

MATERIAL NUMBER 1.4125 · CLASS 1.4

617

Material no. 1.4125

also listed as X105CrMo17

Chemical composition, mechanical and physical property values, and 50 standard designations from 10 regions.

DENSITY**7.7** g/cm³**OTHER DESIGNATIONS****50** in 10 regions**PROPERTY VALUES****11** on file

Chemical composition

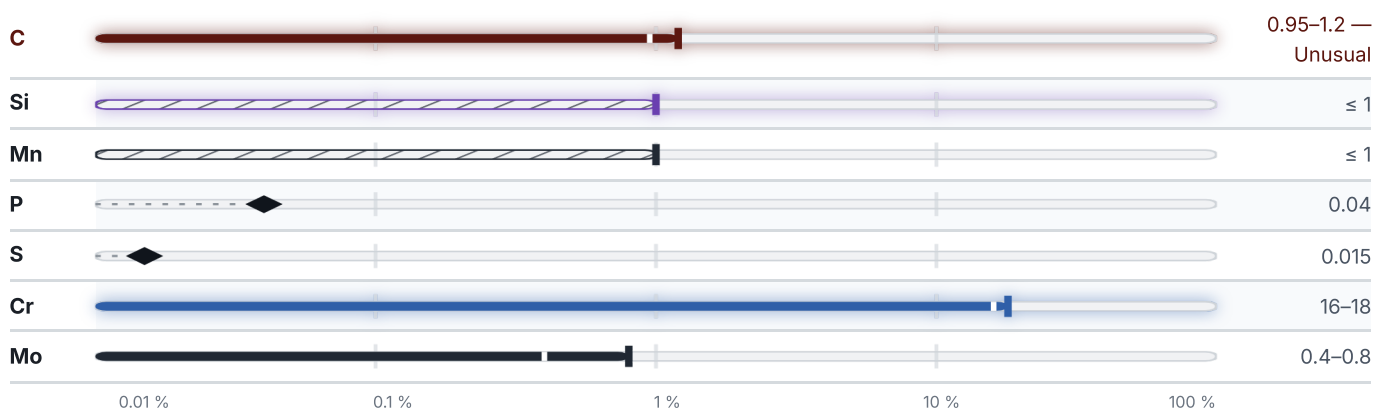
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 79.3 % ● Cr — 17 % ● C — 1.1 % ● Si — 1 % ● Traces & impurities · 1.7 %

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

6 values across 3 conditions

SOFT ANNEALED					HB
Soft annealed					285
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	
Bar	770	420	15	30	
CONDITION · DIMENSION					HB
95KH18 (95X18) (annealing) , Bar GOST 5949-75					269

Physical properties

4 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	ALPHA 10 ⁻⁶ /K	LAMBDA W/(m·K)	CP J/(kg·K)
20	7.75	204	–	24	–
100	7.73	–	11.8	–	483
200	–	–	12.3	–	–
300	–	–	12.7	–	–
400	–	–	13.1	–	–
500	–	–	13.4	–	–
PROPERTY				VALUE	UNIT
Density				7.7	g/cm ³
Transformation point Ac1				830	°C
Transformation point Ac3				1100	°C
Transformation point Ar3				810	°C

Designations across standards

50 designations · 5 documented as identical

United States		27	Russia / CIS		6
S44002		uns	110Ch18M-SChD		gost
S44003		uns	95Ch18		gost
S44004	This grade's own name	uns	95KH18		gost
S44020		uns	95X18		gost
S44025	This grade's own name	uns	9X18		gost
400C		aisi-sae	ЭИ229		gost
440A		aisi-sae			
440B		aisi-sae	France		2
440C	This grade's own name	aisi-sae	X105CrMo17		afnor
440F		aisi-sae	Z100CD17		afnor
440FSe		aisi-sae			
51440C		aisi-sae	International		2
617	This grade's own name	aisi-sae	A-1b		iso
A756		aisi-sae	X108CrMo17		iso
S44004		aisi-sae			
S44025		aisi-sae	China		2
A 480		astm	11Cr17		gb
A276		astm	9Cr18		gb
A314		astm			
A473		astm	Europe		1
A484		astm	X105CrMo17	This grade's own name	din-en
A493		astm			
A580		astm	Japan		1
F116		astm	SUS 440C		jis
F1613		astm			
F2215		astm	Czechia		1
F899		astm	17042		csn
United States / Aerospace		7	Poland		1
5618		ams	H18		pn
5630		ams			
5631		ams			
5632		ams			
5880		ams			
5899		ams			
7445		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 617

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

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ISSUED

Aug 20, 2026