

MATERIAL NUMBER 1.1535 · CLASS 1.1

W109

Material no. 1.1535

also listed as C90U

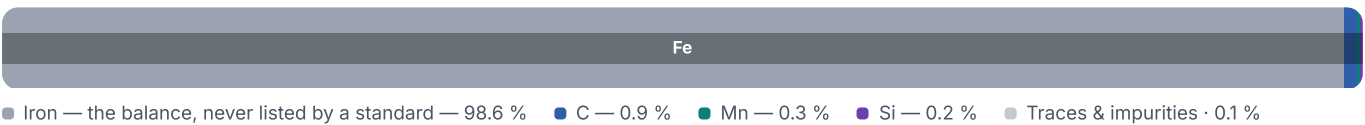
Chemical composition, mechanical and physical property values, and 26 standard designations from 14 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 26 in 14 regions	PROPERTY VALUES 12 on file
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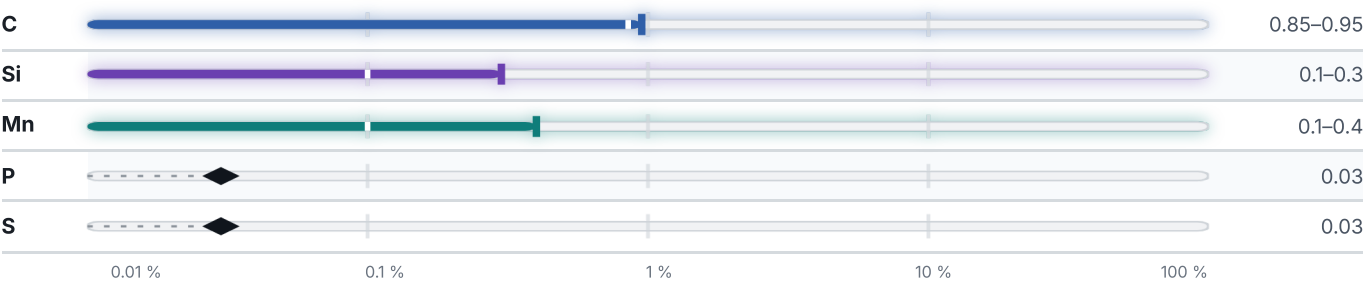
Chemical composition

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

Not enough recorded composition to predict a transformation temperature for this grade — missing: Ni, Cr, Mo.

Mechanical properties

4 values across 3 conditions

SOFT ANNEALED	HB
Soft annealed	207

AS-DELIVERED STATE	RM N/mm ²	A5 %
to 4	750	10
CONDITION · DIMENSION	HB	
(annealing) , GOST 1435-99	197	

Physical properties

7 values

CONDITION · DIMENSION	RHO g/cm ³	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	7.81	–	40	420
100	–	11.5	44	–
200	–	11.9	–	–
300	–	12.5	41	–
400	–	13	–	–
500	–	13.4	–	–
600	–	13.9	38	–
700	–	14.3	–	–
800	–	13.9	–	–
900	–	15.4	34	–
1000	–	13.3	–	–

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	730	°C
Transformation point Ac3	800	°C
Transformation point Ar1	700	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	is not used.	
Flake sensitivity	not predisposed	
Temper brittleness	not predisposed	

Designations across standards

26 designations · 3 documented as identical

United States4		Russia / CIS2	
T72301	uns	U10	gost
W109	This grade's own nameaisi-sae	U9A	gost
W110	aisi-sae		
W1C 0,90%	This grade's own nameaisi-sae	South Korea	2
Japan3		STC3	ks
SK3	jis	STC4	ks
SK4	jis	France	1
SK5	jis	C105E2U	afnor
Poland3		China	1
N10	pn	T10	gb
N9	pn	Italy	1
N9E	pn	C100KU	uni
Europe2		Czechia	1
C105W2	din-en	19192	csn
C90U	This grade's own namedin-en	Romania	1
United Kingdom2		OSC 8M	stas
BW1	bs	Austria	1
BW1B	bs	K990	onorm
International2			
C90U	iso		
TC105	iso		

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 W109

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	1.1535	Aug 20, 2026