

MATERIAL NUMBER 1.0143 · CLASS 1.0

45 C

Material no. 1.0143

also listed as S275J0

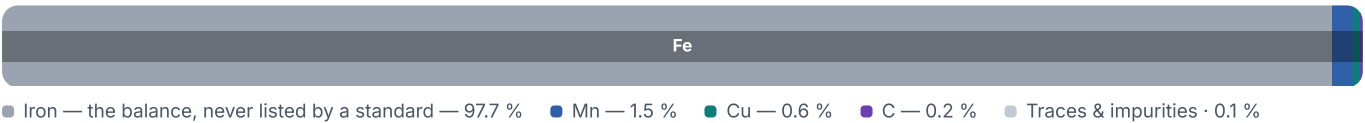
Chemical composition, mechanical and physical property values, and 25 standard designations from 16 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 25 in 16 regions	PROPERTY VALUES 8 on file
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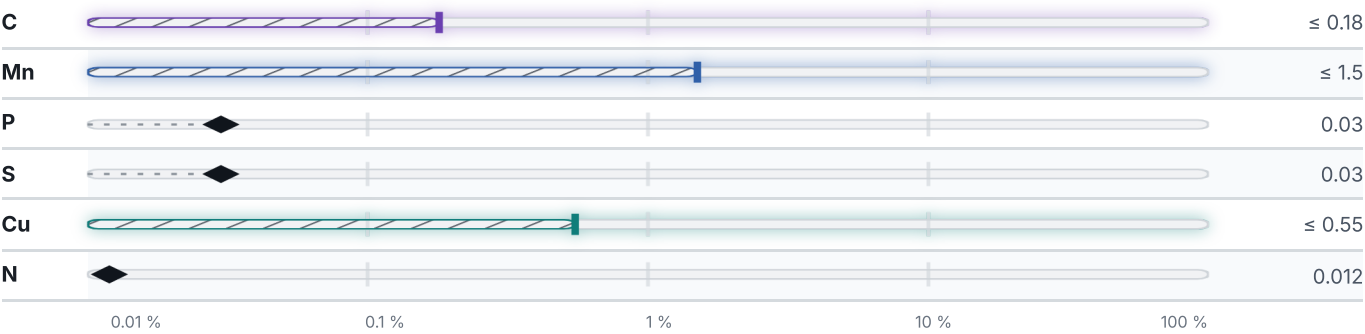
Chemical composition

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: Si, Ni, Cr, Mo.

Mechanical properties

31 values across 3 conditions

FLAT AND LONG PRODUCTS	REH N/mm ²	RM N/mm ²	
≤ 3	–	430–580	
3 – 100	–	410–560	
≤ 16	275	–	
16 – 40	265	–	
40 – 63	255	–	
63 – 80	245	–	
80 – 100	235	–	
100 – 150	225	400–540	
150 – 250	–	380–540	
150 – 200	215	–	
200 – 250	205	–	
CONDITION · DIMENSION	A80 % · Lo = 80 mm	A % · Lo = 5,65 √So	
≤ 1	15	–	
1 – 1.5	16	–	
1.5 – 2	17	–	
2 – 2.5	18	–	
2.5 – 3	19	–	
3 – 40	–	23	
40 – 63	–	22	
63 – 100	–	21	
100 – 150	–	19	
150 – 250	–	18	
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %
Pipe, GOST 10705-80	412	245	21
Rolled stock, GOST 535-2005	410–530	235–265	21–24
Sheet trick, GOST 14637-89	410–530	235–265	21–23

Physical properties

2 values

CONDITION · DIMENSION	RHO g/cm ³
20	7.85

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Technological properties

PROPERTY	VALUE	UNIT
Weldability	limited weldability.	

Designations across standards

25 designations · 3 documented as identical

Europe	5	France	1
Fe430C	din-en	E28-3	afnor
P265GH	din-en		
S275J0 This grade's own name	din-en	International	1
St 44-3 U This grade's own name	din-en	E275C	iso
St44-3	din-en		
United States	2	Norway	1
K02702 This grade's own name	uns	NS12143	ns
A578Gr.70	aisi-sae	Portugal	1
		FE430-C	np
United Kingdom	2		
43C	bs	China	1
Gr 43C	bs	Q275	gb
Spain	2	Italy	1
AE255C	une	Fe430C	uni
AE275C	une		
		Poland	1
Russia / CIS	2	St4W	pn
St4ps	gost		
St4sp	gost	South Africa	1
		300 WC	sans
Hungary	2		
45 C	msz	Austria	1
Fe 275 C	msz	St430C	onorm
		Belgium	1
		AE295C	nbn

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 45 C

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

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DATASHEET ONLINE

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GRADE SEARCH

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ISSUED

Aug 20, 2026