

MATERIAL NUMBER 1.0554 · CLASS 1.0

1.0554

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

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 14 in 9 regions	PROPERTY VALUES 14 on file
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Chemical composition

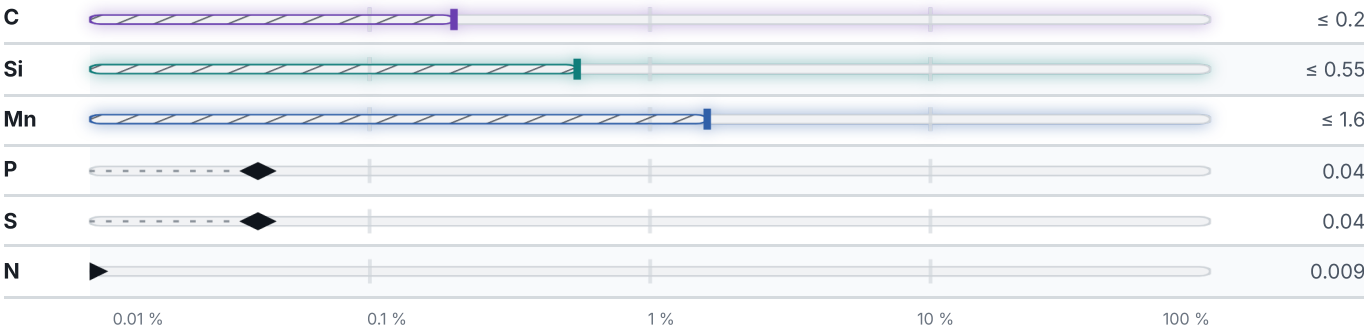
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 97.6 % ● Mn — 1.6 % ● Si — 0.6 % ● C — 0.2 % ● Traces & impurities · 0.1 %

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	Czechia	2
S355J0C	din-en	11523	csn
St 52-3 U This grade's own name	din-en	422 670	csn
United Kingdom	2	United States	1
50C	bs	Gr.105-85	aisi-sae
AW3	bs	Japan	1
France	2	SCC5	jis
E26-52-M	afnor	Slovakia	1
E36-3	afnor	11 523	stn
Russia / CIS	2	Belgium	1
55L	gost	AE355-C	nbn
55Л	gost		

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 1.0554
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ISSUED
Aug 20, 2026