

MATERIAL NUMBER 1.4460 · CLASS 1.4

grade F50

Material no. 1.4460

also listed as X 4 CrNiMoN 27 5 2

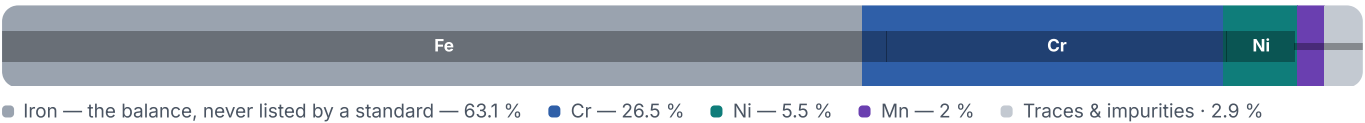
Chemical composition, mechanical and physical property values, and 47 standard designations from 9 regions.

DENSITY 7.8 g/cm³	OTHER DESIGNATIONS 47 in 9 regions	PROPERTY VALUES 11 on file
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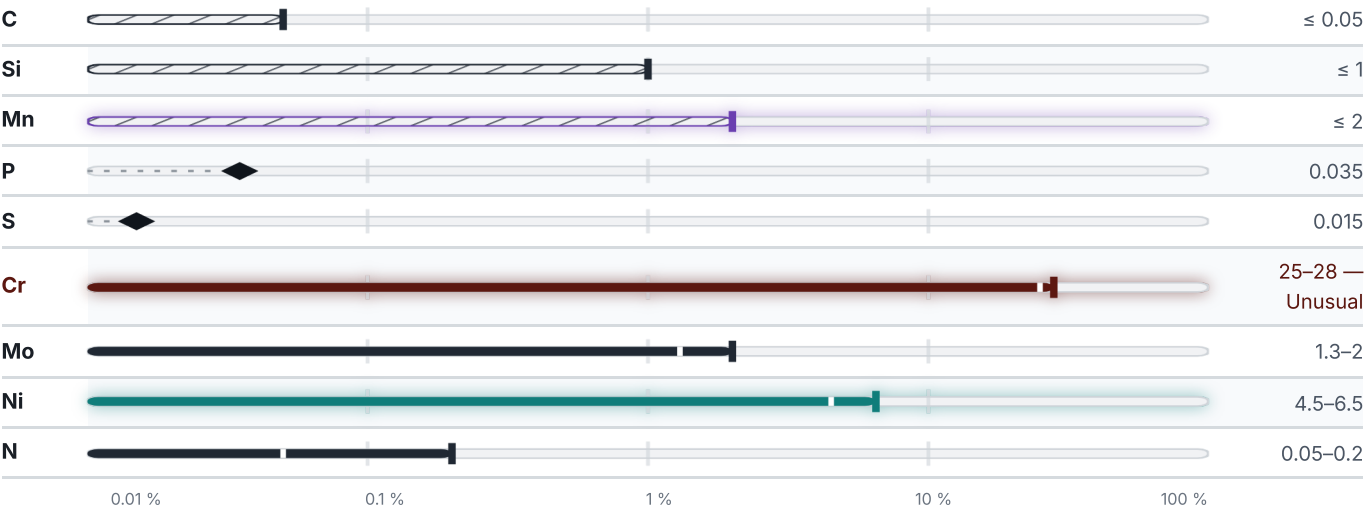
Chemical composition

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

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

23 values across 6 conditions

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A %	HB	HRC	HV
Plate/Sheet Hot-rolled	590	390	18	–	–	–
Hot-rolled	–	–	–	277	29	292
CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²	HB
Forging, GOST 25054-81	539	343	18–22	35–40	390–780	–
08KH21N6M2T (08X21H6M2T) , Forging GOST 25054-81	–	–	–	–	–	140–200
SOFT ANNEALED						HB
Soft annealed						260
QUENCHING 950 - 1050°C,COOLING AIR	RM N/mm²	RE N/mm²	A5 %	Z %		
60	590	345	25	45		
CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %	KCU kJ/m²		
Sheet trick, GOST 7350-77	590	345	20	590		
CONDITION · DIMENSION				RM N/mm²	A5 %	
Sheet thin, GOST 5582-75				590	22	

Physical properties

2 values

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10^-6/K	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	7.85	193	–	–	700
100	–	185	9.5	14.6	–
200	–	178	13.8	15.9	–
300	–	169	16	17.5	–
400	–	164	16	19.2	–
500	–	162	16.3	20.5	–
600	–	153	16.7	21.7	–
700	–	139	17.1	21.7	–

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	RHO_EL nΩ·m
800	–	136	17.1	24.3	–
900	–	–	17.4	25.5	–
PROPERTY			VALUE	UNIT	
Density			7.8	g/cm³	

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	

Designations across standards

47 designations · 6 documented as identical

United States		23	Japan		5
S31200	This grade's own name	uns	SCS11		jis
S31260	This grade's own name	uns	SUS 329J1		jis
S32900	This grade's own name	uns	SUS 329J1FB		jis
329	This grade's own name	aisi-sae	SUS 329J1SUS 329J1TB		jis
J92740		aisi-sae	SUS 329J1TP		jis
S31260		aisi-sae			
S32900		aisi-sae	Spain		4
25Cr-5Ni-Mo-N		astm	F.3309		une
44LN		astm	F.3552		une
A1022		astm	X 8 CrNiMo 27-05		une
A240		astm	X8CrNiMo26-6		une
A480		astm			
A781 Grade 3A		astm	Sweden		3
A789		astm	2324		ss
A790		astm	Duplex 2324		ss
A928		astm	SS2324		ss
A949		astm			
CD6MN		astm	Europe		2
F2215		astm	X 4 CrNiMoN 27 5 2	This grade's own name	din-en
grade F50		astm	X3CrNiMoN27-5-2	This grade's own name	din-en
J93371		astm			
S31200		astm	France		1
S32900		astm	Z5CND27.05.AZ		afnor
Russia / CIS		7	China		1
08KH21N6M2T		gost	0Cr26Ni5Mo2		gb
08X21H6M2T		gost			
0X21H6M2T		gost	Poland		1
10Ch26N5M		gost	DUPLEX		pn
12KH25N5TMFL		gost			
12X25H5TMΦЛ		gost			
ЭП54		gost			

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 grade F50
Quotation, availability, mill certificate or a technical question — directly on the material page.

Start an enquiry

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ISSUED
Aug 20, 2026