

MATERIAL NUMBER 1.0554 · CLASS 1.0

Gr.105-85

Material no. 1.0554

also listed as St 52-3 U

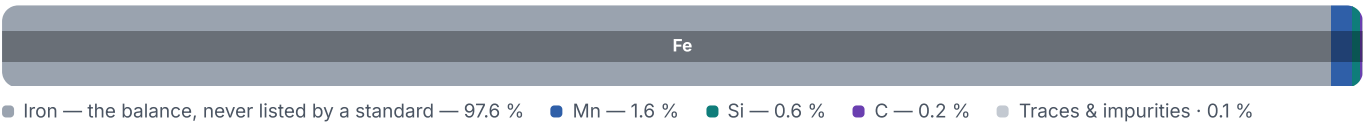
Chemical composition, mechanical and physical property values, and 14 standard designations from 9 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 14 in 9 regions	PROPERTY VALUES 14 on file
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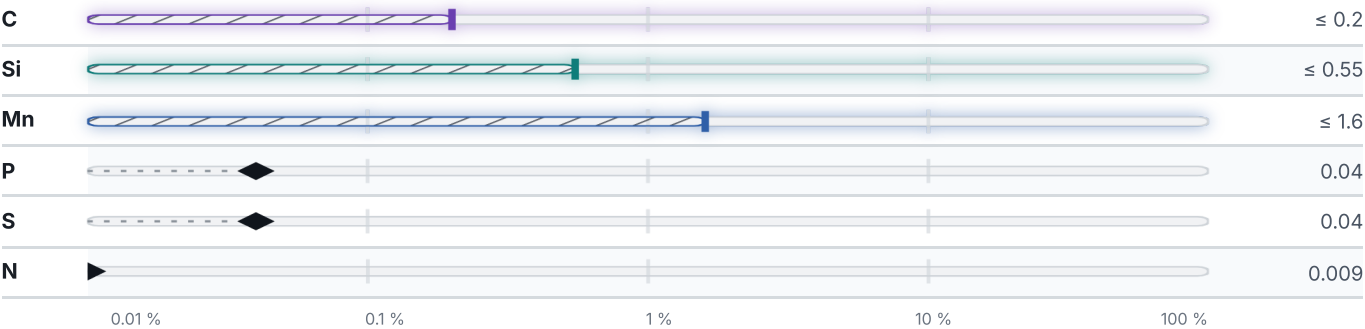
Chemical composition

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

5 values across 1 conditions

NORMALIZING 840 - 860°C,DRAWING 600 - 630°C	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
to 100	600	350	10	18	240

Physical properties

8 values

CONDITION · DIMENSION	RHO g/cm³	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)
20	7.82	–	–	–
100	–	11	68	479
200	–	11.8	55	487
400	–	13.4	36	525
500	–	–	32	–
600	–	14.5	–	571

PROPERTY	VALUE	UNIT
Density	7.85	g/cm³
Transformation point Ac1	725	°C
Transformation point Ac3	770	°C
Transformation point Ar3	755	°C
Transformation point Ar1	690	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	hard weldability.	
Flake sensitivity	not predisposed	
Temper brittleness	not predisposed	

Designations across standards

14 designations · 1 documented as identical

Europe	2	France	2
S355J0C	din-en	E26-52-M	afnor
St 52-3 U This grade's own name	din-en	E36-3	afnor
United Kingdom	2	Russia / CIS	2
50C	bs	55L	gost
AW3	bs	55Л	gost

Czechia	2	Japan	1
11523	csn	SCC5	jis
422 670	csn		
United States	1	Slovakia	1
Gr.105-85	aisi-sae	11 523	stn
		Belgium	1
		AE355-C	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 Gr.105-85

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	1.0554	Aug 20, 2026