

MATERIAL NUMBER 1.0545 · CLASS 1.0

1.0545

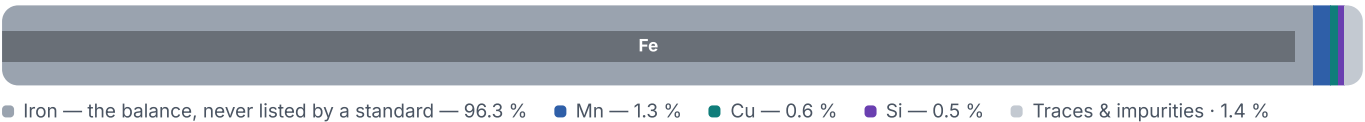
Chemical composition, mechanical and physical property values, and 16 standard designations from 9 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 16 in 9 regions	PROPERTY VALUES 18 on file
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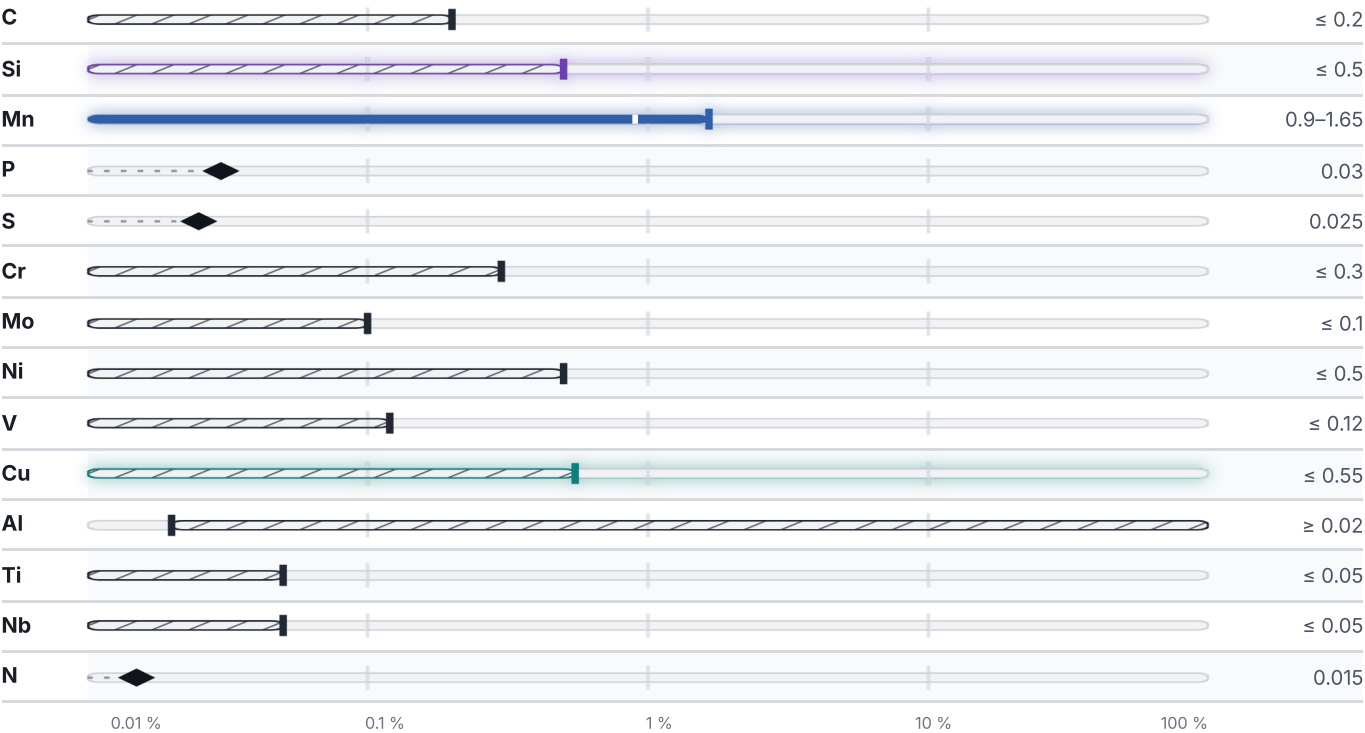
Chemical composition

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

computed from composition · °C

PREDICTED AE3 808 °C	PREDICTED AE1 711 °C	PREDICTED ACM 437 °C	PREDICTED BS 546 °C
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Mechanical properties

23 values across 4 conditions

CONDITION · DIMENSION	REH N/mm ²	A %
≤ 16	355	22
16 – 40	345	22
40 – 63	335	22
63 – 80	325	21
80 – 100	315	–
80 – 200	–	21
100 – 150	295	–
150 – 200	285	–
200 – 250	275	21

FLAT AND LONG PRODUCTS	RM N/mm ²
≤ 100	470–630
100 – 200	450–600
200 – 250	450–600

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %
Sheet, GOST 19282-73	510	375	21

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %
to 140	480	345	21

Physical properties

4 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	
Flake sensitivity	not predisposed	
Temper brittleness	not predisposed	

Designations across standards

16 designations · 5 documented as identical

Europe	4	France	1
FeE355KGN	din-en	E355R	afnor
S355N	din-en		
S355NH This grade's own name	din-en	Spain	1
StE 355 This grade's own name	din-en	AE355KG	une
United States	4	China	1
K02803 This grade's own name	uns	Q345D	gb
K12000 This grade's own name	uns		
K12709 This grade's own name	uns	Russia / CIS	1
A572Gr.50	aisi-sae	15GF	gost
United Kingdom	2	Italy	1
50DD	bs	FeE355KGN	uni
50E	bs		
		Sweden	1
		2134-01	ss

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 1.0545

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.

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ISSUED

Aug 20, 2026