

MATERIAL NUMBER 1.6582 · CLASS 1.6

38XHMA

Material no. 1.6582

also listed as 34CrNiMo6

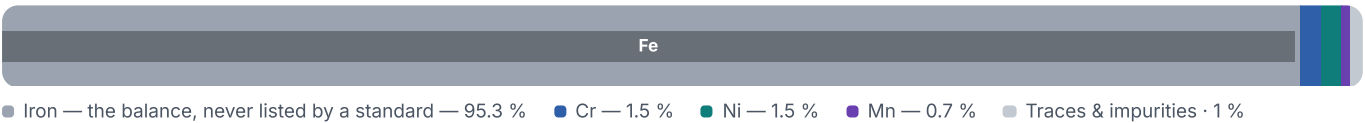
Chemical composition, mechanical and physical property values, and 84 standard designations from 24 regions.

DENSITY 7.73 g/cm³	OTHER DESIGNATIONS 84 in 24 regions	PROPERTY VALUES 16 on file
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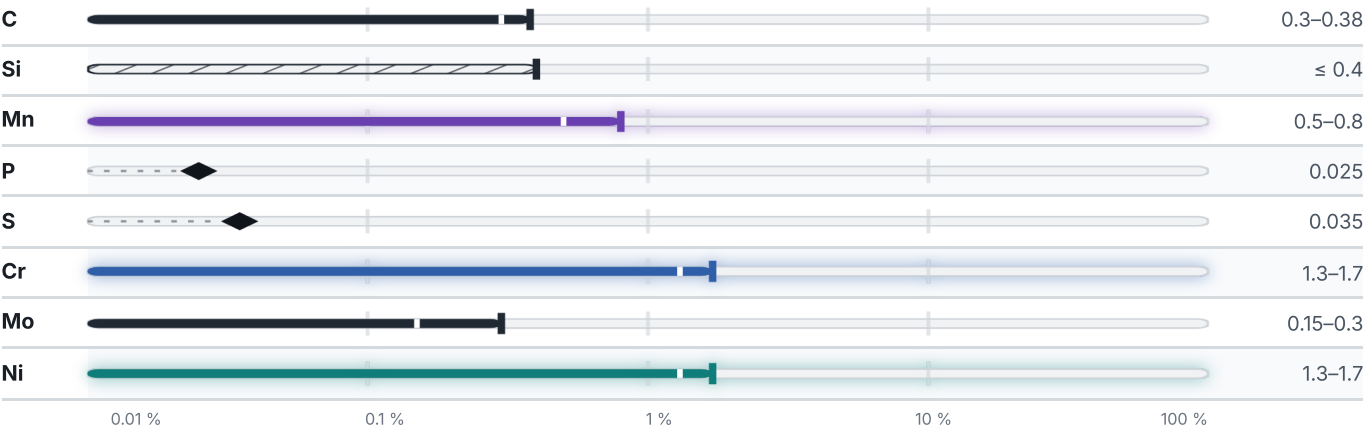
Chemical composition

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

computed from composition · °C

PREDICTED AE3 760 °C	PREDICTED AE1 736 °C	PREDICTED ACM 606 °C	PREDICTED BS 491 °C
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Mechanical properties

12 values across 4 conditions

QUENCHED AND TEMPERED · ROUND PRODUCTS					A % · Lo = 5,65 √So
≤ 16					9
16 – 40					10
40 – 100					11
100 – 160					12
160 – 250					13
SOFT ANNEALED					HB
Soft annealed					248–255
QUENCHING AND DRAWING	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Ø 25	1080	930	12	50	780
CONDITION · DIMENSION					HB
38KH2N2MA (38X2H2MA) (annealing) , GOST 4543-71					269

Physical properties

8 values

CONDITION · DIMENSION	E GPa	ALPHA 10 ^{^-6} /K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
20	213	–	38	–	322
100	206	11.9	37	490	398
200	194	12.5	35	502	482
300	180	13.1	35	523	592
400	174	13.3	33	532	740
500	164	13.8	32	565	910
600	157	14.1	30	590	1090
700	141	14.6	28	615	1300
800	129	11.8	28	670	–
PROPERTY	VALUE		UNIT		
Density	7.73		g/cm ³		
Transformation point Ac1	753		°C		
Transformation point Ac3	790		°C		

PROPERTY	VALUE	UNIT
Transformation point Ar3	490	°C
Transformation point Ar1	370	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	is not used.	
Flake sensitivity	predisposed	
Temper brittleness	not predisposed	

Heat treatment

1 regimes

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

Designations across standards

84 designations · 4 documented as identical

Russia / CIS		14	United States		10
30KHNML	gost		F1270	This grade's own name	uns
30XHMЛ	gost		G43400		uns
34ChN1M	gost		4330		aisi-sae
34XH1M	gost		4337		aisi-sae
36KH2N2MFA	gost		4340		aisi-sae
36KH2N2MFA	gost		G43376		aisi-sae
36X2H2MΦA	gost		G43400		aisi-sae
36XH1MΦA	gost		G43499		aisi-sae
38Ch2N2MA	gost		J23015		aisi-sae
38KH2N2MA	gost		A829		astm
38KH2N2MA	gost		United States / Aerospace		5
38X2H2MA	gost				
38XHMA	gost		6359		ams
40KHN2MA	gost		6409		ams
			6414		ams
			6415		ams
			6454		ams
			China		5
			34Cr2Ni2Mo		gb
			34CrNi3Mo		gb
			34CrNiMo		gb
			40CrNiMoA		gb
			ZG34CrNiMo		gb

Italy	5	Japan	3
34CrNiMo6	uni	SNCM431	jis
35CrNiMo6	uni	SNCM439	jis
35NiCrMo6	uni	SNCM447	jis
35NiCrMo6KB	uni		
KB	uni	Hungary	3
Romania	5	34CrNiMo6	msz
34MoCrNi15	stas	Ao30CrNiMo6-6	msz
34MoCrNi15q	stas	NCMo 5	msz
34MoCrNi16	stas	Sweden	2
34MoCrNi16q	stas	2541	ss
T30MoCrNi14	stas	SIS 14 2541 This grade's own name	ss
Europe	4	Poland	2
1.6582	din-en	34HNM	pn
34CrNiMo6 This grade's own name	din-en	34HNMA	pn
G34CrNiMo6 This grade's own name	din-en	Bulgaria	2
GS-34CrNiMo6V	din-en	30ChNML	bds
United Kingdom	4	34CrNiMo6	bds
34CrNiMo6	bs	International	1
816M40	bs	36CrNiMo6	iso
817M40	bs	Slovakia	1
EN 24	bs	16 343	stn
France	4	Serbia	1
34CrNiMo6	afnor	Č.5431	srps
34CrNiMo8	afnor	Croatia	1
35CND6	afnor	Č.5431	hrn
35NCD6	afnor	Australia / New Zealand	1
Spain	4	4340	as-nzs
34CrNiMo6	une	Austria	1
40NiCrMo7	une	BOHLERV155	onorm
F.1272	une	Belgium	1
F.1272-40NiCrMo7	une	35CrNiMo6	nbn
Czechia	4	South Korea	1
16 444	csn	SNCM447	ks
16342	csn		
16343	csn		
16440	csn		

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 38XHMA

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

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ISSUED

Sep 8, 2026