

MATERIAL NUMBER 1.0727 · CLASS 1.0

1.0727

Chemical composition, mechanical and physical property values, and 12 standard designations from 8 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 12 in 8 regions	PROPERTY VALUES 6 on file
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Chemical composition

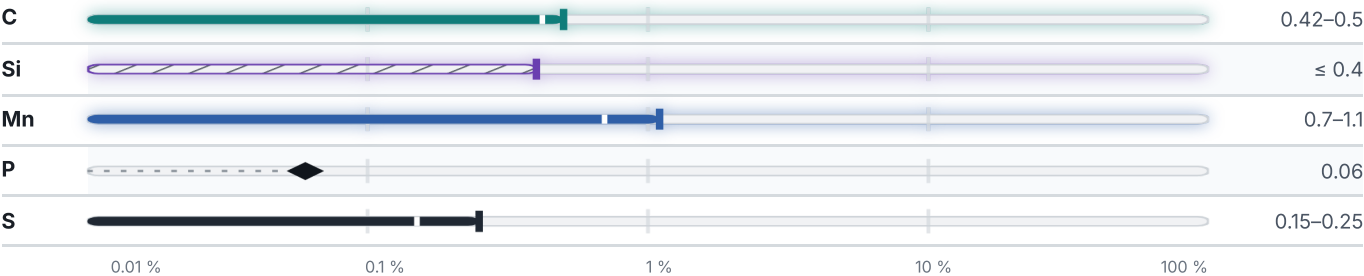
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 98 % ● Mn — 0.9 % ● C — 0.5 % ● Si — 0.4 % ● Traces & impurities · 0.3 %

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

11 values across 2 conditions

COLD DRAWN / HARD	RM N/mm ²	A %
5 – 10	740–980	5
10 – 16	690–930	6

COLD DRAWN / HARD	RM N/mm ²	A %
16 – 40	640–880	7
40 – 63	610–850	8
63 – 100	580–820	8
AS ROLLED AND TURNED		HB
As rolled and turned		166–225

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³

Designations across standards

12 designations · 7 documented as identical

United States	4	France	1
G11390	This grade's own nameuns	45MF4	afnor
G11460	This grade's own nameuns	International	1
1139	This grade's own nameaisi-sae	46S20	iso
1146	This grade's own nameaisi-sae		
Europe	2	Japan	1
45 S 20	This grade's own namedin-en	46S20	This grade's own namejis
46 S 20	This grade's own namedin-en	Sweden	1
United Kingdom	1	1973	ss
212M44	bs	Poland	1
		A45	pn

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 1.0727

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