

MATERIAL NUMBER 1.2235 · CLASS 1.2

9ChS

Material no. 1.2235

also listed as 80CrV2

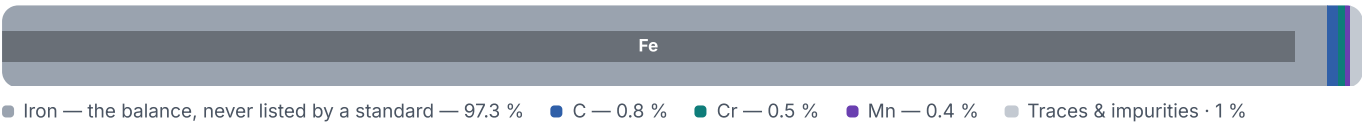
Chemical composition, mechanical and physical property values, and 26 standard designations from 14 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 26 in 14 regions	PROPERTY VALUES 11 on file
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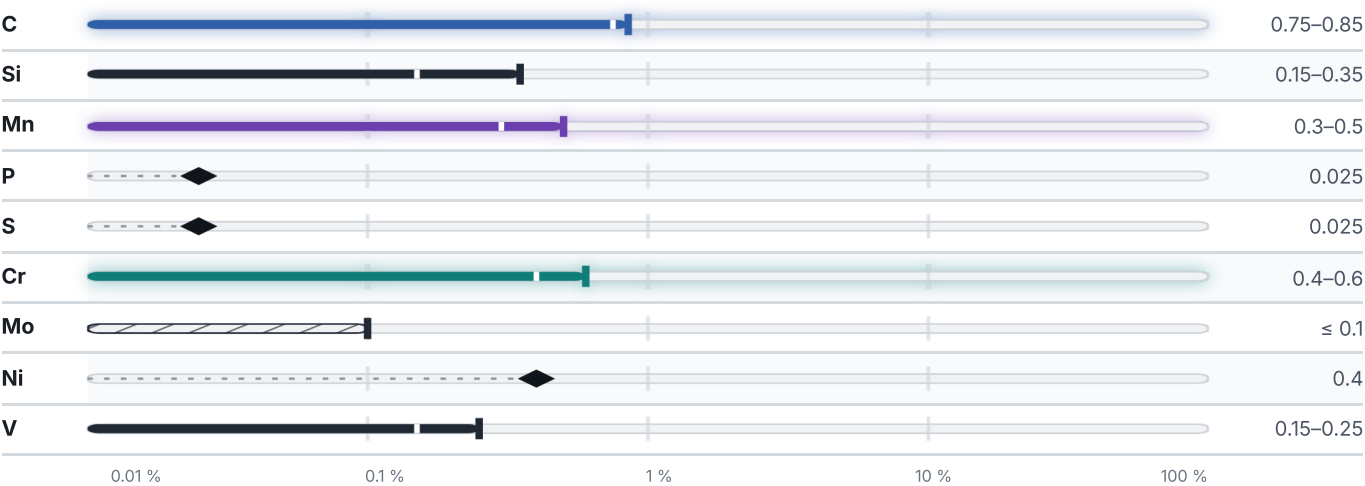
Chemical composition

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

7 values across 6 conditions

SOFT ANNEALED	RM N/mm ²	A80 %
0.3 – 3	720	12
CONDITION · DIMENSION	RM N/mm ²	
0.1 - 4		930
QUENCHED AND TEMPERED	RM N/mm ²	
0.3 – 3		1200–1800
CONDITION · DIMENSION	HB	
(heat treatment) , GOST 5950-2000		241
SOFT ANNEALED	HV	
Soft annealed		225
QUENCHED AND TEMPERED	HV	
Quenched and tempered		370–550

Physical properties

2 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	700	°C

Designations across standards

26 designations · 2 documented as identical

Russia / CIS	7	Czechia	3
8ChF	gost	19419	csn
8KhF	gost	19421 przybliż.	csn
9ChF	gost	19423	csn
9ChS	gost		
9KHF	gost	Japan	2
9KhS	gost	SKC11	jis
9XΦ	gost	SKS5 przybliż.	jis
United States	4	Europe	1
1084+Cr	aisi-sae	80CrV2 This grade's own name	din-en
czasami porównywany z 1080	aisi-sae		
handlowo używany L2	aisi-sae	United Kingdom	1
L2	aisi-sae	735A50 przybliż.	bs

France	1	Poland	1
80CrV2	afnor	NCV1	pn
China	1	Bulgaria	1
8CrV	gb	8ChF	bds
Italy	1	Austria	1
80CrV2	uni	BOHLERB400	onorm
Serbia	1	South Korea	1
Č.4844	srps	SKC11 This grade's own name	ks

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 9ChS

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	1.2235	Aug 20, 2026