

MATERIAL NUMBER 1.1525 · CLASS 1.1

TC80

Material no. 1.1525

also listed as C80U

Chemical composition, mechanical and physical property values, and 44 standard designations from 19 regions.

DENSITY

7.85 g/cm³

OTHER DESIGNATIONS

44 in 19 regions

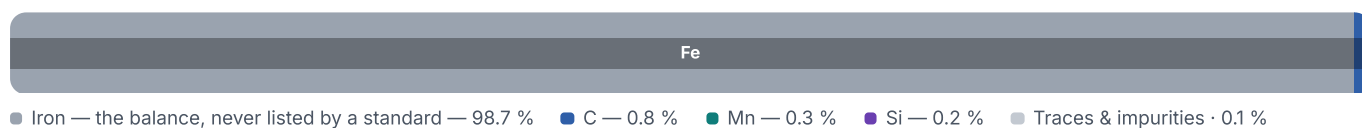
PROPERTY VALUES

11 on file

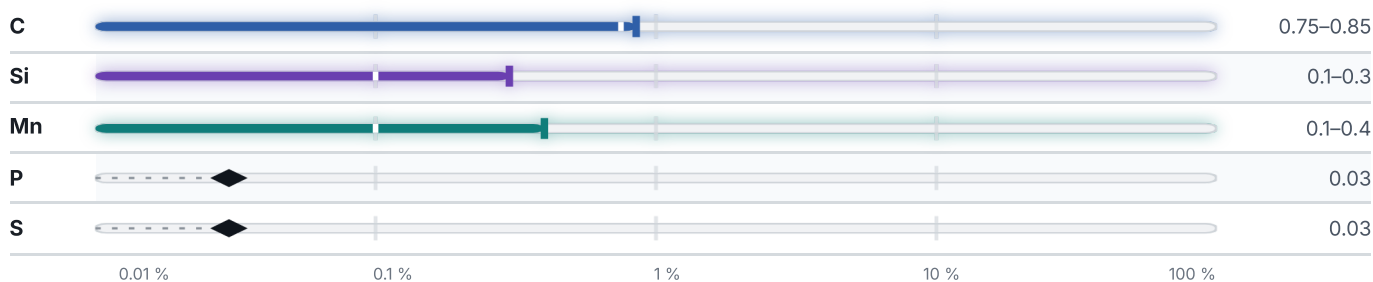
Chemical composition

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

10 values across 5 conditions

CONDITION · DIMENSION	HB	HRC
(SK5) Annealed	207	—

CONDITION · DIMENSION		HB			HRC
(SK5) Quenched and tempered		—			59
SOFT ANNEALED					HB
Soft annealed					192
QUENCHING 780°C, OIL, DRAWING 400°C		RM N/mm ²	RE N/mm ²	A5 %	Z %
6		1420	1230	10	37
CONDITION · DIMENSION		RM N/mm ²			A5 %
1.5		750			10
CONDITION · DIMENSION					HB
(annealing) , GOST 1435-99					187

Physical properties

6 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
20	7.839	209	–	–	–	–
100	7.817	205	11.4	49	477	230
200	7.786	199	12.2	46	511	305
300	7.752	192	13	42	528	395
400	7.714	185	13.7	38	548	491
500	7.676	175	14.3	35	565	625
600	7.638	166	14.8	33	594	769
700	7.6	–	15.2	30	624	931
800	7.852	–	14.5	24	724	1129
900	–	–	–	–	–	1165
PROPERTY	VALUE		UNIT			
Density	7.85		g/cm ³			
Transformation point Ac1	720		°C			
Transformation point Ar1	700		°C			

Technological properties

PROPERTY	VALUE	UNIT
Weldability	is not used.	
Flake sensitivity	not predisposed	
Temper brittleness	not predisposed	

Designations across standards

44 designations · 4 documented as identical

United States	8	International	2
T72301	uns	C80U	iso
W1	aisi-sae	TC80	iso
W1-7	aisi-sae		
W1-8	aisi-sae	Italy	2
W108 This grade's own name	aisi-sae	C80KU	uni
W108Extra	aisi-sae	C90KU	uni
W1C 0,80% This grade's own name	aisi-sae		
W1A-8	astm	Hungary	2
		S91	msz
Russia / CIS	6	S92	msz
U8	gost		
U8A	gost	South Korea	2
U8G	gost	STC5	ks
U9	gost	STC6	ks
Y8Г	gost		
Y9	gost	United Kingdom	1
		BW1A	bs
Japan	4		
SK5	jis	Spain	1
SK6	jis	F-513	une
SK75	jis		
SK85	jis	China	1
		T8	gb
Europe	3		
C80U This grade's own name	din-en	Czechia	1
C80W1 This grade's own name	din-en	19152	csn
C80W2	din-en		
		Slovakia	1
France	3	19 152	stn
C90E2U	afnor		
Y1-90	afnor	Serbia	1
Y180	afnor	Č.1840	srps
Poland	3	Romania	1
N8	pn	OSC8	stas
N8E	pn		
N9	pn	Bulgaria	1
		U9	bds

Austria	1
K980	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 TC80

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	1.1525	Aug 20, 2026