

MATERIAL NUMBER 1.0551 · CLASS 1.0

GrLCB

Material no. 1.0551

also listed as S355JRC

Chemical composition, mechanical and physical property values, and 17 standard designations from 11 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 17 in 11 regions	PROPERTY VALUES 14 on file
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Chemical composition

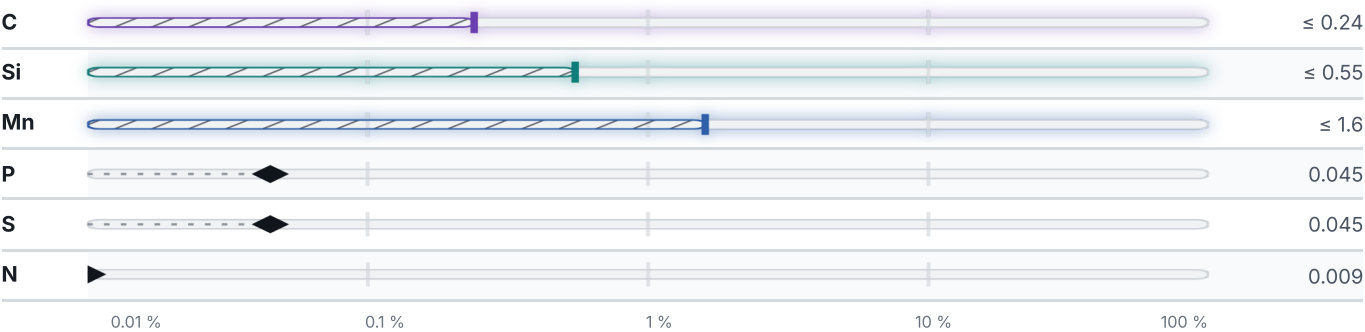
Mass fraction in %

What this alloy is



■ Iron — the balance, never listed by a standard — 97.5 % ■ 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

10 values across 2 conditions

NORMALIZING 880 - 900°C, DRAWING 610 - 630°C	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
to 100	471	255	17	30	343
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Casting, GOST 977-88	491	294	17	30	343

Physical properties

8 values

CONDITION · DIMENSION	RHO g/cm ³	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)
20	7.81	—	—	—
100	—	12.6	76	470
200	—	13.9	65	483
400	—	15	44	525
500	—	15.6	38	—
600	—	—	—	571
PROPERTY	VALUE		UNIT	
Density	7.85		g/cm ³	
Transformation point Ac1	735		°C	
Transformation point Ac3	813		°C	
Transformation point Ar3	796		°C	
Transformation point Ar1	677		°C	

Technological properties

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

Designations across standards

17 designations · 1 documented as identical

United States5		United Kingdom1	
Gr.N2	aisi-sae	161Gr400A	bs
GrLCB	aisi-sae		
GrWCB	aisi-sae	France1	
J03002	aisi-sae	E26-52-M	afnor
J03003	aisi-sae		
Japan2		Italy1	
SC450	jis	FeG49-1	uni
SC480	jis		
Russia / CIS2		Sweden1	
30L	gost	1505	ss
30Л	gost		
Europe1		Czechia1	
S355JRC	This grade's own name	422 650	csn
	din-en		
		Poland1	
		LII500	pn
		Austria1	
		GS52	onorm

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 GrLCB

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	1.0551	Aug 20, 2026