

MATERIAL NUMBER 1.4828 · CLASS 1.4

S20500

Material no. 1.4828

also listed as X15CrNiSi20-12

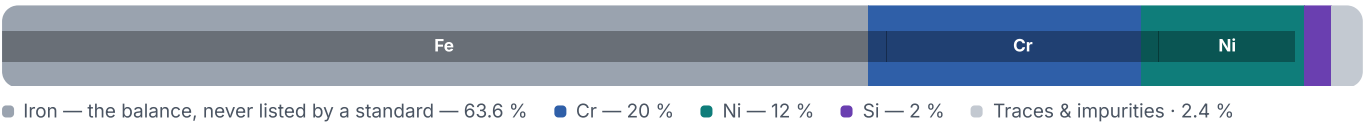
Chemical composition, mechanical and physical property values, and 77 standard designations from 19 regions.

DENSITY 7.9 g/cm³	OTHER DESIGNATIONS 77 in 19 regions	PROPERTY VALUES 9 on file
-----------------------------	---	-------------------------------------

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

14 values across 4 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %	Z %	HB	HRB	HV
Bars/Rods Solution treatment	560	205	45	50	–	–	–
Solution treatment	–	–	–	–	201	95	210
SOLUTION ANNEALED							HB
Solution annealed							223
QUENCHING 1000 - 1150°C, AIR	RM N/mm ²		RE N/mm ²		A5 %		Z %
Ø 60	590		295		35		55
CONDITION · DIMENSION				RM N/mm ²		A5 %	
Sheet thin, GOST 5582-75				590		40	

Physical properties

1 values

CONDITION · DIMENSION	RHO g/cm ³	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	7.8	–	–	946
100	7.76	16	15	1000
200	–	–	17	1051
300	–	–	18	1095
400	–	–	19	1130
500	–	–	21	1100
600	7.55	18.1	23	1194
700	7.51	18.3	24	1218
800	7.47	18.5	26	1242
900	7.42	18.8	28	1242
1000	–	19	–	–
PROPERTY	VALUE		UNIT	
Density	7.9		g/cm ³	

Designations across standards

77 designations · 2 documented as identical

United States		30	Russia / CIS		9
S20500		uns	08KH20N14S2		gost
S30900		uns	08X20H14C2		gost
S41400		uns	0X20H14C2		gost
S43023		uns	20Ch20N14S2		gost
205		aisi-sae	20KH20N14S2		gost
30309		aisi-sae	20X20H14C2		gost
309		aisi-sae	X20H14C2		gost
3U8		aisi-sae	ЭИ211		gost
414		aisi-sae	ЭИ732		gost
430FSe		aisi-sae			
51414		aisi-sae	United Kingdom		3
S30900		aisi-sae	305S19		bs
XM-15		aisi-sae	309S24		bs
A167		astm	X15CrNiSi20-12		bs
A264		astm			
A276		astm	United States / Aerospace		3
A314		astm	5523		ams
A403		astm	5574		ams
A409		astm	5650		ams
A473		astm			
A479		astm	Japan		3
A480		astm	SUH 309		jis
A484		astm	SUH 309TB		jis
A511		astm	SUH 309TP		jis
A580		astm			
A581		astm	China		3
A582		astm	1Cr20Ni14Si2		gb
A666		astm	1Cr23Ni13		gb
A895		astm	2Cr23Ni13		gb
F2281		astm			
France		9	Europe		2
308F80		afnor	1.4828		din-en
Z10CNS20-12		afnor	X15CrNiSi20-12	This grade's own name	din-en
Z10CNS25-20		afnor			
Z15CN24-13		afnor	Spain		2
Z15CNS20.10		afnor	F.3312		une
Z15CNS20.12		afnor	X15CrNiSi20-12		une
Z17CNS20	This grade's own name	afnor			
Z17CNS20-12		afnor	Italy		2
Z9CN24-13		afnor	X16CrNi23-14		uni
			X6CrNi2520		uni
			Czechia		2
			17251		csn
			17256VN		csn

Poland	2	Hungary	1
H18N9S	pn	H8	msz
H20N12S2	pn		
		Romania	1
Slovakia	1	15SiNiCr200	stas
17 251	stn		
		Bulgaria	1
Serbia	1	Ch20N14S2	bds
Č.4577	srps		
		South Korea	1
former Yugoslavia	1	STR309	ks
Č.4577	jus		

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 S20500

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	1.4828	Sep 8, 2026