

MATERIAL NUMBER 1.8959 · CLASS 1.8

1.8959

Chemical composition, mechanical and physical property values, and 23 standard designations from 10 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 23 in 10 regions	PROPERTY VALUES 12 on file
------------------------------	---	--------------------------------------

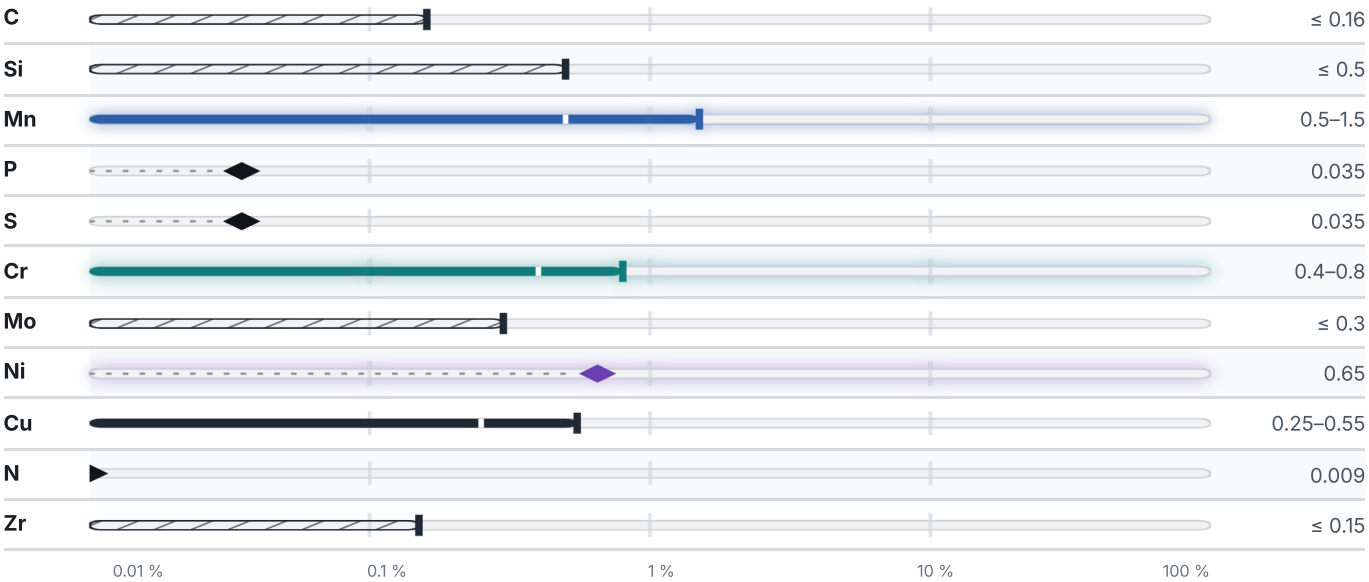
Chemical composition

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

computed from composition · °C

PREDICTED AE3 814 °C	PREDICTED AE1 722 °C	PREDICTED ACM 423 °C	PREDICTED BS 526 °C
--------------------------------	--------------------------------	--------------------------------	-------------------------------

Mechanical properties

16 values across 1 conditions

CONDITION · DIMENSION	REH N/mm ²	RM N/mm ²	A80 %	A %
1.5 – 2	–	–	16	–
2 – 2.5	–	–	17	–
2.5 – 3	–	–	18	–
≤ 3	–	510–680	–	–
3 – 100	–	470–630	–	–
3 – 40	–	–	–	22
≤ 16	355	–	–	–
16 – 40	345	–	–	–
40 – 63	335	–	–	21
63 – 80	325	–	–	–
63 – 100	–	–	–	20
80 – 100	315	–	–	–
100 – 150	295	450–600	–	18

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

23 designations · 4 documented as identical

United States	7	Europe	3
K02601	uns	A709-50W	din-en
K11430 This grade's own name	uns	Fe510C2KI	din-en
K11538 This grade's own name	uns	S355J0W This grade's own name	din-en
K12043 This grade's own name	uns		
A242Gr.1	aisi-sae	United Kingdom	1
A588	aisi-sae	WR50B	bs
A709-50W	aisi-sae		
Brazil	6	France	1
NBR 5008 CGR400	abnt	E36WB3	afnor
NBR 5008 CGR500	abnt		
NBR 5920 CFR500	abnt	International	1
NBR 5921 CFR400	abnt	Fe355W	iso
NBR 5921 CFR500	abnt		
NBR 7007 AR350 COR	abnt	Japan	1
		SMA50AW	jis

Russia / CIS	1	Canada	1
17G1S	gost	350AAT	csa
Italy	1		
Fe510C2K1	uni		

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 1.8959
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	1.8959	Aug 20, 2026