

MATERIAL NUMBER 1.2343 · CLASS 1.2

UD12

Material no. 1.2343

also listed as X37CrMoV5-1

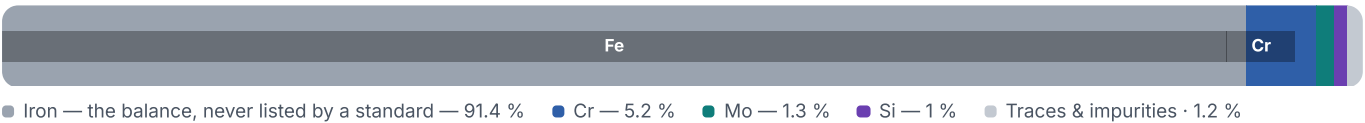
Chemical composition, mechanical and physical property values, and 42 standard designations from 20 regions.

DENSITY 7.8 g/cm³	OTHER DESIGNATIONS 42 in 20 regions	PROPERTY VALUES 13 on file
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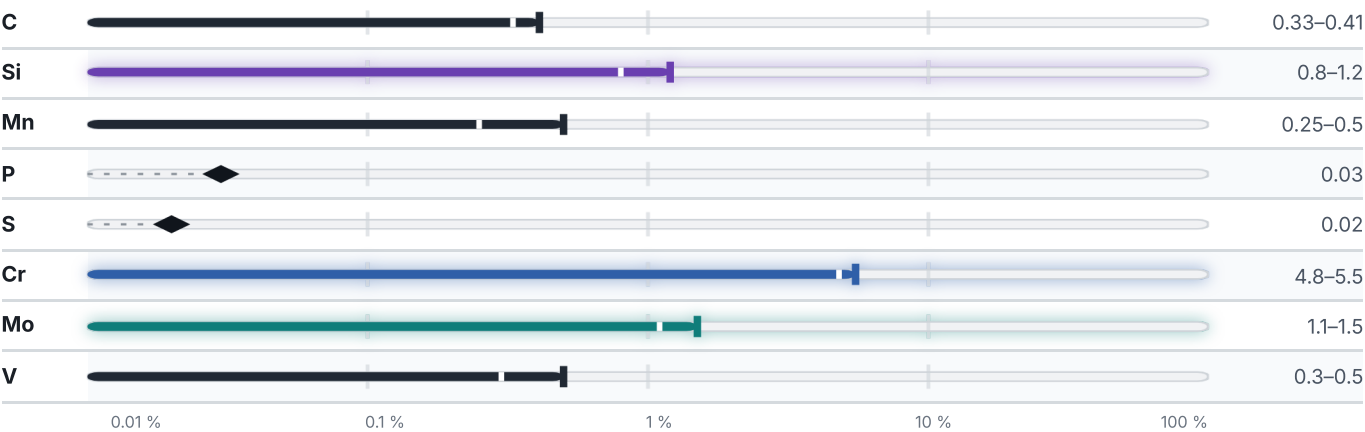
Chemical composition

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.

Mechanical properties

7 values across 4 conditions

CONDITION · DIMENSION		HB	HRC
Annealed		229	–
Quenched and tempered		–	48
SOFT ANNEALED			HB
Soft annealed			229
QUENCHING 1000 - 1020°C,DRAWING 530 - 560°C,DRAWING 500 - 520°C	RM N/mm ²	RE N/mm ²	KCU kJ/m ²
10	1750	1480	570
CONDITION · DIMENSION			HB
(annealing) , GOST 5950-2000			241

Physical properties

5 values

CONDITION · DIMENSION	RHO g/cm ³	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	7.75	29	480
100	7.724	30	–
200	7.697	30	–
300	7.67	31	–
400	7.641	33	–
500	7.6	31	–
600	7.573	30	–
700	7.546	28	–
800	7.52	26	–
900	7.495	27	–
PROPERTY	VALUE	UNIT	
Density	7.8	g/cm ³	
Transformation point Ac1	840	°C	
Transformation point Ac3	870	°C	
Transformation point Ar3	810	°C	
Transformation point Ar1	735	°C	

Heat treatment

2 regimes

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

Designations across standards

42 designations · 4 documented as identical

United States	5	China	2
T20811 This grade's own name	uns	4Cr5MoSiV	gb
T20813	uns	SM4Cr5MoSiV	gb
H11 This grade's own name	aisi-sae	Italy	2
H13	aisi-sae	UD12	uni
T20811	aisi-sae	X37CrMoV5-1KU	uni
France	4	Czechia	2
X37CrMoV51KU	afnor	19552	csn
X38CrMoV5	afnor	19553	csn
Z38CDV5	afnor	Poland	2
Z38CDV5-1	afnor	WCL	pn
Spain	3	WCLV	pn
F.5317X37CrMoV5	une	Austria	2
F.5318	une	BOHLERW300	onorm
X37CrMoV5	une	W300	onorm
International	3	Japan	1
35CrMoV5	iso	SKD6	jis
X37CrMoV5-1	iso	Slovakia	1
X40CrMoV5-1	iso	19 552	stn
United States / Aerospace	3	Croatia	1
6485	ams	Č 4751	hrn
6487	ams	Serbia	1
6488	ams	Č.4751	srps
Russia / CIS	3	Romania	1
4Ch5MFS	gost	39VSiMoCr52	stas
4KH5MFS	gost	Bulgaria	1
4X5MΦC	gost	X37CrMoV5-1	bds
Europe	2	South Korea	1
X37CrMoV5-1 This grade's own name	din-en	STD6	ks
X38CrMoV5-1 This grade's own name	din-en		
United Kingdom	2		
2343	bs		
BH11	bs		

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 UD12
Quotation, availability, mill certificate or a technical question — directly on the material page.

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GRADE SEARCH
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ISSUED
Aug 20, 2026