

MATERIAL NUMBER 1.4833 · CLASS 1.4

309S16

Material no. 1.4833

also listed as X 7 CrNi 23 14

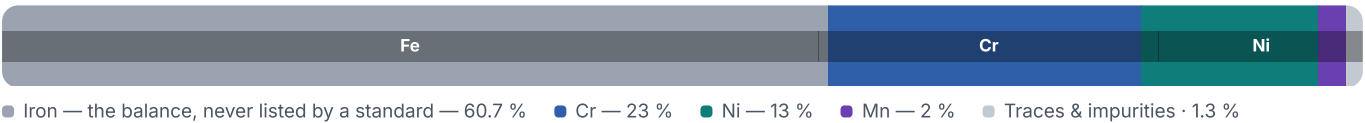
Chemical composition, mechanical and physical property values, and 69 standard designations from 14 regions.

DENSITY 7.9 g/cm³	OTHER DESIGNATIONS 69 in 14 regions	PROPERTY VALUES 11 on file
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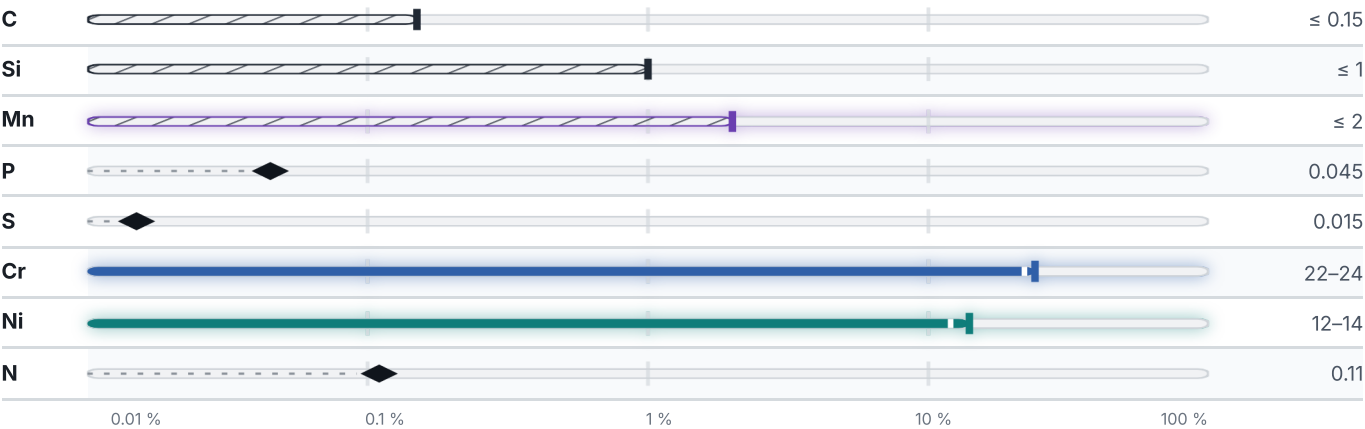
Chemical composition

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

15 values across 5 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %	HB	HRB	HV
Plate/Sheet Hot-rolled	520	205	40	–	–	–
Hot-rolled	–	–	–	187	90	200
SOLUTION ANNEALED						HB
Solution annealed						192
QUENCHING 1100 - 1150°C, AIR	RM N/mm ²		RE N/mm ²		A5 %	Z %
Ø 60	490		295		35	50
CONDITION · DIMENSION			RM N/mm ²	A5 %		
Sheet trick, GOST 7350-77			570	35		
CONDITION · DIMENSION			RM N/mm ²	A5 %		
Sheet thin, GOST 5582-75			540	35		

Physical properties

3 values

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)
20	7.82	207	–	–	–
100	7.79	–	14.9	–	538
200	–	–	15.7	17	–
300	–	–	16.6	19	–
400	–	–	17.1	21	–
500	–	–	17.5	23	–
600	7.58	–	17.8	24	–
700	–	–	18.2	27	–
800	7.48	–	–	29	–
900	–	–	–	31	–
PROPERTY			VALUE	UNIT	
Density			7.9	g/cm³	

Technological properties

PROPERTY	VALUE	UNIT
Weldability	limited weldability.	
Temper brittleness	predisposed	

Designations across standards

69 designations · 5 documented as identical

United States		34	Japan		5
S30900		uns	SUH 309		jis
S30908	This grade's own name	uns	SUS 309S		jis
30309		aisi-sae	SUS 309STP		jis
30309S		aisi-sae	SUS309		jis
309		aisi-sae	SUS309STB		jis
309S	This grade's own name	aisi-sae	United Kingdom		4
MT309		aisi-sae	309S		bs
MT309S		aisi-sae	309S16		bs
S30900		aisi-sae	309S24		bs
S30908		aisi-sae	X12CrNi23-13		bs
A1012		astm	France		4
A167		astm	Z10CNS20-12		afnor
A213		astm	Z15CN23-13		afnor
A240		astm	Z15CN24-13		afnor
A249		astm	Z17CNS20-12		afnor
A264		astm	United States / Aerospace		4
A276		astm	5523		ams
A312		astm	5574		ams
A314		astm	5650		ams
A358		astm	7490		ams
A403		astm	Russia / CIS		4
A409		astm	20KH23N13		gost
A473		astm	20X23H13		gost
A478		astm	X23H13		gost
A479		astm	ЭИ319		gost
A480		astm	Europe		3
A511		astm	X 7 CrNi 23 14 This grade's own name		din-en
A554		astm	X12CrNi23-13 This grade's own name		din-en
A580		astm	X18CrNi23-13 This grade's own name		din-en
A813		astm	Poland		3
A814		astm	H18N9S		pn
A924		astm	H20N12S2		pn
A943		astm	H23N13		pn
F2281		astm			

China	2	International	1
0Cr23Ni13	gb	X6CrNi23-14	iso
2Cr23Ni13	gb		
Italy	2	Romania	1
X16CrNi23-14	uni	15SiNiCr200	stas
X6CrNi2314	uni	South Korea	1
Spain	1	STS309S	ks
X12CrNi23-13	une		

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 309S16
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	1.4833	Aug 20, 2026