

MATERIAL NUMBER 1.7039 · CLASS 1.7

Cr 3 E

Material no. 1.7039

also listed as 41CrS4

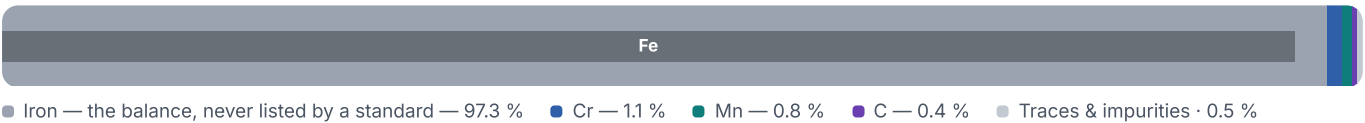
Chemical composition, mechanical and physical property values, and 20 standard designations from 13 regions.

DENSITY 7.72 g/cm³	OTHER DESIGNATIONS 20 in 13 regions	PROPERTY VALUES 7 on file
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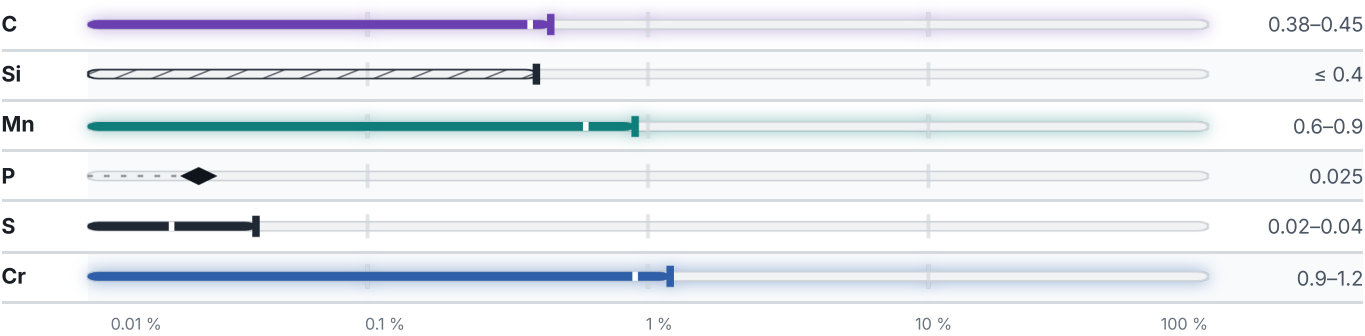
Chemical composition

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, Mo.

Mechanical properties

5 values across 3 conditions

QUENCHED AND TEMPERED · ROUND PRODUCTS	A % · Lo = 5,65 √So
≤ 16	11
16 – 40	12
40 – 100	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

20 designations · 9 documented as identical

United States	4	Russia / CIS	2
G51400	uns	40CH This grade's own name	gost
H51400 This grade's own name	uns	40KH	gost
5140	aisi-sae		
5140H This grade's own name	aisi-sae		
United Kingdom	2	Sweden	2
530H40 This grade's own name	bs	2245	ss
EN18 This grade's own name	bs	SIS 2245 This grade's own name	ss
Spain	2	Europe	1
42Cr41	une	41CrS4 This grade's own name	din-en
F 1207 This grade's own name	une	France	1
		42C4u	afnor

International	1	Czechia	1
41CrS4	iso	14146ŽH	csn
Japan	1	Serbia	1
SCR 440H	This grade's own name jis	Č.4181	srps
Italy	1	Hungary	1
41Cr4	uni	Cr 3 E	msz

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 Cr 3 E

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	1.7039	Aug 20, 2026