

MATERIAL NUMBER 1.1152 · CLASS 1.1

20FYu

Material no. 1.1152

also listed as C20E2C

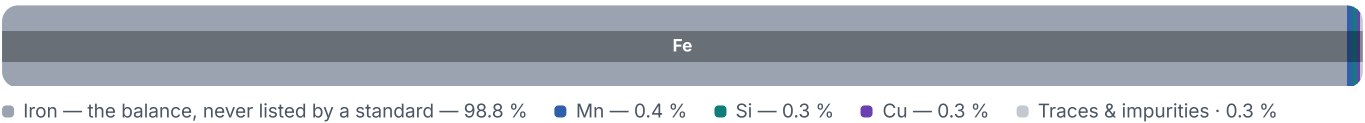
Chemical composition, mechanical and physical property values, and 41 standard designations from 4 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 41 in 4 regions	PROPERTY VALUES 11 on file
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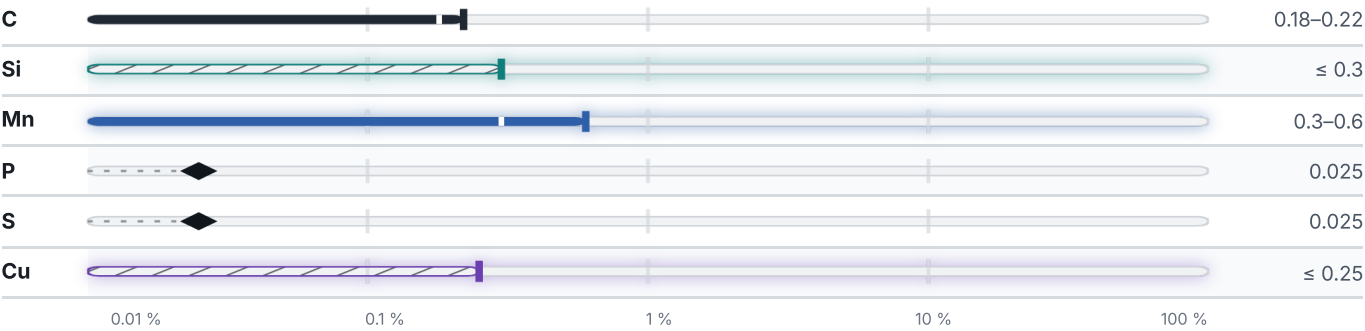
Chemical composition

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

9 values across 2 conditions

CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Normalizing 1100°C,Drawing 650°C, 6h	1076	958	13.3	46.6	150

CONDITION · DIMENSION	RM N/mm ²	A5 %	Z %	KCU kJ/m ²
Bar	900	15	55	400

Physical properties

5 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	LAMBDA W/(m·K)
20	7.9	217	–
100	–	211	41
200	–	205	46.1
300	–	196	48.2
400	–	188	50.2
500	–	180	52.8
600	–	167	54.4
700	–	152	56.1

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	810	°C
Transformation point Ac3	950	°C
Transformation point Ar3	800	°C
Transformation point Ar1	690	°C

Designations across standards

41 designations · 4 documented as identical

Russia / CIS		35	Europe		3
20	gost		20kp		din-en
20-PV	gost		C20E2C This grade's own name		din-en
20A	gost		Cq 22 This grade's own name		din-en
20DKHL	gost				
20F	gost		United States		2
20FA	gost		G10230 This grade's own name		uns
20FL	gost		1023 This grade's own name		aisi-sae
20FTL	gost				
20FYu	gost		Japan		1
20GNMFL	gost		S22C		jis
20GNMYuL	gost				
20GS	gost				
20KHF	gost				
20KhFA	gost				
20KHGNR	gost				
20KHGNTR	gost				
20KHGR	gost				
20KHGSFL	gost				
20KHGSNDML	gost				
20KHGSA	gost				
20KhMFBR	gost				
20KHML	gost				
20KHN	gost				
20KHNR	gost				
20kp	gost				
20ps	gost				
20YuA	gost				
20YuCh	gost				
20YuChA	gost				
PA-ZhKh20KB	gost				
SHKH20SG	gost				
Sv-20GSTYuA	gost				
AS20KHGNM	gost				
ATS20KHGNM	gost				
X20K5	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 20FYu

[Start an enquiry](#)

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

DATASHEET ONLINE

[View the material page](#)

GRADE SEARCH

[Search all grades](#)

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ISSUED

Aug 20, 2026