

MATERIAL NUMBER 1.7380 · CLASS 1.7

Gr31

Material no. 1.7380

also listed as 10CrMo9-10

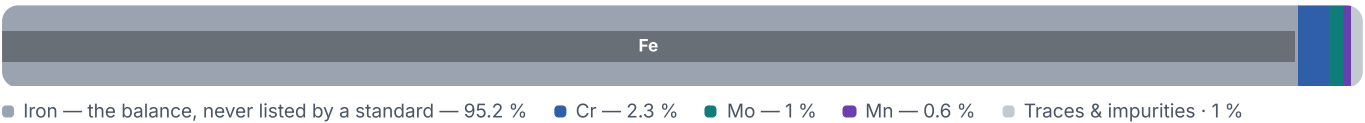
Chemical composition, mechanical and physical property values, and 82 standard designations from 19 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 82 in 19 regions	PROPERTY VALUES 10 on file
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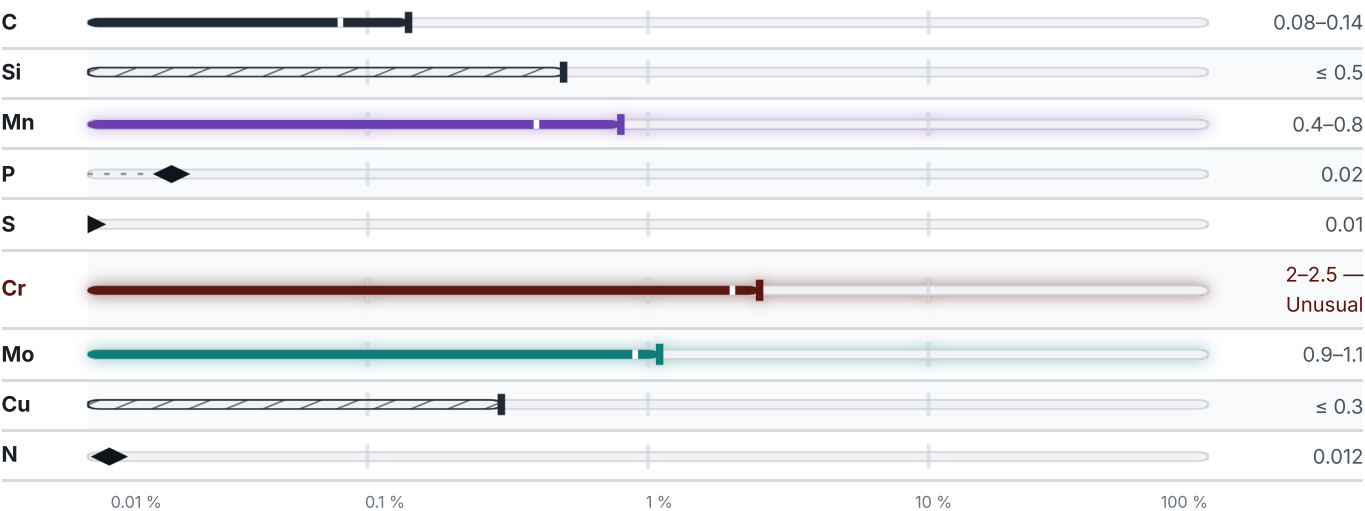
Chemical composition

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: Ni.

Mechanical properties

14 values across 2 conditions

CONDITION · DIMENSION	REH N/mm ²	RM N/mm ²
≤ 16	310	—
16 – 40	300	—
40 – 60	290	—
≤ 60	—	480–630
60 – 100	280	470–620
100 – 150	260	460–610
150 – 250	250	450–600

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	KCU kJ/m ²
Sheet, GOST 5520-79	390–590	295	20	980

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Heat treatment

1 regimes

STEP	TEMPERATURE	MEDIUM
source joins the operations with + / procedural order		
Isothermal annealing	Temperature not stated	—
Normalizing	Temperature not stated	—
Tempering	675 °C	—

Designations across standards

82 designations · 4 documented as identical

Russia / CIS		28	United States		19
10Ch2M	gost		2.25Cr1Mo		uns
10G2A	gost		A182 F22		uns
10G2FB	gost		A182 T22		uns
10G2FBYu	gost		K21390	This grade's own name	uns
10G2SB	gost		K21590	This grade's own name	uns
10G2SFB	gost		A182		aisi-sae
10GN2MFA	gost		A387Gr.22		aisi-sae
10GN2MFA-Sh	gost		ASTM A182		aisi-sae
10Kh2GNM	gost		ASTM A182 F.22		aisi-sae
10KH2M	gost		F22		aisi-sae
10ГН2МФА-БД	gost		Gr.P22		aisi-sae
10X2M	gost		2.25Cr1Mo		astm
10X2M-БД	gost		A 182 F 22 Class1	This grade's own name	astm
12X2M	gost		A 182 Grade F22		astm
1Ch2M	gost		A 234 Grade WP22		astm
1Kh2M	gost		A 335 Grade P22		astm
PK10D2F	gost		A182 F22		astm
PK10N2M	gost		A182 T22		astm
Sv-10G2	gost		K21590		astm
Sv-10G2SMA	gost				
Sv-10KhG2SMA	gost		United Kingdom		6
Sv-10KhN2GMT	gost		1501-622		bs
ПК10Д2Ф-6.0	gost		1501-622 Gr31		bs
ПК10Н2М-6.8	gost		622		bs
ПК10Н2М-7.2	gost		622-490		bs
ПК10Н2М-7.6	gost		622Gr.31		bs
ст.12Х2М	gost		Gr31		bs
ЭИ-984	gost				
			France		5
			10CD9-10		afnor
			11CrMo9-10		afnor
			12CD10		afnor
			12CD9		afnor
			12CD9-10		afnor
			Italy		4
			10CrMo9-10		uni
			12CrMo10		uni
			12CrMo9		uni
			12CrMo9-10		uni
			Europe		3
			1.7380		din-en
			10CrMo9-10	This grade's own name	din-en
			Gr.P22		din-en

International	3	Czechia	1
F34	iso	15313	csn
P34	iso		
TS34	iso	Poland	1
Japan	2	10H2M	pn
SCMV4	jis	Slovakia	1
SFVAF22A	jis	15 313	stn
Romania	2	Serbia	1
10CrMo10	stas	Č.7401	srps
12MoCr22	stas		
Spain	1	Hungary	1
TU.H	une	2Cr10Mo45.47	msz
China	1	Bulgaria	1
12CrMo	gb	12Ch2M	bds
Sweden	1	Austria	1
2218	ss	10CrMo9-10KW	onorm

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 Gr31

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

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GRADE SEARCH

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ISSUED

Aug 20, 2026