

MATERIAL NUMBER 1.4401 · CLASS 1.4

S31 EN 58J

Material no. 1.4401

also listed as X 5 CrNiMo 18 10

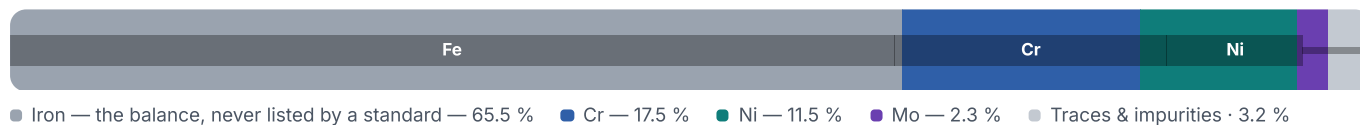
Chemical composition, mechanical and physical property values, and 134 standard designations from 19 regions.

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

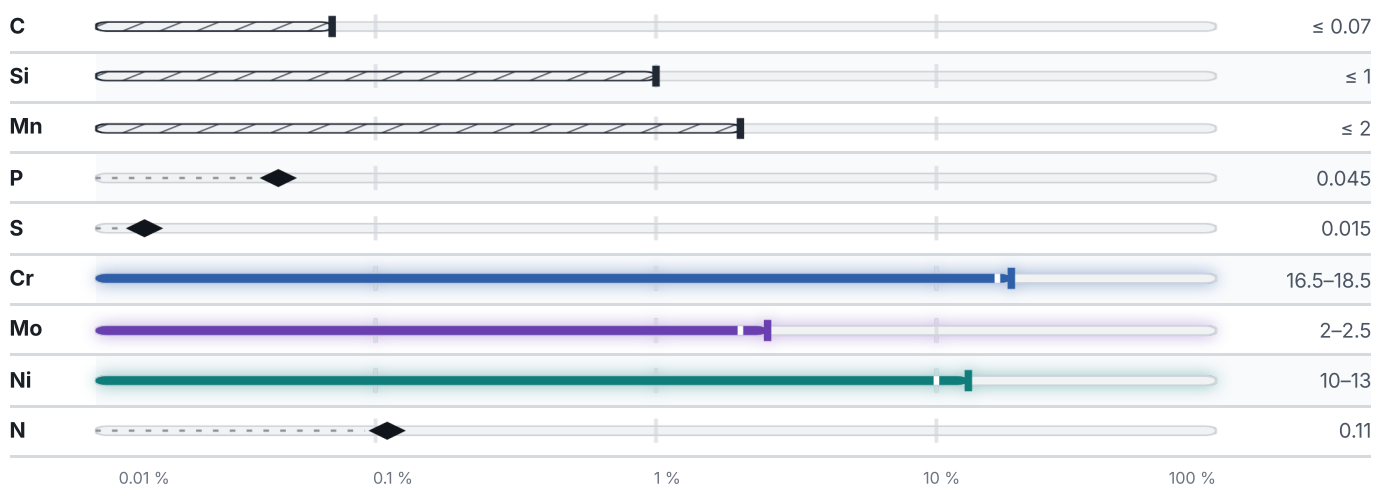
Chemical composition

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

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.	

134 designations · 5 documented as identical

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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				
Z3CND17-11-02	afnor		Italy		1
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		17 346		stn
08Ch16N11M3	gost				
08KH16N11M3	gost		Brazil		1
08X16H11M3	gost		316		abnt
Spain		5	Serbia		1
03	une		Č.4573		srps
F.310.A	une				
F.3534	This grade's own name		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 S31 EN 58J

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

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DATASHEET ONLINE

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GRADE SEARCH

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ISSUED

Aug 20, 2026