

MATERIAL NUMBER 1.6657 · CLASS 1.6

16NCD13

Material no. 1.6657

also listed as 14NiCrMo13-4

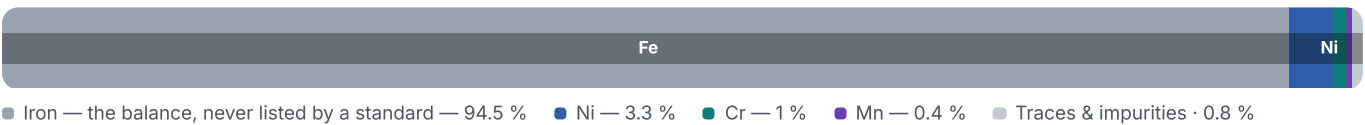
Chemical composition, mechanical and physical property values, and 40 standard designations from 14 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 40 in 14 regions	PROPERTY VALUES 16 on file
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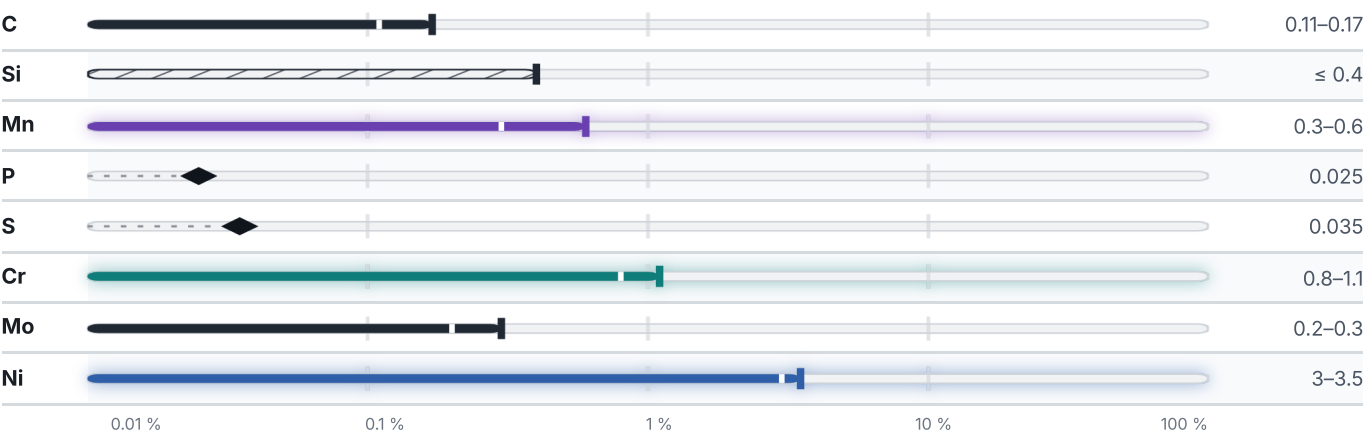
Chemical composition

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

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no transformation temperature is predicted here.

Mechanical properties

11 values across 7 conditions

TREATED TO IMPROVE SHEARABILITY					HB
Treated to improve shearability					255
SOFT ANNEALED					HB
Soft annealed					241
TREATED TO HARDNESS RANGE					HB
Treated to hardness range					187–241
TREATED TO FERRITE-PEARLITE STRUCTURE AND HARDNESS RANGE					HB
Treated to ferrite-pearlite structure and hardness range					166–217
QUENCHING AND DRAWING	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
Ø 15	1130	835	12	50	980
CONDITION · DIMENSION					HB
(annealing) , GOST 4543-71					269
CONDITION · DIMENSION					RM N/mm ²
200					1200

Physical properties

8 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)
20	7.95	200	–	–
100	7.93	165	11.7	36
200	7.9	141	12.2	36
300	7.86	–	12.7	35
400	7.83	139	13.1	35
500	7.8	–	13.5	34
600	7.76	–	13.9	33
700	–	–	–	32
800	–	–	–	30

PROPERTY	VALUE	UNIT
Density	7.85	g/cm ³
Transformation point Ac1	700	°C
Transformation point Ac3	810	°C
Transformation point Ar3	400	°C
Transformation point Ar1	350	°C

Technological properties

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

Heat treatment

1 regimes

STEP	TEMPERATURE	MEDIUM
Soft annealing	Temperature not stated	—

Designations across standards

40 designations · 7 documented as identical

United States		10	Russia / CIS	5
G93106		uns	14ChN3M	gost
H93100	This grade's own name	uns	14HN3M	gost
H93106	This grade's own name	uns	14KhN3M	gost
9310		aisi-sae	18KH2N4MA	gost
9310H	This grade's own name	aisi-sae	18X2H4MA	gost
9310RH	This grade's own name	aisi-sae		
E9310		aisi-sae	Spain	4
E9310H	This grade's own name	aisi-sae	131	une
EX1	This grade's own name	aisi-sae	14NiCrMo131	une
A322		astm	F.1569	une
			F.1569-14NiCrMo	une
United Kingdom		6	United States / Aerospace	3
36C		bs	6260	ams
832H13		bs	6265	ams
832M13		bs	6267	ams
835M15		bs		
EN36C		bs	Europe	2
S157		bs	1.6657	din-en
			14NiCrMo13-4	This grade's own name din-en

France	2
16NCD13	afnor
16NiCrMo13	afnor
Italy	2
15NiCrMo13	uni
16NiCrMo12	uni
Japan	1
SNCM815	jis
Czechia	1
16720	csn

Poland	1
18H2N4WA	pn
Hungary	1
~BNCMo 2	msz
Bulgaria	1
18Ch2N4MA	bds
Austria	1
BOHLERM130	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 16NCD13

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

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ISSUED

Aug 20, 2026