SteelEquivalents.com

Material datasheet
As of Aug 20, 2026

MATERIAL NUMBER 1.0114 · CLASS 1.0

Gr 40C

Material no. 1.0114

also listed as S235J0

Chemical composition, mechanical and physical property values, and 30 standard designations from 21 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.85 g/cm³	30 in 21 regions	10 on file

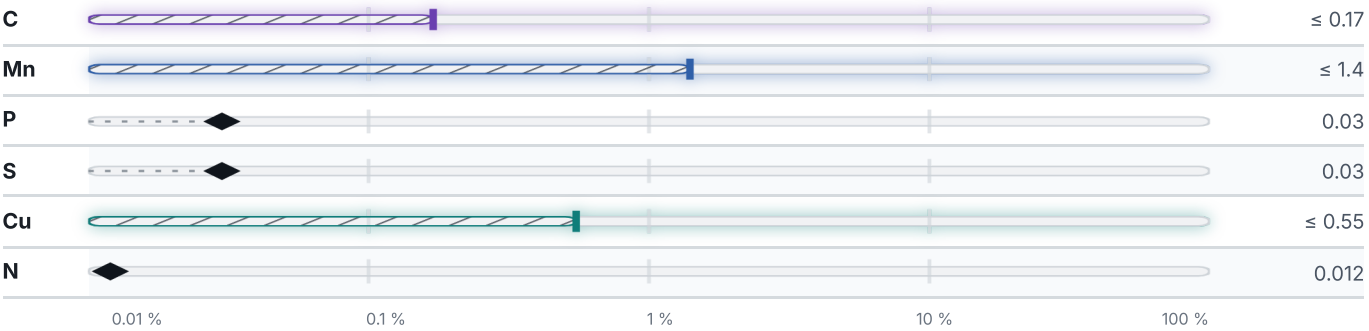
Chemical composition

Mass fraction in %

What this alloy is

Iron — the balance, never listed by a standard — 97.8 % · Mn — 1.4 % · Cu — 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: Si, Ni, Cr, Mo.

Mechanical properties

39 values across 3 conditions

FLAT AND LONG PRODUCTS	REH N/mm²	RM N/mm²
≤ 3	–	360–510
3 – 100	–	360–510
≤ 16	235	–
16 – 40	225	–
40 – 63	215	–
63 – 80	215	–
80 – 100	215	–
100 – 150	195	350–500
150 – 250	–	340–490
150 – 200	185	–
200 – 250	175	–

CONDITION · DIMENSION	A80 % · Lo = 80 mm	A % · Lo = 5,65 √So
≤ 1	17	–
1 – 1.5	18	–
1.5 – 2	19	–
2 – 2.5	20	–
2.5 – 3	21	–
3 – 40	–	26
40 – 63	–	25
63 – 100	–	24
100 – 150	–	22
150 – 250	–	21

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %	Z %
Pipe, GOST 8696-74	372	245	23	–
Pipe, GOST 10705-80	372	225	22	–
Rolled stock, GOST 535-2005	370–490	205–255	23–26	–
Sheet trick, GOST 14637-89	370–480	205–245	23–26	–
Rebar, GOST 5781-82	373	235	25	–
Wire rods , GOST 30136-95	490–540	–	–	60

Physical properties

4 values

CONDITION · DIMENSION	RHO g/cm³
20	7.85

PROPERTY	VALUE	UNIT
Density	7.85	g/cm³

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	
Flake sensitivity	not predisposed	
Temper brittleness	not predisposed	

Designations across standards

30 designations · 3 documented as identical

Europe 4

A284D	din-en
Fe360C	din-en
S235J0 This grade's own name	din-en
St 37-3 U This grade's own name	din-en

United States 3

K02401 This grade's own name	uns
A284C	aisi-sae
A284D	aisi-sae

United Kingdom 2

40C	bs
Gr 40C	bs

Russia / CIS 2

St3ps	gost
St3sp	gost

Brazil 2

NBR 5008 CGR400	abnt
NBR 5921 CFR400	abnt

Hungary 2

37 C	msz
Fe 235 C	msz

France 1

E24-3	afnor

Spain 1

AE235C	une

International 1

E235C	iso

Norway 1

NS12124	ns

Japan 1

SM400B	jis

Portugal 1

FE360-C	np

China 1

Q235C	gb

Italy 1

Fe360C	uni

Sweden 1

1312	ss

Czechia 1

11378	csn

Slovakia 1

11 378	stn

Poland	1
St3W	pn

Austria	1
St360C	onorm

South Africa	1
240 WC	sans

Belgium	1
AE235C	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 40C

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	1.0114	Aug 20, 2026