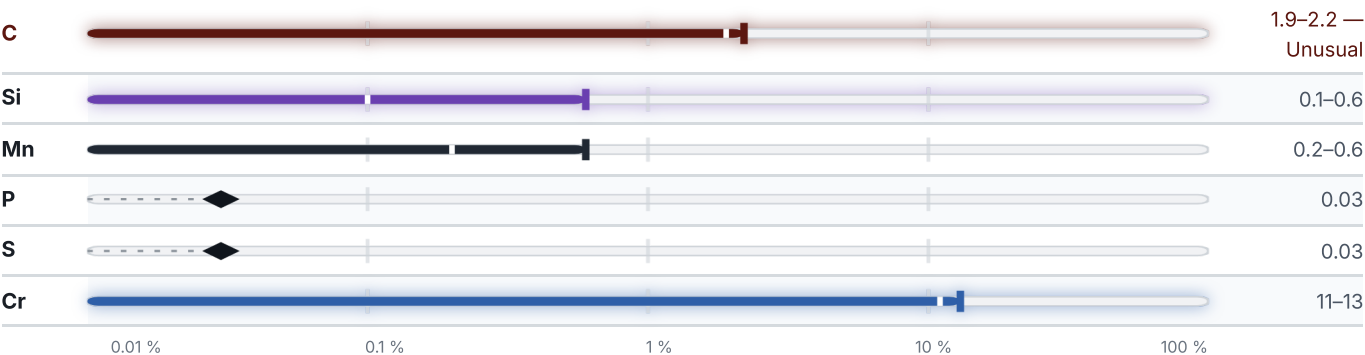
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 85.1 % ● Cr — 12 % ● C — 2.1 % ● Mn — 0.4 % ● Traces & impurities · 0.4 %

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: Ni, Mo.

Mechanical properties

4 values across 3 conditions

CONDITION · DIMENSION	HB	HRC
Annealed	248	—
Quenched and tempered	—	62
SOFT ANNEALED		HB
Soft annealed		248
CONDITION · DIMENSION		HB
(annealing) , GOST 5950-2000		255

Physical properties

5 values

PROPERTY	VALUE	UNIT
Density	7.6	g/cm ³
Transformation point Ac1	810	°C
Transformation point Ac3	835	°C
Transformation point Ar3	770	°C
Transformation point Ar1	755	°C

Heat treatment

3 regimes

STEP	TEMPERATURE	MEDIUM
Quenching	Temperature not stated	—
Quenching	950–1000 °C	Oil
Annealing	Temperature not stated	—

Designations across standards

32 designations · 3 documented as identical

United States		4	Russia / CIS		4
T30403	This grade's own name	uns	Ch12		gost
ASTM D3		aisi-sae	H12		gost
D3	This grade's own name	aisi-sae	KH12		gost
D3 ASTM D3		aisi-sae	X12		gost
			International		3
			210Cr12		iso
			X210Cr12		iso
			X210CrW12		iso

Italy	3
X205Cr12KU	uni
X210Cr13KU	uni
X250Cr12KU	uni
Europe	2
1.2080	din-en
X210Cr12 This grade's own name	din-en
France	2
Z200C12	afnor
Z210CW12-01	afnor
Spain	2
F.5212	une
X210Cr12	une
Czechia	2
19 435	csn
19436	csn
United Kingdom	1
BD3	bs

Japan	1
SKD1	jis
China	1
Cr12	gb
Sweden	1
2312	ss
Slovakia	1
19 436	stn
Serbia	1
Č.4150	srps
Croatia	1
Č4150	hrn
Poland	1
NC11	pn
Austria	1
K100	onorm
South Korea	1
STD1	ks

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 D3 ASTM D3

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

[Start an enquiry](#)

DATASHEET ONLINE

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GRADE SEARCH

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ISSUED

Aug 20, 2026