

MATERIAL NUMBER 1.2344 · CLASS 1.2

4Ch5MF1S

Material no. 1.2344

also listed as X40CrMoV5-1

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

DENSITY

7.78 g/cm³

OTHER DESIGNATIONS

49 in 20 regions

PROPERTY VALUES

13 on file

Chemical composition

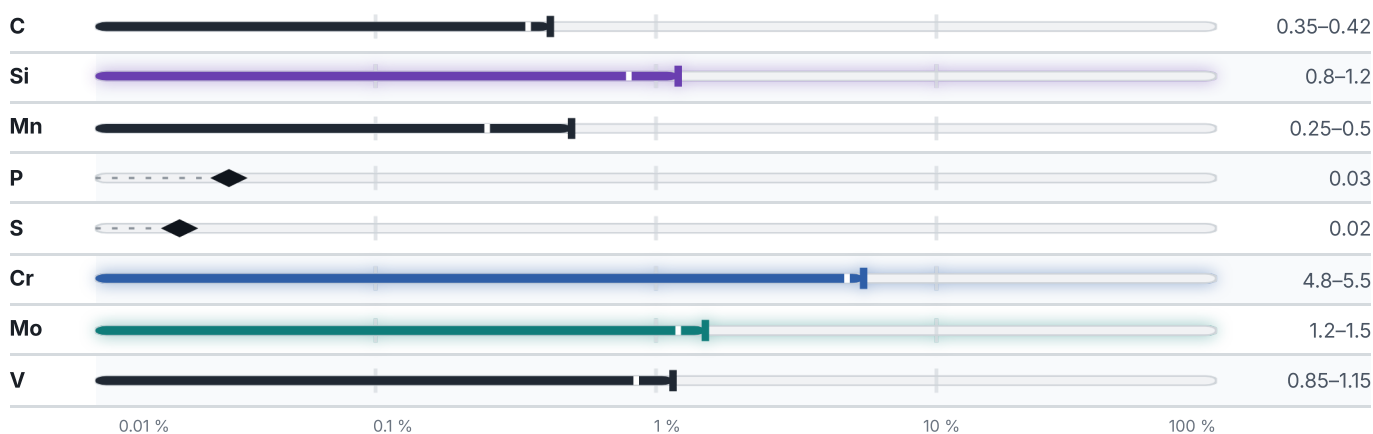
Mass fraction in %

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/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Quenching 1020°C, oil, Drawing 580°C, 2h	1670	1470	10	40	390
CONDITION · DIMENSION					HB
4KH5MF1S (4X5MΦ1C) (annealing) , GOST 5950-2000					241

Physical properties

5 values

CONDITION · DIMENSION	RHO g/cm ³	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/cm ³	
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	China	3
T20811	uns	40CrMoV5	gb
T20813 This grade's own name	uns	4Cr5MoSiV1	gb
ASTM H13	aisi-sae	SM4Cr5MoSiV1	gb
H11	aisi-sae		
H13 This grade's own name	aisi-sae	Poland	3
H13 ASTM H13	aisi-sae	L40H5MF	pn
T20811	aisi-sae	WCL	pn
T20813	aisi-sae	WCLV	pn
Russia / CIS	5	Europe	2
4Ch5MF1S	gost	1.2344	din-en
4KH5MF1S	gost	X40CrMoV5-1 This grade's own name	din-en
4Kh5MFS	gost		
4X5MΦ1C	gost	United Kingdom	2
ЭП572	gost	2344	bs
Spain	4	BH13	bs
F.5318	une	Sweden	2
F.5318X40CrMoV5	une	2214	ss
X40CrMoV5	une	2242	ss
X40CrMoV5	une		
Italy	4	Hungary	2
UD14	uni	K13	msz
X35CrMoV05KU	uni	K13K	msz
X40CrMoV51KU	uni	Japan	1
X40CrMoV5-1-1KU	uni	SKD61	jis
France	3	Czechia	1
Z40CDV5	afnor	19554	csn
Z40CDV5-1	afnor		
X40CrMoV5	afnor	Slovakia	1
International	3	19 554	stn
40CrMoV5	iso	Serbia	1
X37CrMoV5-1	iso	Č.4753	srps
X40CrMoV5-1	iso	Romania	1
		40VSiMoCr52	stas

Bulgaria	1	South Korea	1
X40CrMoV5-1	bds	STD61	ks
Austria	1		
W302	onorm		

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 4Ch5MF1S
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	1.2344	Aug 20, 2026