

MATERIAL NUMBER 1.4300 · CLASS 1.4

X18H9

Material no. 1.4300

also listed as X 12 CrNi 18 8

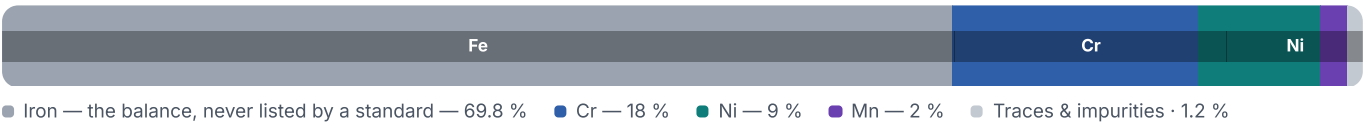
Chemical composition, mechanical and physical property values, and 76 standard designations from 14 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 76 in 14 regions	PROPERTY VALUES 9 on file
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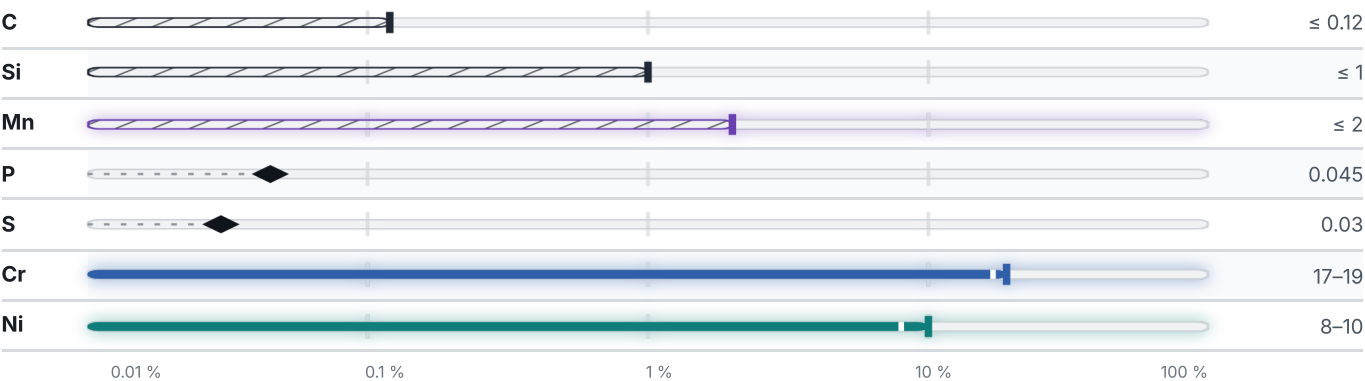
Chemical composition

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

30 values across 5 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	HB
Pipe cooling strain, GOST 9941-81	549	–	37	–	–
Pipe hot strain, GOST 9940-81	529	–	40	–	–
Bar cold-worked , GOST 18907-73	880–930	–	–	–	–
Bar, GOST 18907-73	640–880	–	20	–	–
Forging, GOST 25054-81	490	196	35–40	40–48	–
Sheet thin cold-worked , GOST 5582-75	930–1230	–	13	–	–
Sheet thin cold-worked , GOST 4986-79	980	–	3–5	–	–
12KH18N9 (12X18H9) , Forging GOST 25054-81	–	–	–	–	179

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %	Z %
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Bars/Rods	520	205	40	60
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QUENCHING 1050 - 1100°C, COOLING AIR	RM N/mm ²	RE N/mm ²	A5 %	Z %
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Ø 60	490	196	45	55
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CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %
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Sheet trick, GOST 7350-77	530	215	38
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CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %
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Sheet thin, GOST 5582-75	540	195	38
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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	–	725
100	7.86	202	16.6	16.3	504	792
200	7.82	197	17	17.5	–	860
300	7.78	190	17.2	18.8	–	920
400	7.74	181	17.5	21.3	–	976
500	7.69	173	17.9	23	–	1028
600	7.65	160	18.2	26.8	–	1070

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10^-6/K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
700	7.6	150	18.6	25.9	–	1117
800	7.56	–	18.9	–	–	–
900	–	–	19.3	–	–	–
PROPERTY				VALUE	UNIT	
Density				7.85	g/cm³	

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	

Designations across standards

76 designations · 3 documented as identical

United States		28	United States / Aerospace		16
S30200	This grade's own name	uns	5358		ams
S30302		uns	5500		ams
301		aisi-sae	5515		ams
302	This grade's own name	aisi-sae	5516		ams
303		aisi-sae	5600		ams
30302		aisi-sae	5636		ams
Gr.302		aisi-sae	5637		ams
S30200		aisi-sae	5688		ams
A240		astm	5693		ams
A264		astm	5866		ams
A276		astm	5903		ams
A313		astm	5904		ams
A314		astm	5905		ams
A368		astm	5906		ams
A473		astm	6693		ams
A478		astm	7241		ams
A479		astm			
A480		astm	Russia / CIS		9
A492		astm	08Ch18N10		gost
A493		astm	12KH18N9		gost
A511		astm	12X18H9		gost
A554		astm	17KH18N9		gost
A580		astm	17X18H9		gost
A666		astm	2X18H9		gost
F1669		astm	PKh18N9T		gost
F2215		astm	PRKh18N9		gost
F599		astm	X18H9		gost
F899		astm			

France	4	Japan	2
Z10CN18-09	afnor	STC52C	jis
Z10CNF18-09	afnor	SUS 302	jis
Z12CN17-07	afnor		
Z6CN18-09	afnor	Czechia	2
		17 242	csn
Spain	4	17241	csn
F.3507	une	Europe	1
F.3508	une	X 12 CrNi 18 8	din-en
F.3517	une	This grade's own name	
X10CrNi18-09	une	China	1
United Kingdom	3	1Cr18Ni9	gb
302S25	bs	Sweden	1
302S26	bs	2331	ss
304S21	bs	Poland	1
Italy	3	1H18N9	pn
X10CrNi18-09	uni	Brazil	1
X10CrNi18-10	uni	302	abnt
X15CrNi18-09	uni		

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 X18H9

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	1.4300	Aug 20, 2026