

MATERIAL NUMBER 1.4432 · CLASS 1.4

S12

Material no. 1.4432

also listed as X2CrNiMo17-12-3

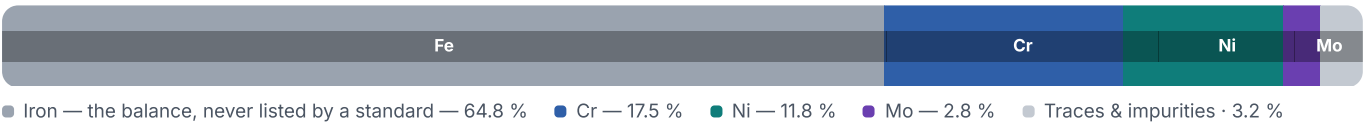
Chemical composition, mechanical and physical property values, and 66 standard designations from 10 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 66 in 10 regions	PROPERTY VALUES 10 on file
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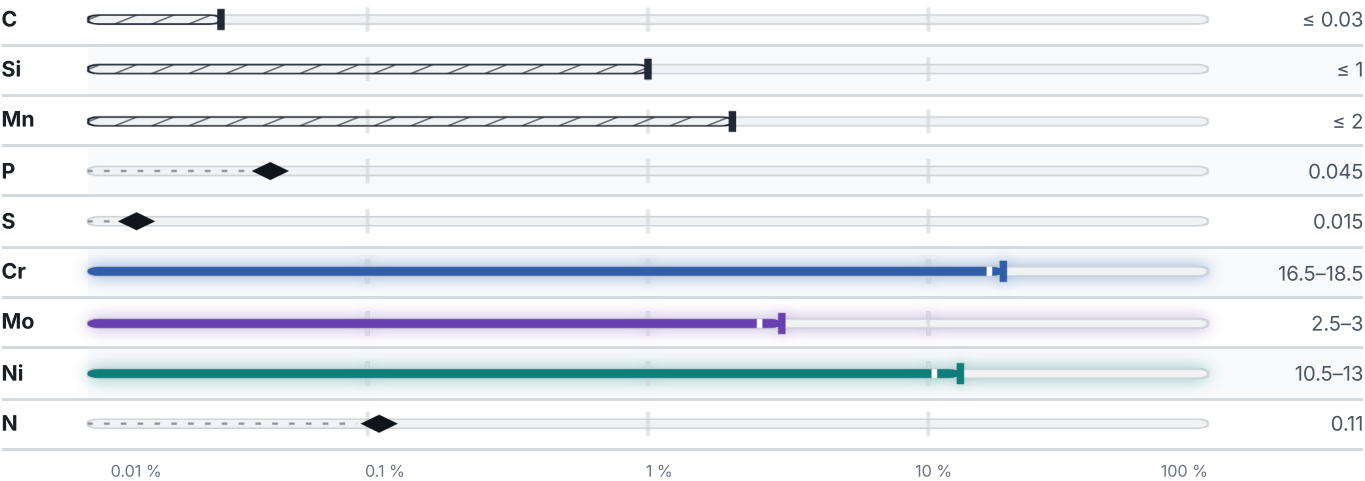
Chemical composition

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

8 values across 3 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
SOFT ANNEALED						HB
Soft annealed						215
SOLUTION ANNEALED						HB
Solution annealed						200

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

66 designations · 3 documented as identical

United States		46	United Kingdom		6
S31603	This grade's own name	uns	316		bs
S31673		uns	316 S 13		bs
30316L		aisi-sae	845 B		bs
316L	This grade's own name	aisi-sae	LW16		bs
S31603		aisi-sae	LWCF16		bs
316LVM		astm	S12		bs
A1022		astm	France		4
A1049		astm	Z3CNC17-13-03		afnor
A182		astm	Z3CND17-13-03		afnor
A213		astm	Z3CND17.12.03		afnor
A240		astm	Z3CND18-14-03		afnor
A249		astm	United States / Aerospace		3
A269		astm	5507		ams
A270		astm	5584		ams
A276		astm	5653		ams
A312		astm	Russia / CIS		2
A314		astm	03KH17N14M3		gost
A336		astm	06CM7N13M3-WD		gost
A358		astm	Europe		1
A403		astm	X2CrNiMo17-12-3	This grade's own name	din-en
A409		astm	Spain		1
A473		astm	F.3537		une
A478		astm	Japan		1
A479		astm	SUS316L		jis
A493		astm	Sweden		1
A511		astm	2353		ss
A554		astm	Brazil		1
A580		astm	316 L		abnt
A632		astm			
A666		astm			
A688		astm			
A774		astm			
A778		astm			
A793		astm			
A813		astm			
A814		astm			
A943		astm			
A965		astm			
A988		astm			
F2281		astm			
F593		astm			
F594		astm			
F738		astm			
F836		astm			
F837		astm			
F879		astm			

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 S12

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

[Start an enquiry](#)

DATASHEET ONLINE
View the material page

GRADE SEARCH
Search all grades

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ISSUED
Aug 20, 2026