

MATERIAL NUMBER 1.4427 · CLASS 1.4

316 F

Material no. 1.4427

also listed as X12CrNiMoS18-11

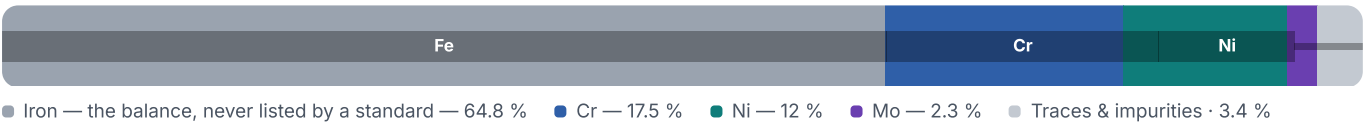
Chemical composition, mechanical and physical property values, and 4 standard designations from 3 regions.

DENSITY 7.9 g/cm³	OTHER DESIGNATIONS 4 in 3 regions	PROPERTY VALUES 9 on file
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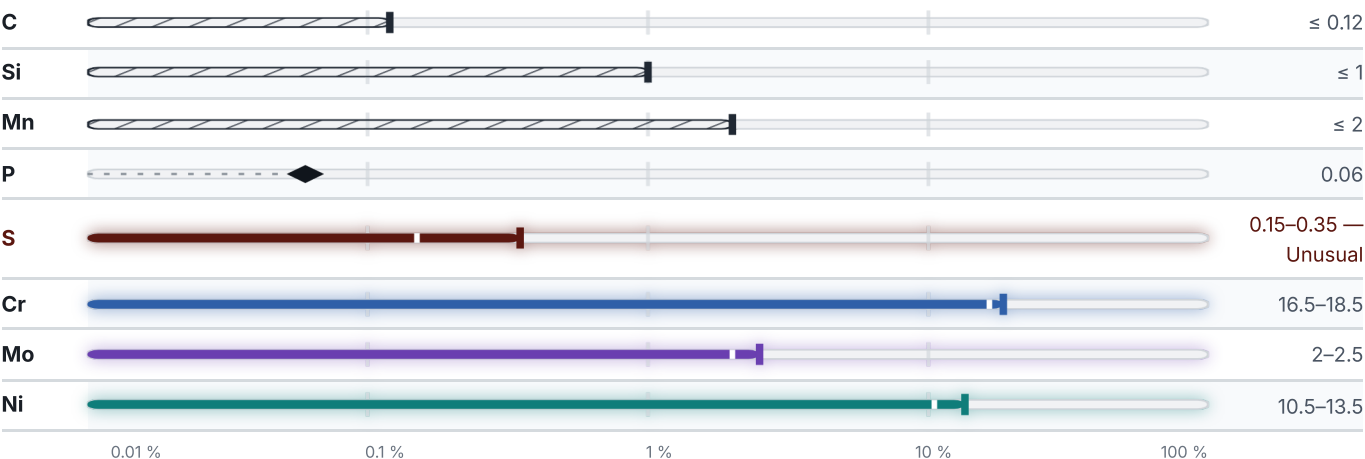
Chemical composition

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

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no transformation temperature is predicted here.

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.9	g/cm³

Designations across standards

4 designations · 1 documented as identical

United States	2	Europe	1
S31620	uns	X12CrNiMoS18-11	This grade's own name
316 F	aisi-sae		din-en
		United States / Aerospace	1
		5649	ams

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 316 F

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	1.4427	Aug 20, 2026