

MATERIAL NUMBER 1.8945 · CLASS 1.8

WR50A

Material no. 1.8945

also listed as S355J0WP

Chemical composition, mechanical and physical property values, and 37 standard designations from 16 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 37 in 16 regions	PROPERTY VALUES 17 on file
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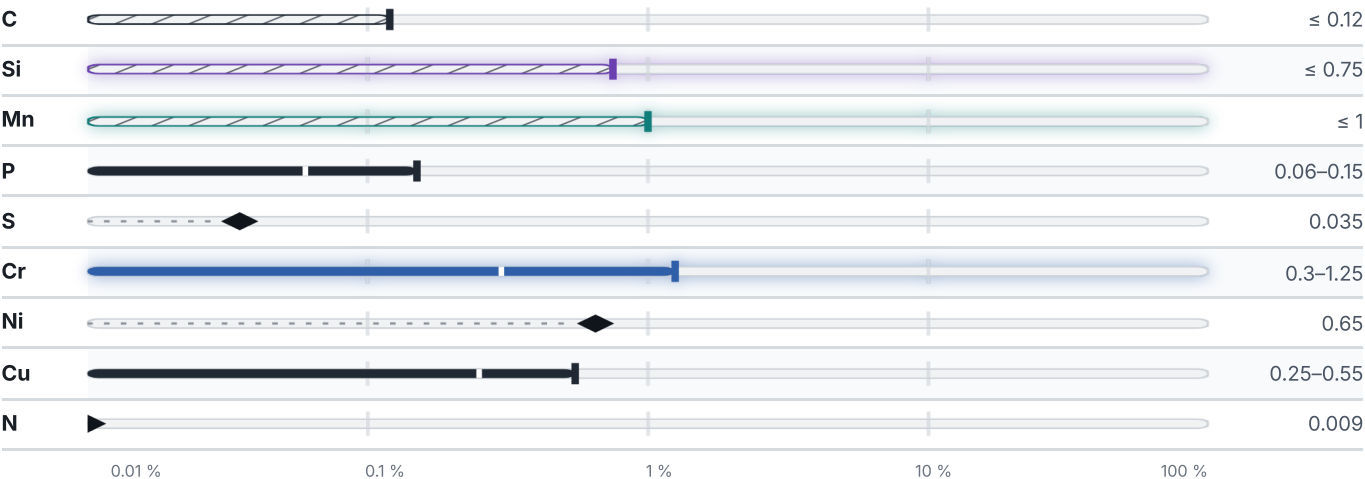
Chemical composition

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: Mo.

Mechanical properties

12 values across 2 conditions

CONDITION · DIMENSION	REH N/mm ²	RM N/mm ²	A80 % · Lo = 80 mm	A % · Lo = 5,65 √So
1.5 – 2	–	–	16	–
2 – 2.5	–	–	17	–
2.5 – 3	–	–	18	–
≤ 3	–	510–680	–	–
3 – 100	–	470–630	–	–
3 – 40	–	–	–	22
≤ 16	355	–	–	–
16 – 40	345	–	–	–
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	KCU kJ/m ²
Sheet, GOST 5520-79	370–480	205–225	25–27	640–690

Physical properties

8 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	7.87	211	–	–	–	200
100	7.84	208	–	57	486	219
200	7.81	205	12	53	498	292
300	7.78	200	12.8	–	514	381
400	7.74	191	13.2	45	533	487
500	7.71	180	13.6	–	555	601
600	7.67	165	13.85	38	584	758
700	7.63	–	–	–	636	925
800	–	–	–	–	703	1094
900	7.61	–	–	–	703	1135
1000	7.55	–	–	–	695	1167
1100	7.49	–	–	–	691	1194
1200	–	–	–	–	687	1219
PROPERTY	VALUE		UNIT			
Density	7.85		g/cm ³			
Transformation point Ac1	724		°C			

PROPERTY	VALUE	UNIT
Transformation point Ac3	860	°C
Transformation point Ar3	830	°C
Transformation point Ar1	676	°C

Technological properties

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

Designations across standards

37 designations · 2 documented as identical

Italy	5	Japan	3
Fe360-1KG	uni	SGV410	jis
Fe360-2KG	uni	SPA-H	jis
Fe410KW	uni	STPL380	jis
Fe510C1K1	uni		
S355JOWP	uni	Russia / CIS	2
		15K	gost
France	4	15K	gost
A37AP	afnor	Sweden	2
A37CP	afnor		
A37FP	afnor	1330	ss
E36WA3	afnor	1332	ss
Czechia	4	Poland	2
11368	csn	10H	pn
11369	csn	St41K	pn
11418	csn		
15217	csn	International	1
		Fe355W-1A	iso
Europe	3	China	1
9CrNiCuP324	din-en	09CuPCrNi-A	gb
Fe510C1K1	din-en		
S355J0WP This grade's own name	din-en	Slovakia	1
		15 217	stn
United States	3	Hungary	1
K11535 This grade's own name	uns		
Gr.1	aisi-sae	KL2	msz
K02001	aisi-sae		
United Kingdom	3	Bulgaria	1
WR50A	bs	16K	bds
WR50B	bs		
WR50C	bs		

Austria	1
St35KW	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 WR50A
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	1.8945	Aug 20, 2026