

MATERIAL NUMBER 1.0486 · CLASS 1.0

Grade42

Material no. 1.0486

also listed as P275N

Chemical composition, mechanical and physical property values, and 18 standard designations from 5 regions.

DENSITY**7.85** g/cm³**OTHER DESIGNATIONS****18** in 5 regions**PROPERTY VALUES****18** on file

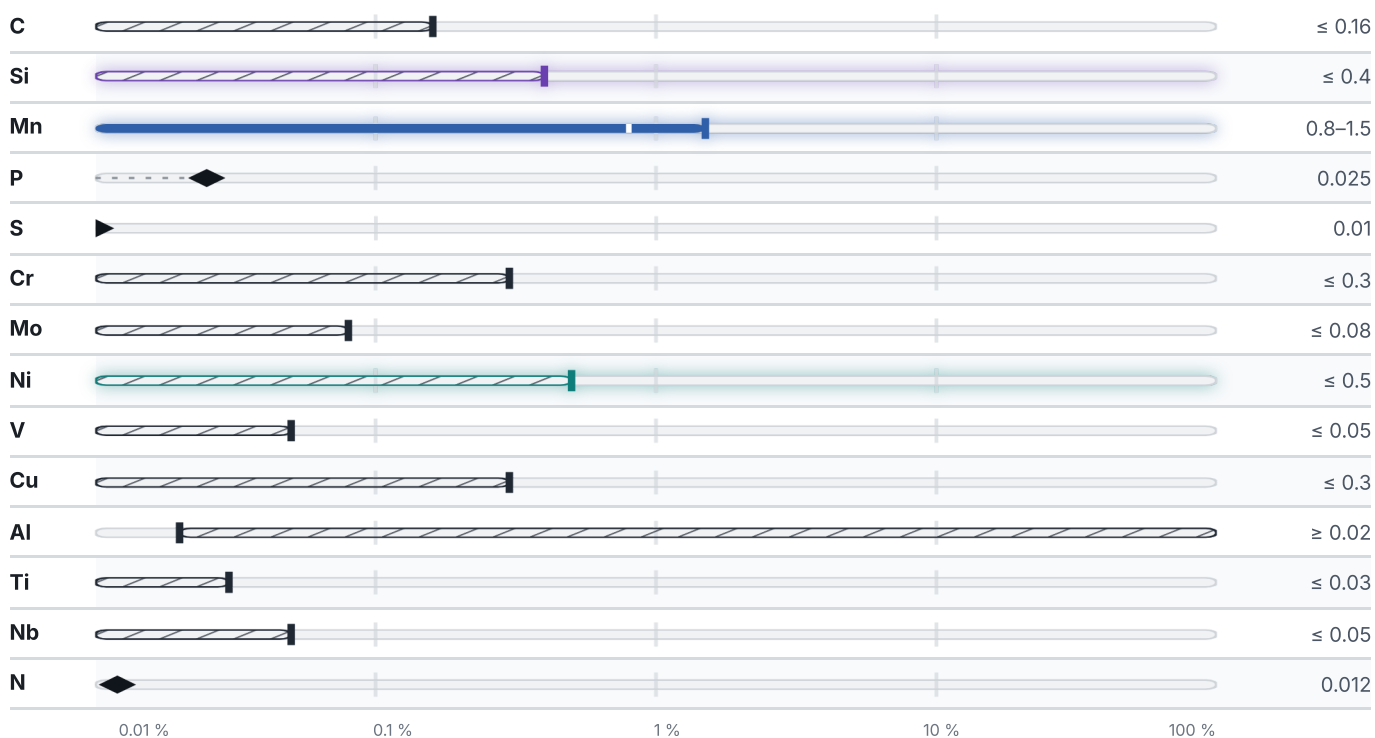
Chemical composition

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

computed from composition · °C

PREDICTED AE3 813 °C	PREDICTED AE1 711 °C	PREDICTED ACM 401 °C	PREDICTED BS 554 °C
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Mechanical properties

6 values across 1 conditions

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %
Rolled stock, GOST 535-2005	370–490	205–245	23–26
Sheet trick, GOST 14637-89	370–490	205–245	23–26

Physical properties

4 values

CONDITION · DIMENSION	RHO g/cm³	
20	7.85	

PROPERTY	VALUE	UNIT
Density	7.85	g/cm³

Technological properties

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

Designations across standards

18 designations · 7 documented as identical

United States		9	Europe		3	
K01701	This grade's own name	uns	1.0486		din-en	
K01802	This grade's own name	uns	P275N	This grade's own name	din-en	
K02100	This grade's own name	uns	StE 285	This grade's own name	din-en	
K02203	This grade's own name	uns	International			2
K02402	This grade's own name	uns	E235-B		iso	
K03006		uns	Fe360-B		iso	
Grade42		aisi-sae	Japan			2
A 694 Grade F42		astm	SM400B		jis	
A 860 Grade WPHY42		astm	SM41B		jis	

Russia / CIS	2
St3Gps	gost
Ст3Гпс	gost

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 Grade42

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	1.0486	Aug 20, 2026