

MATERIAL NUMBER 1.4550 · CLASS 1.4

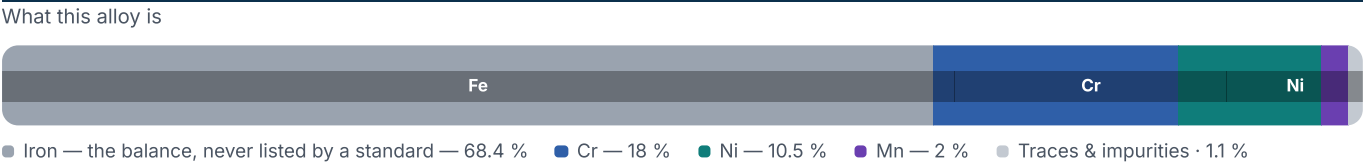
1.4550

Chemical composition, mechanical and physical property values, and 107 standard designations from 14 regions.

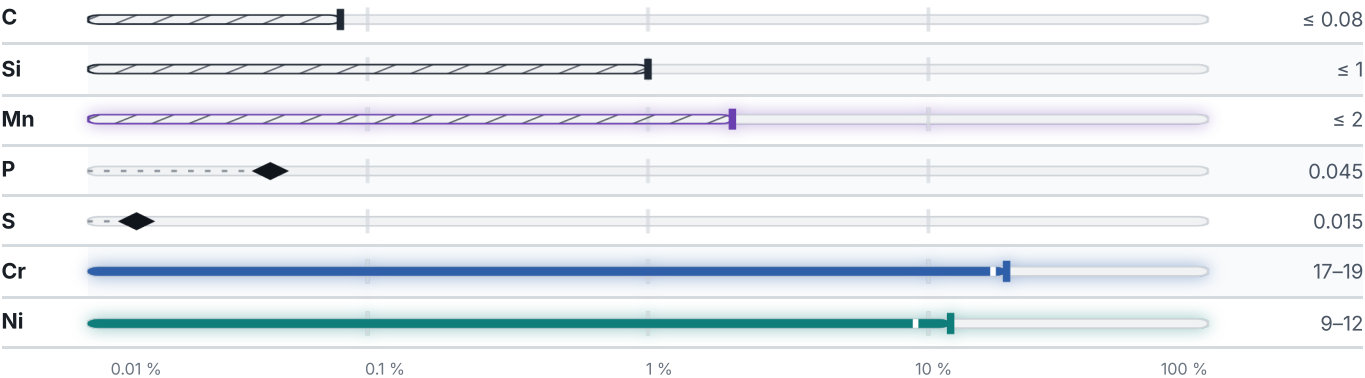
DENSITY 7.9 g/cm³	ELASTIC MODULUS 193 GPa	OTHER DESIGNATIONS 107 in 14 regions	PROPERTY VALUES 13 on file
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Chemical composition

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

Not enough recorded composition to predict a transformation temperature for this grade — missing: Mo.

Mechanical properties

21 values across 7 conditions

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A %	HB	HRB	HV
Plate/Sheet Hot-rolled	520	205	40	–	–	–

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %	HB	HRB	HV
Hot-rolled	—	—	—	187	90	200
CONDITION · DIMENSION			RM N/mm ²	A5 %		
Pipe cooling strain, GOST 9941-81			529	37		
Pipe hot strain, GOST 9940-81			510	38		
SOFT ANNEALED			HB			
Soft annealed			230			
SOLUTION ANNEALED			HB			
Solution annealed			210			
QUENCHING 1050 - 1100°C, AIR	RM N/mm ²	RE N/mm ²	A5 %	Z %		
to Ø 60	490	175	40	55		
CONDITION · DIMENSION		RM N/mm ²	RE N/mm ²	A5 %		
Sheet trick, GOST 7350-77		510	205	40		
CONDITION · DIMENSION		RM N/mm ²	A5 %			
Sheet thin, GOST 5582-75		530	40			

Physical properties

6 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	7.9	202	–	730
100	–	–	15.9	–
PROPERTY	VALUE		UNIT	
Density	7.9		g/cm ³	
Elastic modulus	193		GPa	
Thermal expansion coefficient	16.6		10 ⁻⁶ /K	
Thermal conductivity	15		W/(m·K)	
Specific heat capacity	500		J/(kg·K)	
Electrical resistivity	730		nΩ·m	

Heat treatment

3 regimes

STEP	TEMPERATURE	MEDIUM
Solution annealing	Temperature not stated	—
Solution annealing	Temperature not stated	—
source joins the operations with (or)		
Quenching	Temperature not stated	—
Solution annealing	1050–1150 °C	Water

Designations across standards

107 designations · 5 documented as identical

United States		52		
S34700	This grade's own name	uns	F593	astm
S34800	This grade's own name	uns	F594	astm
30347		aisi-sae	F738	astm
30348		aisi-sae	F836	astm
347	This grade's own name	aisi-sae	TP347	astm
347H		aisi-sae		
348	This grade's own name	aisi-sae		
S34700		aisi-sae		
S34800		aisi-sae		
347 H		astm		
A 182 Grade F347		astm		
A 312 Grade TP347		astm		
A 403 Grade WP347		astm		
A1012		astm		
A1049		astm		
A182		astm		
A193		astm		
A194		astm		
A213		astm		
A240		astm		
A249		astm		
A264		astm		
A269		astm		
A276		astm		
A312		astm		
A313		astm		
A314		astm		
A320		astm		
A336		astm		
A358		astm		
A376		astm		
A403		astm		
A409		astm		
A430		astm		
A473		astm		
A479		astm		
A511		astm		
A554		astm		
A580		astm		
A632		astm		
A774		astm		
A778		astm		
A813		astm		
A814		astm		
A943		astm		
A965		astm		
F2281		astm		
			United States / Aerospace	
				13
			5362	ams
			5512	ams
			5556	ams
			5558	ams
			5571	ams
			5575	ams
			5646	ams
			5654	ams
			5674	ams
			5680	ams
			5790	ams
			5897	ams
			7490	ams
			United Kingdom	
				11
			347 S 40	bs
			347 S 50	bs
			347 S 51	bs
			347S17	bs
			347S20	bs
			347S31	bs
			58F	bs
			ANC 3 grade B	bs
			ANC3B	bs
			EN58F	bs
			S130	bs
			Russia / CIS	
				9
			03Ch17N14M3	gost
			08Ch18N10B	gost
			08Ch18N12B	gost
			08KH18N12B	gost
			08X18H12B	gost
			08X18H10B	gost
			08X18H12B	gost
			0X18H12B	gost
			ЭИ402	gost

Japan		7	Europe		2
SUS 347FB	jis		1.4550		din-en
SUS 347HTB	jis		X6CrNiNb18-10	This grade's own name	din-en
SUS 347TB	jis				
SUS 347TKA	jis		Italy		2
SUS 347TP	jis		X6CrNiNb1811		uni
SUS F 347	jis		X8CrNiNb18-11		uni
SUS347	jis				
Spain		3	France		1
F.3524	une		Z6CNNb18-10		afnor
F.3552	une		Sweden		1
X6CrNiNb18-10	une		2338		ss
China		3	Czechia		1
0Cr18Ni11Nb	gb		17 XXX NN		csn
1Cr18Ni11Nb	gb		Poland		1
1Cr19Ni11Nb	gb		OH18N12Nb		pn
			Serbia		1
			Č.4582		srps

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 1.4550

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	1.4550	Aug 20, 2026