

MATERIAL NUMBER 1.0045 · CLASS 1.0

NBR 7007 AR350

Material no. 1.0045

also listed as S355JR

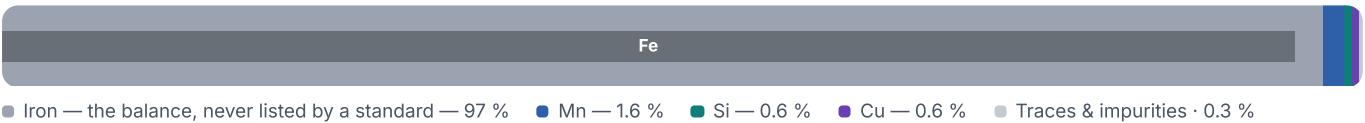
Chemical composition, mechanical and physical property values, and 32 standard designations from 17 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 32 in 17 regions	PROPERTY VALUES 8 on file
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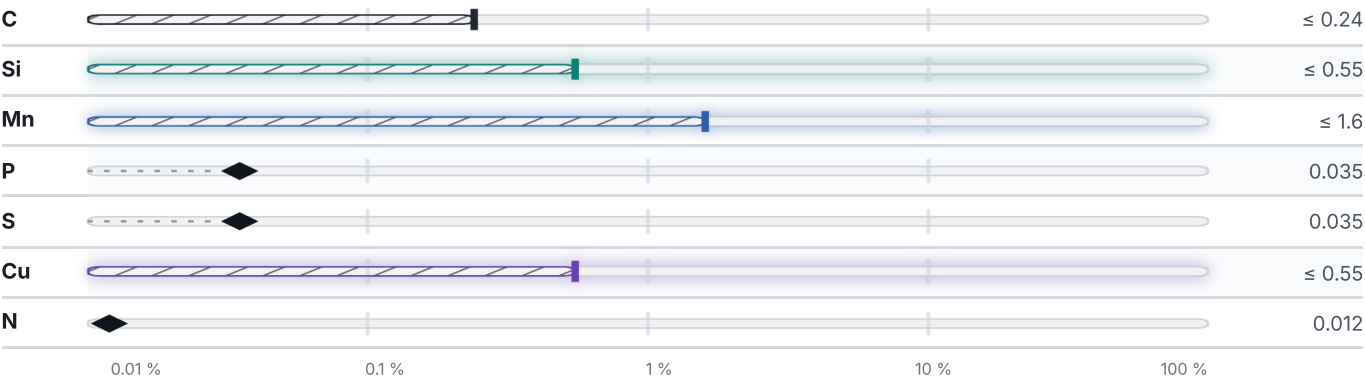
Chemical composition

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: Ni, Cr, Mo.

Mechanical properties

46 values across 3 conditions

FLAT AND LONG PRODUCTS	REH N/mm ²	RM N/mm ²	
≤ 3	–	510–680	
3 – 100	–	470–630	
≤ 16	355	–	
16 – 40	345	–	
40 – 63	335	–	
63 – 80	325	–	
80 – 100	315	–	
100 – 150	295	450–600	
150 – 250	–	450–600	
150 – 200	285	–	
200 – 250	275	–	
CONDITION · DIMENSION	A80 % · Lo = 80 mm	A % · Lo = 5,65 √So	
≤ 1	14	–	
1 – 1.5	15	–	
1.5 – 2	16	–	
2 – 2.5	17	–	
2.5 – 3	18	–	
3 – 40	–	22	
40 – 63	–	21	
63 – 100	–	20	
100 – 150	–	18	
150 – 250	–	17	
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %
≤ 16	470–630	≥ 345	≥ 20
16 – 40	470–630	≥ 335	≥ 20
40 – 63	470–630	≥ 325	≥ 19
63 – 80	470–630	≥ 315	≥ 19
80 – 100	470–630	≥ 305	≥ 19
100 – 150	450–600	≥ 285	≥ 18

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %
150 – 200	450–600	≥ 275	≥ 17
200 – 250	450–600	≥ 265	≥ 17

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

32 designations · 4 documented as identical

United States5		Japan2	
K02404	This grade's own nameuns	SM490A	jis
K02702	This grade's own nameuns	SS490	jis
A572	aisi-sae	Canada2	
A678Gr.A	aisi-sae	350W	csa
SSGrade50	aisi-sae		csa
Europe4		France1	
Fe510B	din-en	E36-2	afnor
S355JR	This grade's own namedin-en		
SSGrade50	din-en	Spain1	
St52-3	din-en		
China3		AE355B	une
50B	This grade's own namegb	Portugal1	
	Q345B	FE510-B	np
	Q345C		
Brazil3		Italy1	
NBR 5000 Grau 35	abnt	Fe510B	uni
NBR 5004 Grau Q35	abnt	Sweden1	
NBR 7007 AR350	abnt	2132-01	ss
United Kingdom2		Poland1	
50B	bs	18G2A	pn
Gr 50B	bs	Hungary1	
International2		Fe 355 B	msz
E355C	iso	South Africa1	
Fe510B	iso	350 WA	sans
		Belgium1	
		AE355B	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 NBR 7007 AR350
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

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ISSUED
Aug 20, 2026