

MATERIAL NUMBER 1.2080 · CLASS 1.2

1.2080

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
-----------------------------	---	--------------------------------------

Chemical composition

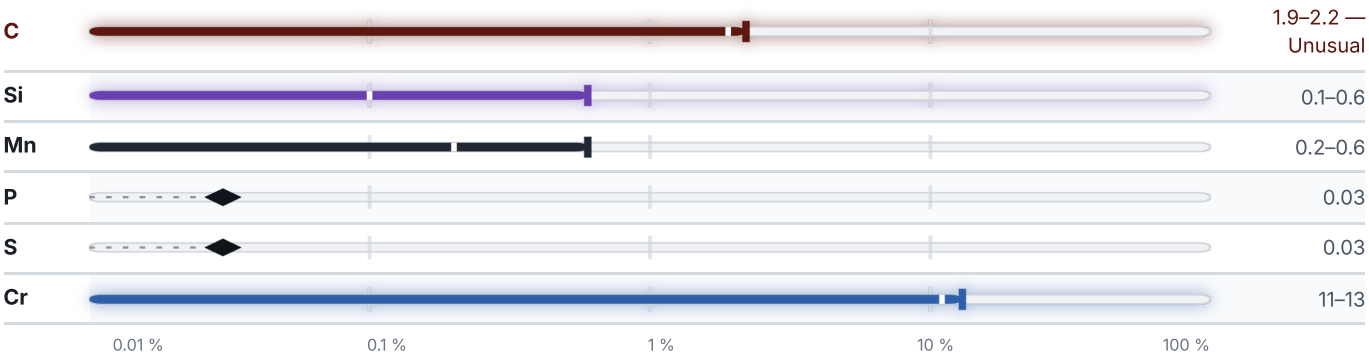
Mass fraction in %

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	—

CONDITION · DIMENSION	HB	HRC
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/cm³
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 States4		International3	
T30403	This grade's own nameuns	210Cr12	iso
ASTM D3	aisi-sae	X210Cr12	iso
D3	This grade's own nameaisi-sae	X210CrW12	iso
D3 ASTM D3	aisi-sae		
Russia / CIS4		Italy3	
Ch12	gost	X205Cr12KU	uni
H12	gost	X210Cr13KU	uni
KH12	gost	X250Cr12KU	uni
X12	gost		
		Europe2	
		1.2080	din-en
		X210Cr12	This grade's own namedin-en

France	2	Sweden	1
Z200C12	afnor	2312	ss
Z210CW12-01	afnor		
Spain	2	Slovakia	1
F.5212	une	19 436	stn
X210Cr12	une	Serbia	1
Czechia	2	Č.4150	srps
19 435	csn	Croatia	1
19436	csn	Č4150	hrn
United Kingdom	1	Poland	1
BD3	bs	NC11	pn
Japan	1	Austria	1
SKD1	jis	K100	onorm
China	1	South Korea	1
Cr12	gb	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 1.2080

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

[Start an enquiry](#)

DATASHEET ONLINE	GRADE SEARCH	MATERIAL NO.	ISSUED
View the material page	Search all grades	1.2080	Aug 20, 2026