SteelEquivalents.com

Material datasheet
As of Aug 20, 2026

MATERIAL NUMBER 1.2344 · CLASS 1.2

2242

Material no. 1.2344

also listed as X40CrMoV5-1

Chemical composition, mechanical and physical property values, and 49 standard designations from 20 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.78 g/cm³	49 in 20 regions	13 on file

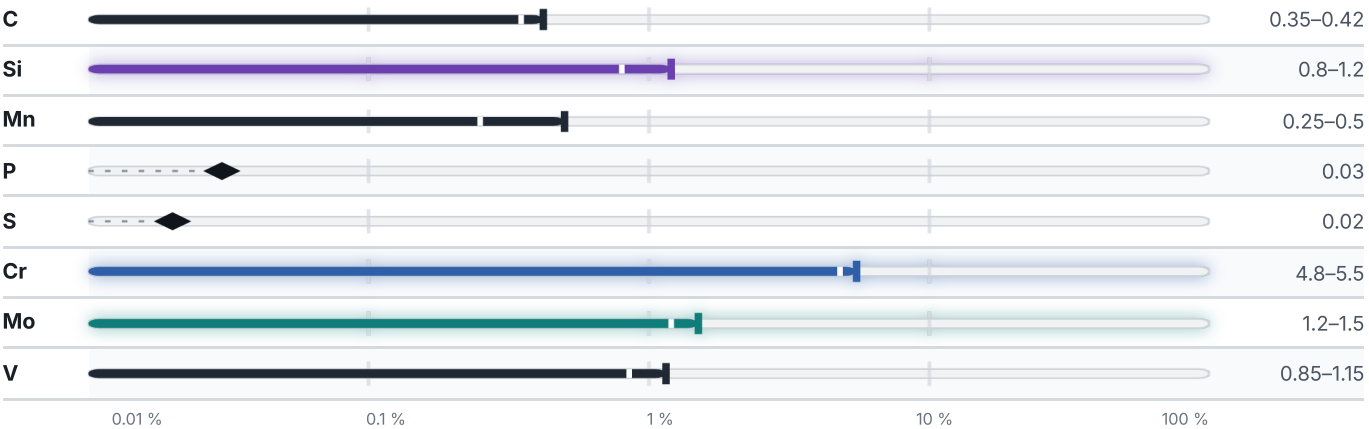
Chemical composition

Mass fraction in %

What this alloy is

Iron — the balance, never listed by a standard — 90.7 % · Cr — 5.2 % · Mo — 1.4 % · Si — 1 % · Traces & impurities · 1.8 %

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

9 values across 4 conditions

CONDITION · DIMENSION	HB	HRC
Annealed	229	–
Quenched and tempered	–	50

SOFT ANNEALED	HB
Soft annealed	229

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
Quenching 1020°C, oil, Drawing 580°C, 2h	1670	1470	10	40	390

CONDITION · DIMENSION	HB
4KH5MF1S (4Х5МФ1С) (annealing) , GOST 5950-2000	241

Physical properties

5 values

CONDITION · DIMENSION	RHO g/cm³	E GPa	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	7.716	207	22	553
100	7.692	–	25	591
200	7.66	–	27	649
300	7.627	187	29	715
400	7.593	–	30	793
500	7.559	–	31	879
600	7.523	160	31	970
700	7.49	–	31	1077
800	7.459	–	31	1189
900	7.438	–	32	1229

PROPERTY	VALUE	UNIT
Density	7.78	g/cm³
Transformation point Ac1	875	°C
Transformation point Ac3	935	°C
Transformation point Ar3	815	°C
Transformation point Ar1	760	°C

Heat treatment

2 regimes

STEP	TEMPERATURE	MEDIUM
Quenching	Temperature not stated	—
Annealing	Temperature not stated	—

Designations across standards

49 designations · 3 documented as identical

United States 8

T20811	uns
T20813 This grade's own name	uns
ASTM H13	aisi-sae
H11	aisi-sae
H13 This grade's own name	aisi-sae
H13 ASTM H13	aisi-sae
T20811	aisi-sae
T20813	aisi-sae

Russia / CIS 5

4Ch5MF1S	gost
4KH5MF1S	gost
4Kh5MFS	gost
4Х5МФ1С	gost
ЭП572	gost

Spain 4

F.5318	une
F.5318X40CrMoV5	une
X40CrMoV5	une
X40CrMoV5	une

Italy 4

UD14	uni
X35CrMoV05KU	uni
X40CrMoV51KU	uni
X40CrMoV5-1-1KU	uni

France 3

Z40CDV5	afnor
Z40CDV5-1	afnor
X40CrMoV5	afnor

International 3

40CrMoV5	iso
X37CrMoV5-1	iso
X40CrMoV5-1	iso

China 3

40CrMoV5	gb
4Cr5MoSiV1	gb
SM4Cr5MoSiV1	gb

Poland 3

L40H5MF	pn
WCL	pn
WCLV	pn

Europe 2

1.2344	din-en
X40CrMoV5-1 This grade's own name	din-en

United Kingdom 2

2344	bs
BH13	bs

Sweden 2

2214	ss
2242	ss

Hungary 2

K13	msz
K13K	msz

Japan 1

SKD61	jis

Czechia 1

19554	csn

Slovakia 1

19 554	stn

Serbia 1

Č.4753	srps

Romania 1

40VSiMoCr52	stas

Bulgaria	1
X40CrMoV5-1	bds

Austria	1
W302	onorm

South Korea	1
STD61	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.

DATASHEET ONLINE	GRADE SEARCH	MATERIAL NO.	ISSUED
View the material page	Search all grades	1.2344	Aug 20, 2026