

MATERIAL NUMBER 1.0570 · CLASS 1.0

Gr 50D

Material no. 1.0570

also listed as S355J2

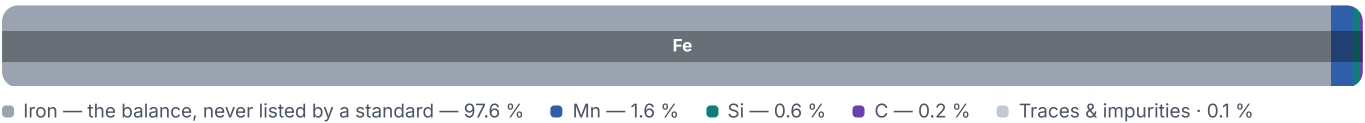
Chemical composition, mechanical and physical property values, and 112 standard designations from 21 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 112 in 21 regions	PROPERTY VALUES 11 on file
--	--	--------------------------------------

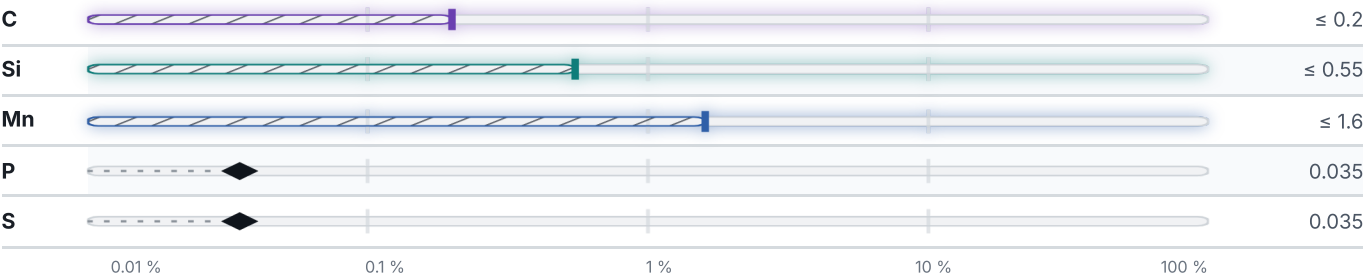
Chemical composition

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

29 values across 3 conditions

FLAT AND LONG PRODUCTS	REH N/mm ²	RM N/mm ²
≤ 3	—	510–680

FLAT AND LONG PRODUCTS	REH N/mm ²	RM N/mm ²	
3 – 100	–	470–630	
≤ 16	355	–	
16 – 40	345	–	
40 – 63	335	–	
63 – 80	325	–	
80 – 100	315	–	
100 – 150	295	450–600	
150 – 250	–	450–600	
150 – 200	285	–	
200 – 250	275	–	
250 – 400	–	450–600	
CONDITION · DIMENSION	A80 % · Lo = 80 mm	A % · Lo = 5,65 √So	
≤ 1	14	–	
1 – 1.5	15	–	
1.5 – 2	16	–	
2 – 2.5	17	–	
2.5 – 3	18	–	
3 – 40	–	22	
40 – 63	–	21	
63 – 100	–	20	
100 – 150	–	18	
150 – 250	–	17	
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %
Sheet, GOST 5520-79	490–510	335–345	23
Pipe, GOST 10705-80	490	343	20

Physical properties

6 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	745	°C

PROPERTY	VALUE	UNIT
Transformation point Ac3	870	°C
Transformation point Ar3	790	°C
Transformation point Ar1	680	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	

Designations across standards

112 designations · 9 documented as identical

United Kingdom	16	Russia / CIS	11
1449-50/35HR	bs	17G1S	gost
1449-50/35HS	bs	17G1S-U	gost
4360 50 B	bs	17GS	gost
4360-50C	bs	17GS-1	gost
4360-50D	bs	17Г1C	gost
50C	bs	17ГC	gost
50D	bs	35	gost
CEW5	bs	CHS17	gost
D1FF	bs	S345	gost
ERW5	bs	C345	gost
Fe510	bs	ст.17ГC	gost
Fe510D1FF	bs		
Gr 50D	bs	Italy	11
S355J0	bs	Fe510	uni
S355J2G3	bs	Fe510B	uni
SAW5	bs	Fe510C	uni
		Fe510CFN	uni
Japan	14	Fe510D	uni
SM490	jis	Fe52BFN	uni
SM490A	jis	Fe52CFN	uni
SM490B	jis	FeE420	uni
SM490C	jis	S355J0	uni
SM490YA	jis	S355J2G3	uni
SM490YB	jis	S355JR	uni
SM50A	jis		
SM520B	jis	United States	7
SM520C	jis	K03011 This grade's own name	uns
SM53C	jis	K03014 This grade's own name	uns
SS490C	jis	K12037 This grade's own name	uns
STK490	jis	K12709 This grade's own name	uns
STKM16C	jis	1024 This grade's own name	aisi-sae
STKR490	jis	Gr.50type1-4	aisi-sae
		A350LF2 This grade's own name	astm

Poland	7	Czechia	4
15GA	pn	11438	csn
16G2	pn	11483	csn
18G2	pn	11503	csn
18G2A	pn	11523	csn
18G2AA	pn		
18G2ACu	pn	Hungary	4
G355	pn	45D	msz
		B50.36	msz
China	6	Fe355C/FF	msz
16Mn	gb	S355J2G3	msz
16MnDR	gb		
16Mng	gb	Romania	2
16MnL	gb	OL52.3	stas
16MnR	gb	OL52.4	stas
HP345	gb		
Sweden	6	Bulgaria	2
2132	ss	17GS	bds
2133	ss	S355J2G3	bds
2134	ss		
2135-01	ss	South Africa	2
2172	ss	350 WDD	sans
2174	ss	350WD	sans
France	5	Austria	2
E36-3	afnor	St510D	onorm
E36-4	afnor	St52F	onorm
S355J0	afnor		
S355J2G3	afnor	Slovakia	1
S355K2G3	afnor	11 503	stn
Spain	5	Serbia	1
A510C	une	Č.0563	srps
AE355D	une		
Fe510D1FF	une	Belgium	1
S355J2G3	une	FE510D1FF	nbn
S355J2G4	une		
Europe	4	South Korea	1
1.0570	din-en	STKM16C	ks
S355J2 This grade's own name	din-en		
S355J2G3 This grade's own name	din-en		
St 52-3 This grade's own name	din-en		

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 50D

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

[Start an enquiry](#)

DATASHEET ONLINE

[View the material page](#)

GRADE SEARCH

[Search all grades](#)

MATERIAL NO.

1.0570

ISSUED

Aug 20, 2026