

MATERIAL NUMBER 1.4303 · CLASS 1.4

SUS305J1

Material no. 1.4303

also listed as X 5 CrNi 18 12

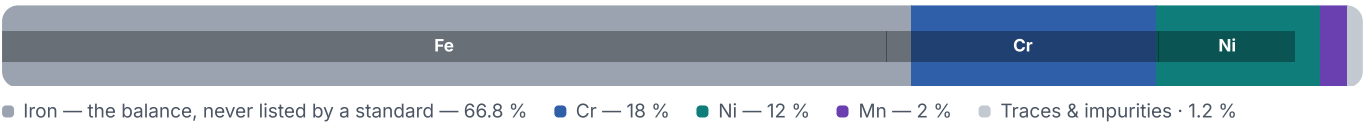
Chemical composition, mechanical and physical property values, and 84 standard designations from 13 regions.

DENSITY 7.9 g/cm³	OTHER DESIGNATIONS 84 in 13 regions	PROPERTY VALUES 10 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

22 values across 6 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %	HB	HRB	HV
Plate/Sheet Hot-rolled	480	175	40	–	–	–
Hot-rolled	–	–	–	187	90	200
CONDITION · DIMENSION			RM N/mm ²	A5 %		
Pipe hot strain, GOST 9940-81			529	40		
Pipe cooling strain, GOST 9941-81			549	35		
SOFT ANNEALED				HB		
Soft annealed				215		
CONDITION · DIMENSION		RM N/mm ²	RE N/mm ²	A5 %	Z %	
Pipe		540	220	35	55	
CONDITION · DIMENSION		RM N/mm ²	RE N/mm ²	A5 %	Z %	
Bar, GOST 5949-75		540	196	40	55	
CONDITION · DIMENSION		RM N/mm ²	RE N/mm ²	A5 %	Z %	
Sheet trick, GOST 7350-77		530	235	38		

Physical properties

2 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
20	7.9	205	–	15.1	–	761
100	7.86	202	16.6	16.3	460	800
200	7.82	197	17	17.6	482	865
300	7.78	190	17.2	18.7	507	930
400	7.74	181	17.5	20.4	525	982
500	7.69	173	17.9	22.2	545	1038
600	7.65	160	18.2	24.1	563	1070
700	7.6	150	18.6	25.9	579	1120
800	7.56	–	18.9	27.4	590	1155
900	7.51	–	19.3	29.1	603	1210
1000	–	–	–	30.8	616	1245

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
1100	–	–	–	32.3	625	1275
1200	–	–	–	34.1	637	1315

PROPERTY	VALUE	UNIT
Density	7.9	g/cm³

Technological properties

PROPERTY	VALUE	UNIT
Weldability	limited weldability.	

Designations across standards

84 designations · 6 documented as identical

United States	48	TP304L	astm
S30300	uns		
S30400	uns		
S30403	uns		
S30453	uns		
S30500	uns		
S30800	uns		
303	aisi-sae		
30305	aisi-sae		
30308	aisi-sae		
304	aisi-sae		
304L	aisi-sae		
304LN	aisi-sae		
305	aisi-sae		
305L	aisi-sae		
308	aisi-sae		
S30500	aisi-sae		
S30800	aisi-sae		
305 3008	astm		
A1012	astm		
A167	astm		
A193	astm		
A194	astm		
A240	astm		
A249	astm		
A276	astm		
A313	astm		
A314	astm		
A320	astm		
A368	astm		
A473	astm		
A478	astm		
A480	astm		
A492	astm		
A493	astm		
A511	astm		
A554	astm		
A580	astm		
F1667	astm		
F2215	astm		
F593	astm		
F594	astm		
F738	astm		
F836	astm		
F837	astm		
F879	astm		
F880	astm		
TP304	astm		
		Russia / CIS	11
		06Ch18N11	gost
		06KH18N11	gost
		06X18H11	gost
		06X18H11	gost
		0X18H11	gost
		12KH18N12BL	gost
		12KH18N12T	gost
		12X18H12	gost
		сг.06X18H11	gost
		X18H12T	gost
		ЭИ684	gost
		Europe	3
		X 5 CrNi 18 12	din-en
		X4CrNi18-12	din-en
		X6CrNi18-12	din-en
		France	3
		Z1CN18-12	afnor
		Z5CN18-11FF	afnor
		Z8CN18-12	afnor
		Spain	3
		F.3513	une
		F.3513-X8CrNi.18-12	une
		X8CrNi18-12	une
		United States / Aerospace	3
		5514	ams
		5685	ams
		5686	ams
		Japan	3
		SUS 305 SUS 305J1	jis
		SUS305	jis
		SUS305J1	jis
		Italy	3
		X7CrNi18-10	uni
		X8CrNi1812	uni
		X8CrNi19-10	uni
		United Kingdom	2
		305S17	bs
		305S19	bs

Poland	2	Sweden	1
00H18N10	pn	23 33	ss
0H18N9	pn		
China	1	former Yugoslavia	1
1Cr18Ni12	gb	Č.45702	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 SUS305J1

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	1.4303	Aug 20, 2026