

MATERIAL NUMBER 1.6565 · CLASS 1.6

5ΦЛ

Material no. 1.6565

also listed as 40NiCrMo6

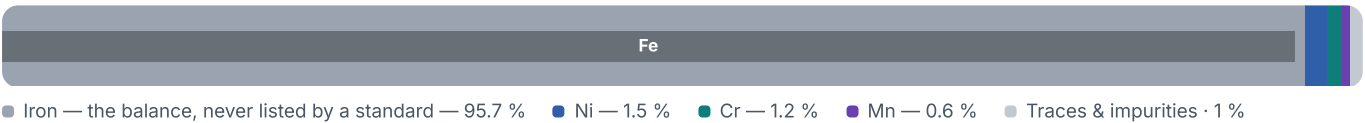
Chemical composition, mechanical and physical property values, and 56 standard designations from 14 regions.

DENSITY 7.85 g/cm³	OTHER DESIGNATIONS 56 in 14 regions	PROPERTY VALUES 14 on file
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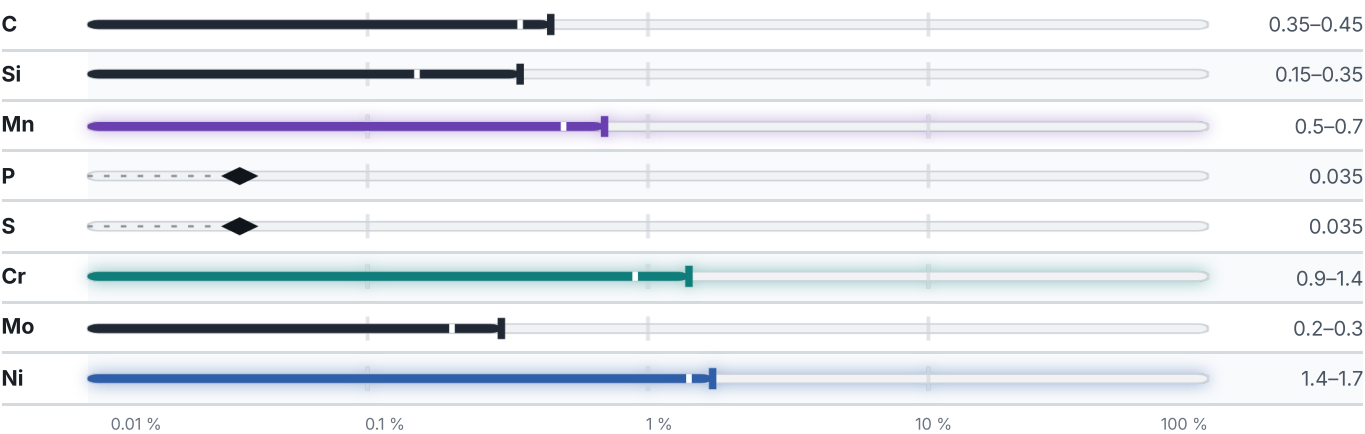
Chemical composition

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 747 °C	PREDICTED AE1 729 °C	PREDICTED ACM 640 °C	PREDICTED BS 501 °C
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Mechanical properties

6 values across 2 conditions

QUENCHING AND DRAWING	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Ø 25	1080	930	10	45	780
CONDITION · DIMENSION					HB
40KH2N2MA (40X2H2MA) (annealing) , GOST 4543-71					255

Physical properties

6 values

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	740	°C
Transformation point Ac3	805	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	hard weldability.	
Flake sensitivity	predisposed	
Temper brittleness	not predisposed	

Heat treatment

2 regimes

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

Designations across standards

56 designations · 8 documented as identical

Russia / CIS		17	Japan		5
40ChN2MA		gost	SNB24-1-5		jis
40Kh2G2M		gost	SNCM 439 STPT 38		jis
40KH2N2MA		gost	SNCM 8		jis
40Kh2N2VA		gost	SNCM439		jis
40KhN2MA		gost	STPT38		jis
40Г1		gost	United Kingdom		2
40X1HBA		gost	817A37		bs
40X2H2MA		gost	818 M 40		bs
5ΦЛ		gost	Spain		2
PK40N2D2		gost	40NiCrMo7		une
PK40N2D2M		gost	F.1272		une
ПК40Н2Д2-6.4		gost	China		2
ПК40Н2Д2-6.8		gost	40CrNiMoA		gb
ПК40Н2Д2-7.4		gost	ML40CrNiMoA		gb
ПК40Н2Д2М-6.8		gost	Italy		2
ПК40Н2Д2М-7.4		gost	40 NiCrMo 7		uni
ст.40X2H2MA		gost	NCM 4		uni
United States		14	Australia / New Zealand		2
G43400		uns	4340		as-nzs
G98500	This grade's own name	uns	4340H		as-nzs
H43400	This grade's own name	uns	Europe		1
H43406	This grade's own name	uns	40NiCrMo6	This grade's own name	din-en
K23028	This grade's own name	uns	France		1
4340		aisi-sae	40 NCD 7		afnor
4340H	This grade's own name	aisi-sae	Poland		1
9850	This grade's own name	aisi-sae	40HNMA		pn
E4340H	This grade's own name	aisi-sae	Latin America		1
G43400		aisi-sae	4340		copant
G98500		aisi-sae	South Korea		1
H43400		aisi-sae	SNCM439		ks
4340 SA-29 Grade 4340		astm			
A829		astm			
United States / Aerospace		5			
6359		ams			
6409		ams			
6414		ams			
6415		ams			
6454		ams			

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 5ΦЛ

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

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ISSUED

Aug 20, 2026