

MATERIAL NUMBER 1.4401 · CLASS 1.4

X5CrNiMo17-12

Material no. 1.4401

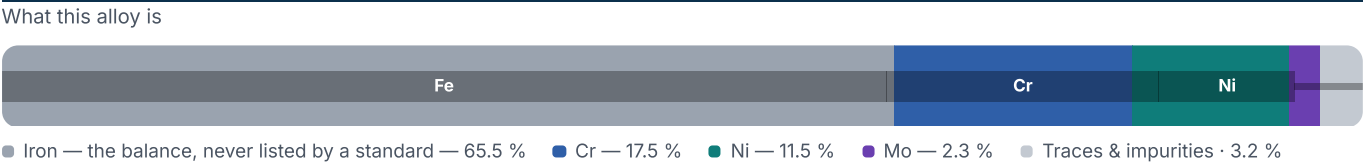
also listed as X 5 CrNiMo 18 10

Chemical composition, mechanical and physical property values, and 134 standard designations from 19 regions.

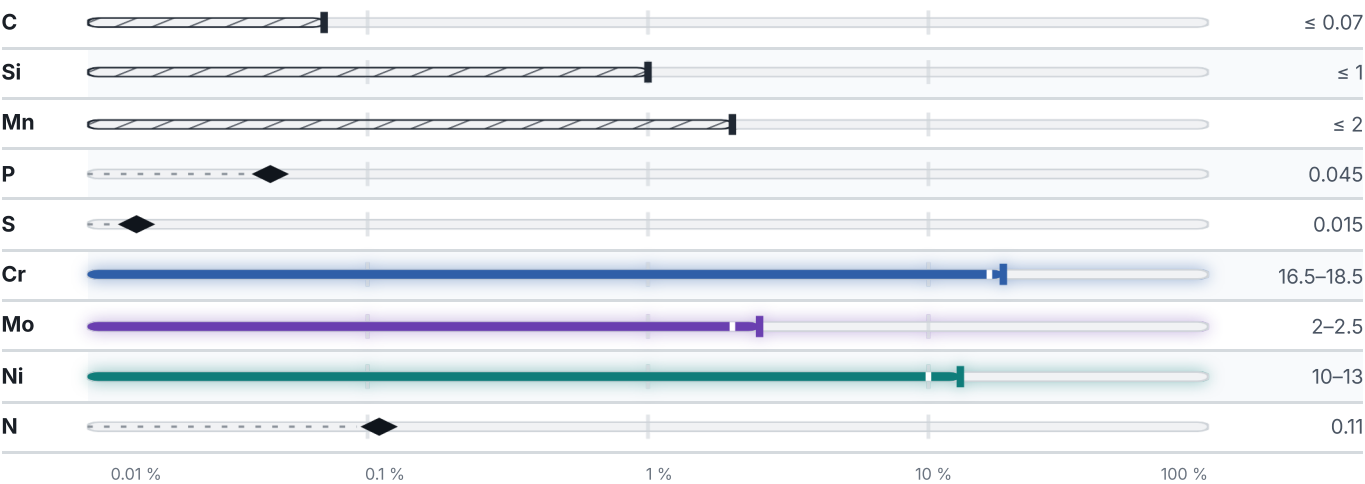
DENSITY 8 g/cm ³	OTHER DESIGNATIONS 134 in 19 regions	PROPERTY VALUES 11 on file
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Chemical composition

Mass fraction in %



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

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no transformation temperature is predicted here.

Mechanical properties

13 values across 4 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Pipe	540	220	40	55	1500
Pipe	540	220	35	50	1400
COLD ROLLED					HV
Cold rolled					220–400
QUENCHED AND TEMPERED					HB
Quenched and tempered					215
SOLUTION ANNEALED					HB
Solution annealed					200

Physical properties

2 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K
20	7.9	214	–
100	–	–	17.1
200	–	–	17.6
300	–	–	18.1
400	–	184	18.4
500	–	175	19
600	–	–	19.3
700	–	–	19.6
800	–	–	19.8
PROPERTY		VALUE	UNIT
Density		8	g/cm ³

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	

Designations across standards

134 designations · 5 documented as identical

United States		67	A826	astm
S31600		uns	A831	astm
S31603		uns	A943	astm
S31609	This grade's own name	uns	A965	astm
30316		aisi-sae	A988	astm
316		aisi-sae	F 138	astm
316H	This grade's own name	aisi-sae	F1667	astm
316L		aisi-sae	F2215	astm
S31600		aisi-sae	F2281	astm
S31609		aisi-sae	F3184	astm
A 182 Grade F316		astm	F593	astm
A 312 Grade TP316		astm	F594	astm
A 403 Grade WP316		astm	F738	astm
A1012		astm	F836	astm
A1022		astm	F837	astm
A1049		astm	F879	astm
A167		astm	F899	astm
A182		astm	F957	astm
A193		astm	TP316	astm
A194		astm	TP316L	astm
A213		astm		
A240		astm	Japan	13
A249		astm	SUS 316A	jis
A264		astm	SUS 316FB	jis
A269		astm	SUS 316HFB	jis
A270		astm	SUS 316HTB	jis
A271		astm	SUS 316HTP	jis
A276		astm	SUS 316TB	jis
A312		astm	SUS 316TBS	jis
A313		astm	SUS 316TKA	jis
A314		astm	SUS 316TKC	jis
A320		astm	SUS 316TP	jis
A336		astm	SUS F 316	jis
A358		astm	SUS Y 316	jis
A368		astm	SUS316	jis
A376		astm		
A403		astm	United Kingdom	11
A409		astm	316 S 17	bs
A430		astm	316 S 19	bs
A479		astm	316 S 33	bs
A484		astm	316 S 40	bs
A580		astm	316 S 41	bs
A632		astm	316S16	bs
A666		astm	316S31	bs
A688		astm	58J	bs
A793		astm	845	bs
A813		astm	EN58J	bs
A814		astm	S31 EN 58J	bs

United States / Aerospace		9	Europe		3
5507	ams		1.4401		din-en
5524	ams		X 5 CrNiMo 18 10	This grade's own name	din-en
5573	ams		X5CrNiMo17-12-2	This grade's own name	din-en
5584	ams				
5648	ams		China		2
5649	ams		0Cr17Ni11Mo2		gb
5653	ams		0Cr17Ni12Mo2		gb
5690	ams				
5691	ams		Poland		2
			00H17N14M2		pn
			0H17N12M2T		pn
France		7			
Z2CND17-12	afnor		Italy		1
Z3CND17-11-02	afnor				
Z6CND17-11-02	afnor		X5CrNiMo17-12		uni
Z6CND17.11	afnor				
Z6CND17.12	afnor		Sweden		1
Z7CND17-11-02	afnor		2347		ss
Z7CND17-12-02	afnor				
			Czechia		1
Russia / CIS		6	17346		csn
03Ch17N13M2	gost				
03X17H13M2	gost		Slovakia		1
03X17H14M2	gost				
08Ch16N11M3	gost		17 346		stn
08KH16N11M3	gost				
08X16H11M3	gost		Brazil		1
			316		abnt
Spain		5	Serbia		1
03	une		Č.4573		srps
F.310.A	une				
F.3534	This grade's own name	une	former Yugoslavia		1
F.3543	une		Č.4573		jus
F.3543-X5CrNiMo17-12	une				
			Australia / New Zealand		1
			316		as-nzs
			Austria		1
			X5CrNiMo17-12-2KW		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 X5CrNiMo17-12

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