

MATERIAL NUMBER 1.6582 · CLASS 1.6

Č.5431

Material no. 1.6582

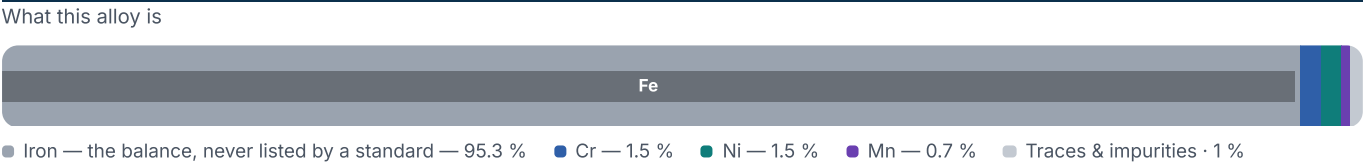
also listed as 34CrNiMo6

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

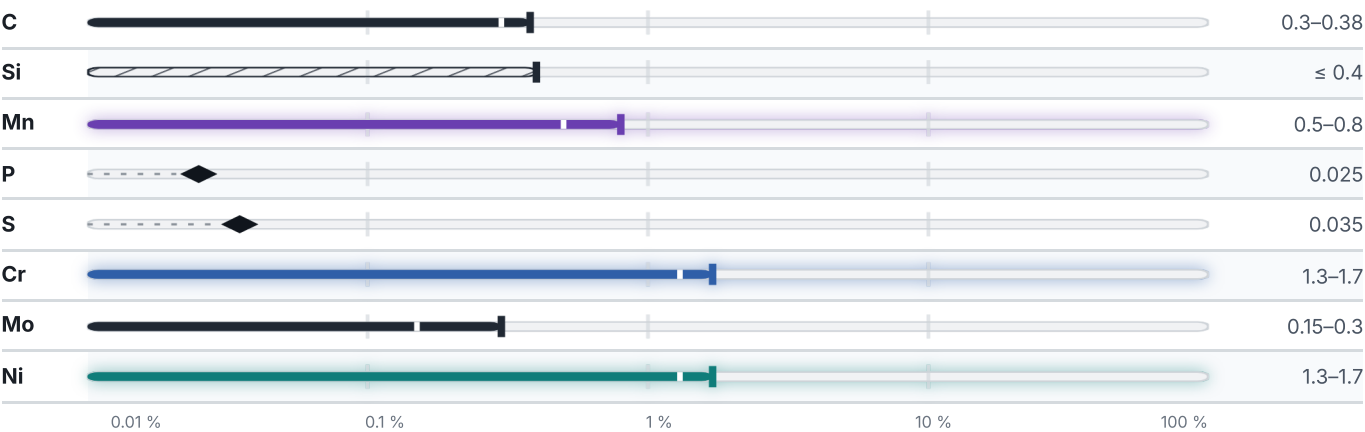
DENSITY 7.73 g/cm³	OTHER DESIGNATIONS 84 in 24 regions	PROPERTY VALUES 16 on file
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Chemical composition

Mass fraction in %



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
34CrNiMo6	uni
35CrNiMo6	uni
35NiCrMo6	uni
35NiCrMo6KB	uni
KB	uni

Romania	5
34MoCrNi15	stas
34MoCrNi15q	stas
34MoCrNi16	stas
34MoCrNi16q	stas
T30MoCrNi14	stas

Europe	4
1.6582	din-en
34CrNiMo6 This grade's own name	din-en
G34CrNiMo6 This grade's own name	din-en
GS-34CrNiMo6V	din-en

United Kingdom	4
34CrNiMo6	bs
816M40	bs
817M40	bs
EN 24	bs

France	4
34CrNiMo6	afnor
34CrNiMo8	afnor
35CND6	afnor
35NCD6	afnor

Spain	4
34CrNiMo6	une
40NiCrMo7	une
F.1272	une
F.1272-40NiCrMo7	une

Czechia	4
16 444	csn
16342	csn
16343	csn
16440	csn

Japan	3
SNCM431	jis
SNCM439	jis
SNCM447	jis

Hungary	3
34CrNiMo6	msz
Ao30CrNiMo6-6	msz
NCMo 5	msz

Sweden	2
2541	ss
SIS 14 2541 This grade's own name	ss

Poland	2
34HNM	pn
34HNMA	pn

Bulgaria	2
30ChNML	bds
34CrNiMo6	bds

International	1
36CrNiMo6	iso

Slovakia	1
16 343	stn

Serbia	1
Č.5431	srps

Croatia	1
Č.5431	hrn

Australia / New Zealand	1
4340	as-nzs

Austria	1
BOHLERV155	onorm

Belgium	1
35CrNiMo6	nbn

South Korea	1
SNCM447	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.

Enquiry about Č.5431

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ISSUED

Sep 8, 2026