

MATERIAL NUMBER 1.4903 · CLASS 1.4

F91

Material no. 1.4903

also listed as X10CrMoVNb9-1

Chemical composition, mechanical and physical property values, and 13 standard designations from 3 regions.

DENSITY 7.76 g/cm³	OTHER DESIGNATIONS 13 in 3 regions	PROPERTY VALUES 14 on file
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Chemical composition

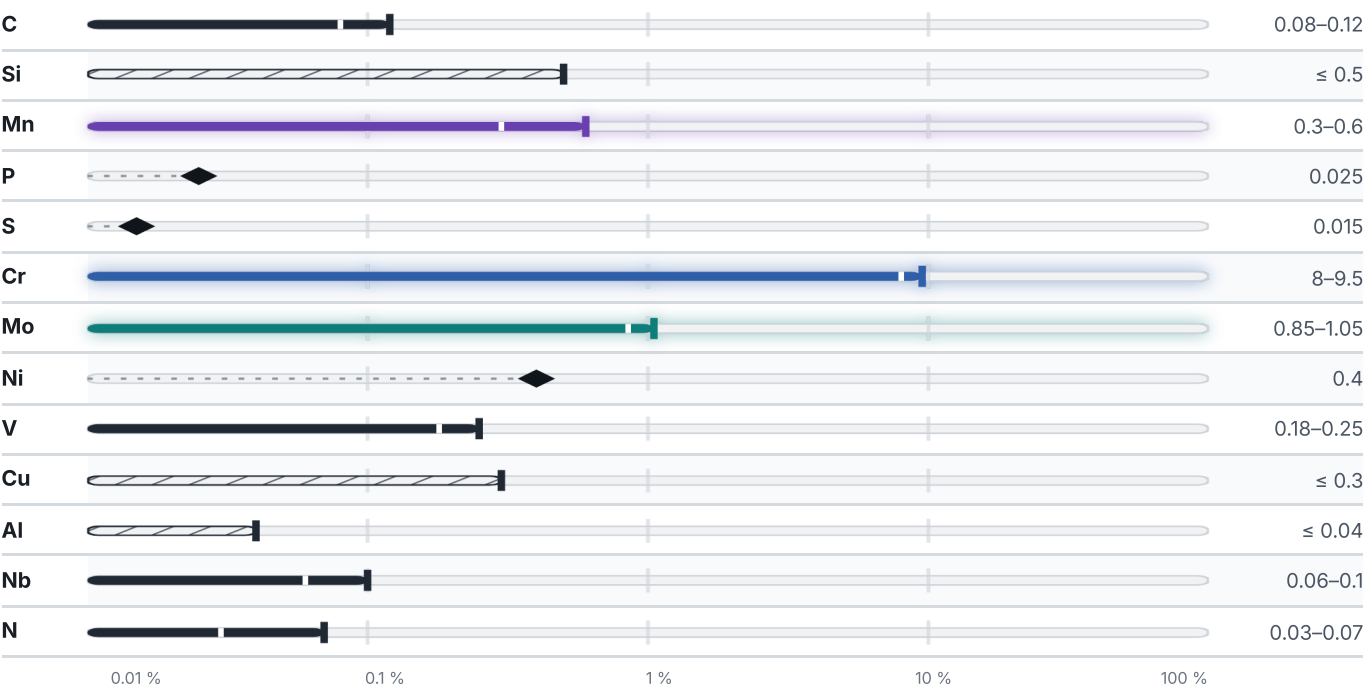
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 88.1 % ● Cr — 8.8 % ● Mo — 1 % ● Si — 0.5 % ● Traces & impurities · 1.7 %

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

5 values across 1 conditions

CONDITION · DIMENSION	REH N/mm ²	RM N/mm ²
≤ 60	445	580–760
60 – 150	–	550–730
60 – 250	435	–
150 – 250	–	520–700

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.76	g/cm ³

Designations across standards

13 designations · 5 documented as identical

United States		10	Europe		2
K90901	This grade's own name	uns	1.4903		din-en
K91560	This grade's own name	uns	X10CrMoVNb9-1	This grade's own name	din-en
S59180	This grade's own name	uns			
F91		aisi-sae	Poland		1
P91		aisi-sae	X10CrMoVNb91		pn
T91		aisi-sae			
A 182 F 9	This grade's own name	astm			
A 182 Grade F91		astm			
A 234 Grade WP91		astm			
A 335 Grade P91		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 F91

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	1.4903	Aug 20, 2026