

MATERIAL NUMBER 1.8966 · CLASS 1.8

A709Gr.50W

Material no. 1.8966

also listed as S355K2G1W

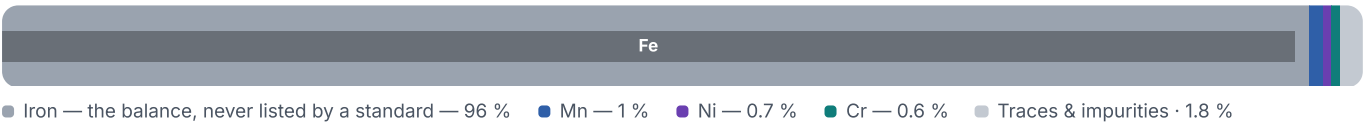
Chemical composition, mechanical and physical property values, and 5 standard designations from 3 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 5 in 3 regions	PROPERTY VALUES 15 on file
--	---	--------------------------------------

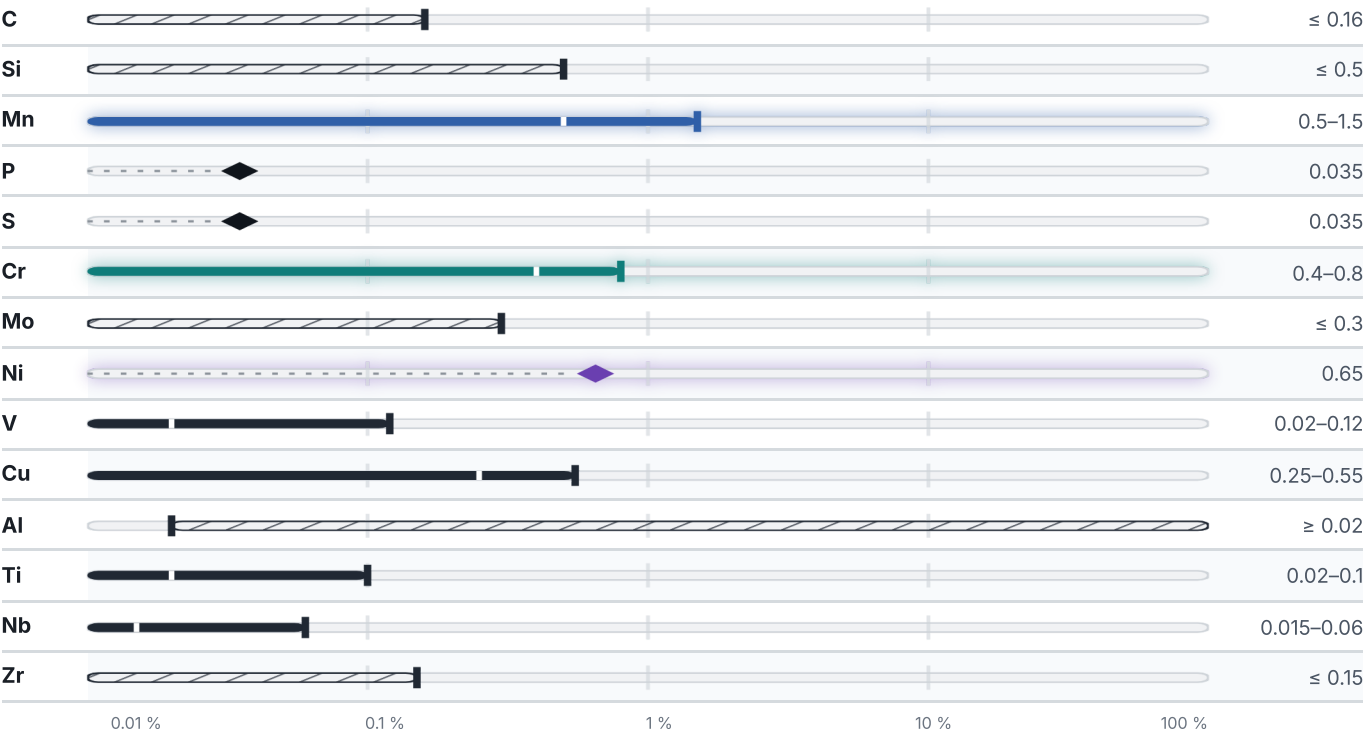
Chemical composition

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/mm²	RM N/mm²	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/cm³

Designations across standards

5 designations · 2 documented as identical

Europe	3	United States	1
S355K2G1W This grade's own name	din-en	A709Gr.50W	aisi-sae
S355K2W This grade's own name	din-en		
S355K2W(+N)	din-en	France	1
		E36WB4	afnor

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 A709Gr.50W

Quotation, availability, mill certificate or a technical question — directly on the material page.

[Start an enquiry](#)

DATASHEET ONLINE

[View the material page](#)

GRADE SEARCH

[Search all grades](#)

MATERIAL NO.

1.8966

ISSUED

Aug 20, 2026