

MATERIAL NUMBER 1.7227 · CLASS 1.7

40CrMo41

Material no. 1.7227

also listed as 42CrMoS4

Chemical composition, mechanical and physical property values, and 28 standard designations from 14 regions.

DENSITY

7.72 g/cm³

OTHER DESIGNATIONS

28 in 14 regions

PROPERTY VALUES

8 on file

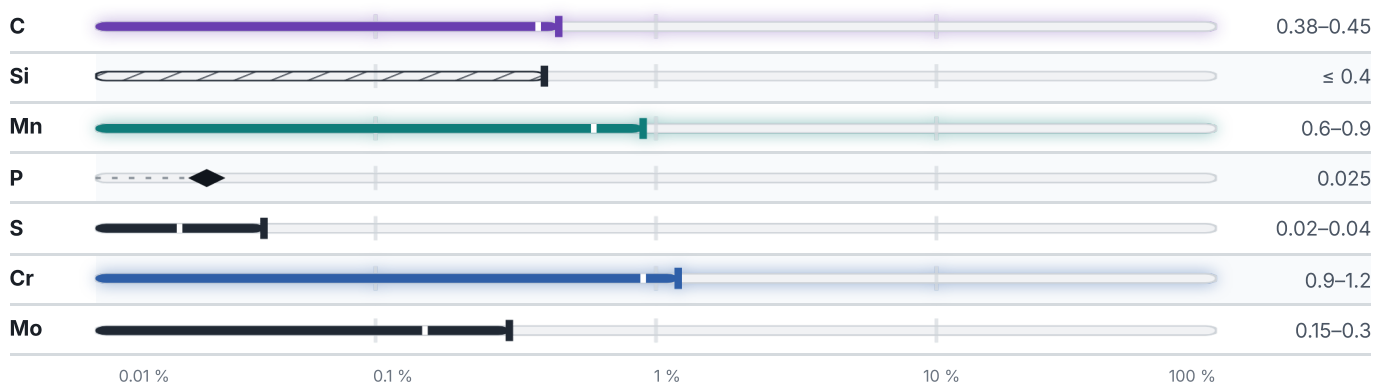
Chemical composition

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.

Mechanical properties

7 values across 3 conditions

QUENCHED AND TEMPERED · ROUND PRODUCTS		A % · Lo = 5,65 √So
≤ 16		10
16 – 40		11
40 – 100		12
100 – 160		13
160 – 250		14
TREATED TO IMPROVE SHEARABILITY		HB
Treated to improve shearability		255
SOFT ANNEALED		HB
Soft annealed		241

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.72	g/cm ³

Heat treatment

2 regimes

STEP	TEMPERATURE	MEDIUM
Soft annealing	Temperature not stated	—
source joins the operations with + / procedural order		
Quenching	Temperature not stated	—
Tempering	Temperature not stated	—

Designations across standards

28 designations · 3 documented as identical

United States		5	France		4
G41400	This grade's own name	uns	40CD4		afnor
G4145		uns	42CD4		afnor
4140	This grade's own name	aisi-sae	42CD4S		afnor
4145		aisi-sae	42CD4u		afnor
A829		astm			

United States / Aerospace	4	International	1
6349	ams	42CrMoS4	iso
6381	ams		
6382	ams	Japan	1
6395	ams	SCM4	jis
Russia / CIS	4	Italy	1
38ChM	gost	42CrMo4	uni
38ChMA	gost		
38XM	gost	Poland	1
38XMA	gost	40HM	pn
United Kingdom	2	Serbia	1
708M40	bs	Č.4782	srps
709M40	bs		
Europe	1	Hungary	1
42CrMoS4 This grade's own name	din-en	CMo4 E	msz
Spain	1	Romania	1
40CrMo41	une	41MoCr11	stas

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 40CrMo41

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