

MATERIAL NUMBER 1.0490 · CLASS 1.0

A572Gr.42

Material no. 1.0490

also listed as S275N

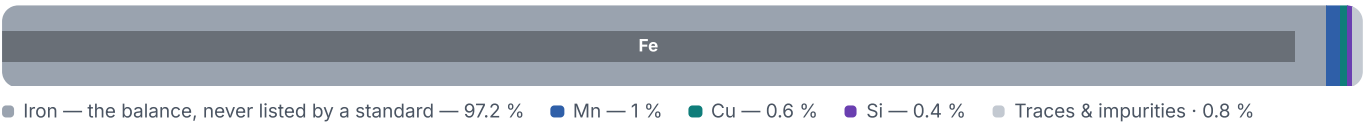
Chemical composition, mechanical and physical property values, and 12 standard designations from 6 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 12 in 6 regions	PROPERTY VALUES 14 on file
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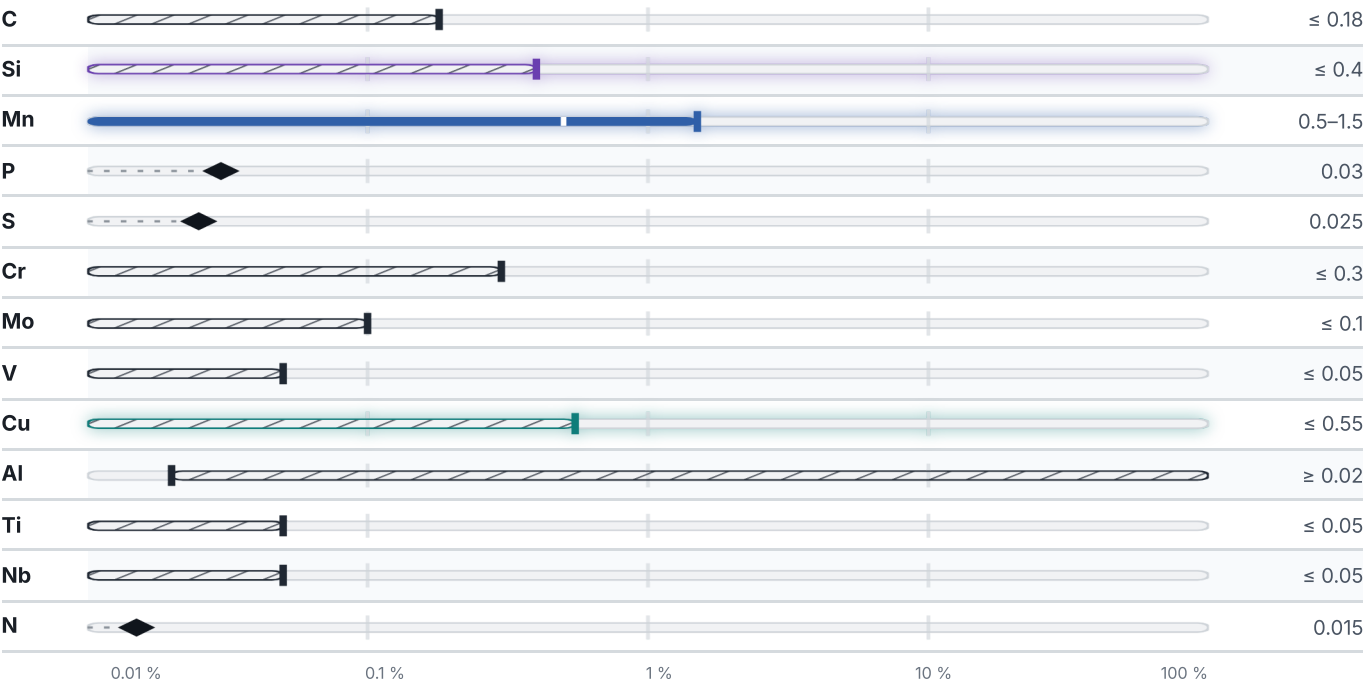
Chemical composition

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.

Mechanical properties

20 values across 3 conditions

CONDITION · DIMENSION	REH N/mm ²	A %	
≤ 16	275	24	
16 – 40	265	24	
40 – 63	255	24	
63 – 80	245	23	
80 – 100	235	–	
80 – 200	–	23	
100 – 150	225	–	
150 – 200	215	–	
200 – 250	205	23	
FLAT AND LONG PRODUCTS		RM N/mm ²	
≤ 100		370–510	
100 – 200		350–480	
200 – 250		350–480	
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A %
Hot-rolled	400–510	195–245	18–24

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

12 designations · 4 documented as identical

Europe			5	United States			3
1.0486	din-en			K03000	This grade's own name		uns
A633A	din-en			A572Gr.42			aisi-sae
FeE275KGN	din-en			A633A			aisi-sae
S275N	This grade's own name	din-en					
StE 285	This grade's own name	din-en					

United Kingdom	1	Italy	1
43DD	bs	FeE275KGN	uni
Japan	1	South Korea	1
SM400B	jis	SM400B This grade's own name	ks

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 A572Gr.42

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	1.0490	Aug 20, 2026