

MATERIAL NUMBER 1.0144 · CLASS 1.0

AE255D

Material no. 1.0144

also listed as S275J2

Chemical composition, mechanical and physical property values, and 64 standard designations from 22 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 64 in 22 regions	PROPERTY VALUES 6 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: Si, Ni, Cr, Mo.

Mechanical properties

31 values across 4 conditions

FLAT AND LONG PRODUCTS	REH N/mm ²	RM N/mm ²
≤ 3	—	430–580

FLAT AND LONG PRODUCTS	REH N/mm ²	RM N/mm ²	
3 – 100	–	410–560	
≤ 16	275	–	
16 – 40	265	–	
40 – 63	255	–	
63 – 80	245	–	
80 – 100	235	–	
100 – 150	225	400–540	
150 – 250	–	380–540	
150 – 200	215	–	
200 – 250	205	–	
CONDITION · DIMENSION	A80 % · Lo = 80 mm	A % · Lo = 5,65 √So	
≤ 1	15	–	
1 – 1.5	16	–	
1.5 – 2	17	–	
2 – 2.5	18	–	
2.5 – 3	19	–	
3 – 40	–	23	
40 – 63	–	22	
63 – 100	–	21	
100 – 150	–	19	
150 – 250	–	18	
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %
Pipe, GOST 10705-80	412	245	21
Rolled stock, GOST 535-2005	400–510	225–255	22–25
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %
Hot-rolled	400–510	195–245	18–24

Physical properties

2 values

CONDITION · DIMENSION	RHO g/cm ³	
20	7.85	
PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Technological properties

PROPERTY	VALUE	UNIT
Weldability	limited weldability.	

Designations across standards

64 designations · 8 documented as identical

United States		10	Italy	4
K02601	This grade's own name	uns	Fe430B	uni
K02702	This grade's own name	uns	Fe430C(FN)	uni
K03000	This grade's own name	uns	Fe430D	uni
A572		aisi-sae	Fe430D(FF)	uni
A573		aisi-sae		
A573-81		aisi-sae	Sweden	4
A573Gr.70		aisi-sae	1411	ss
A611Gr.D		aisi-sae	1412	ss
A633Gr.A		aisi-sae	1414	ss
K03000		aisi-sae	1414-00	ss
Europe		9	International	3
1.0144		din-en	E275-A	iso
A633Gr.A		din-en	Fe430-A	iso
Fe430D1		din-en	Fe430D	iso
S275J2	This grade's own name	din-en		
S275J2(+N)		din-en	Japan	3
S275J2G3		din-en	SM400A	jis
S275J2G3C	This grade's own name	din-en	SM400B	jis
St 44-3 N	This grade's own name	din-en	SM400C	jis
St.44.2		din-en		
United Kingdom		6	Russia / CIS	3
4360 43 C		bs	St4kp	gost
43C		bs	St4ps	gost
43D		bs	Ct4kn	gost
Fe430D1FF		bs		
S275J2G3		bs	Czechia	3
S275N		bs	11 448	csn
			11423	csn
			11428	csn

France	2	Norway	1
E28-3	afnor	NS12-143	ns
E28-4	afnor		
Spain	2	Portugal	1
AE275D	une	Fe430-D	np
Fe430D1FF	une		
Poland	2	China	1
St4SW	pn	Q255	gb
St4SX	pn		
Bulgaria	2	Serbia	1
BSt4kp	bds	Č.0452	srps
WSt4kp	bds		
Belgium	2	Romania	1
AE255D	nbn	OL42.1	stas
FE430D1FF	nbn		
South Korea	2	Austria	1
SM400A This grade's own name	ks	St430D	onorm
SM400C This grade's own name	ks	Finland	1
		Fe44D	sfs

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 AE255D

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

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ISSUED

Aug 20, 2026