

MATERIAL NUMBER 1.7035 · CLASS 1.7

1.7035

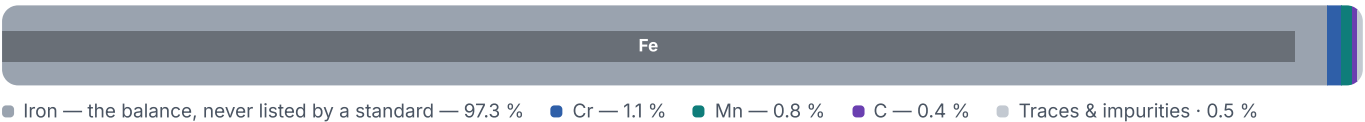
Chemical composition, mechanical and physical property values, and 67 standard designations from 18 regions.

DENSITY 7.72 g/cm³	OTHER DESIGNATIONS 67 in 18 regions	PROPERTY VALUES 14 on file
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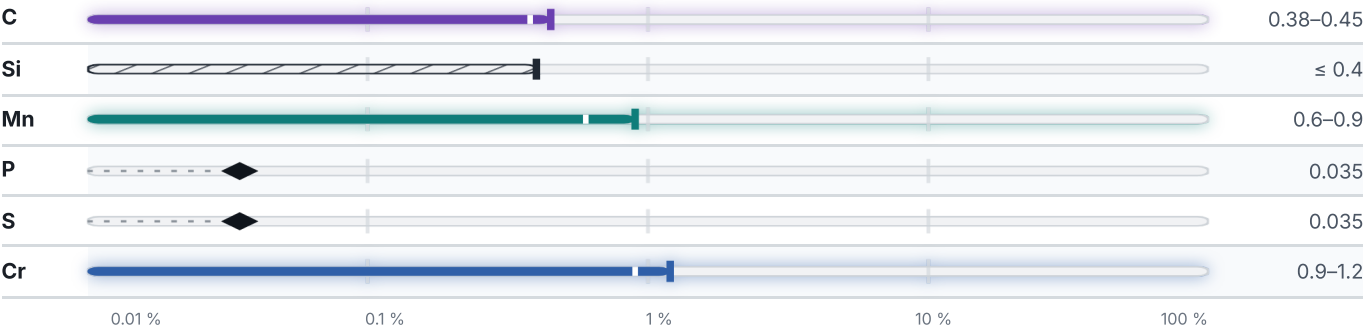
Chemical composition

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, Mo.

Mechanical properties

19 values across 6 conditions

CONDITION · DIMENSION	RM N/mm²	A5 %	HB
Band annealed , GOST 2283-79	640–740	10–15	–
Band cold-worked , GOST 2283-79	740–1180	–	–

CONDITION · DIMENSION		RM N/mm ²	A5 %	HB		
(annealing) , GOST 4543-71		–	–	229		
(normalize) , Sheet trick GOST 1577-93		–	–	255		
(annealing) , Sheet trick GOST 1577-93		–	–	217		
QUENCHED AND TEMPERED				RM N/mm ²		
≤ 8				1000		
8 – 20				900		
20 – 50				800		
QUENCHED AND TEMPERED · ROUND PRODUCTS				A % · Lo = 5,65 √So		
≤ 16				11		
16 – 40				12		
40 – 100				14		
TREATED TO IMPROVE SHEARABILITY				HB		
Treated to improve shearability				255		
SOFT ANNEALED				HB		
Soft annealed				241		
QUENCHING AND DRAWING		RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Ø 25		650	390	13	40	390

Physical properties

8 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)
20	7.81	216	–	43	–
100	–	213	11.8	42	487
200	–	208	12.5	41	500
300	–	199	13.2	38	517
400	–	185	13.8	36	533
500	–	174	14.3	34	559
600	–	160	14.8	31	584

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)
700	–	142	15.1	29	609
800	–	130	12.3	28	676

PROPERTY	VALUE	UNIT
Density	7.72	g/cm³
Transformation point Ac1	723	°C
Transformation point Ac3	760	°C
Transformation point Ar3	740	°C
Transformation point Ar1	680	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	hard weldability.	
Flake sensitivity	predisposed	
Temper brittleness	predisposed	

Designations across standards

67 designations · 7 documented as identical

Russia / CIS		17	United States		9
38ChA	gost		G51400		uns
38KhA	gost		H51400	This grade's own name	uns
40CH	gost		5140		aisi-sae
40KH	gost		5140H	This grade's own name	aisi-sae
40X	gost		5140RH	This grade's own name	aisi-sae
45KH	gost		5145		aisi-sae
45X	gost		5145H		aisi-sae
50	gost		G51450		aisi-sae
50A	gost		H51450		aisi-sae
50G	gost				
50KH	gost		Japan		5
50KhGL	gost		S Gr 440		jis
50KHN	gost		SCr 4 H		jis
50KhNM	gost		SCr440		jis
50KHSA	gost		SCr440H		jis
N50	gost		SCr445		jis
ct.40X	gost		Czechia		5
			14 151		csn
			14 151 PH		csn
			14140		csn
			14141		csn
			14148VN		csn

United Kingdom	4	Europe	2
520M40	bs	1.7035	din-en
530A40	bs	41Cr4 This grade's own name	din-en
530M40	bs		
EN18 This grade's own name	bs	China	2
France	4	40Cr	gb
41Cr4	afnor	40CrH	gb
42C4	afnor	Sweden	2
42C4FF	afnor	2245	ss
45C4	afnor	SIS 2245 This grade's own name	ss
International	4	Italy	1
37Cr4	iso	41Cr4	uni
37CrS4	iso		
41Cr4	iso	Latin America	1
41CrS4	iso	5140	copant
Poland	4	Serbia	1
38HA	pn	Č.4131	srps
40H	pn		
40HA	pn	Türkiye	1
45H	pn	Ç 5140	mke
Spain	3	Hungary	1
42Cr4	une	Cr 3	msz
F.1202-42O4	une	Bulgaria	1
F1202	une	45Ch	bds

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 1.7035

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	1.7035	Aug 20, 2026