SteelEquivalents.com

Material datasheet
As of Aug 20, 2026

MATERIAL NUMBER 1.6587 · CLASS 1.6

18CrNiMo7

Material no. 1.6587

also listed as 17CrNiMo6

Chemical composition, mechanical and physical property values, and 41 standard designations from 15 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.77 g/cm³	41 in 15 regions	14 on file

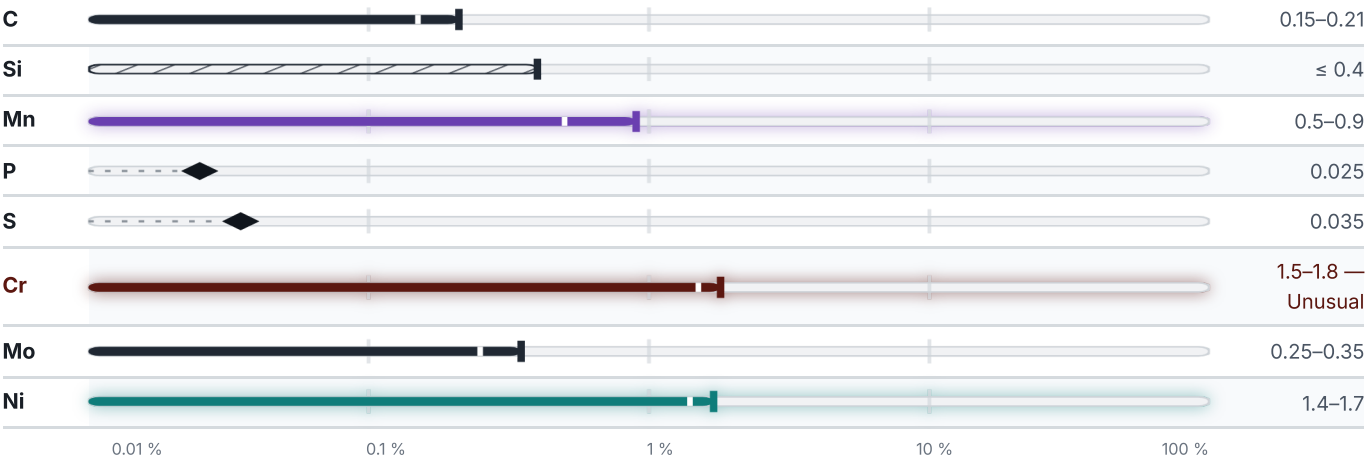
Chemical composition

Mass fraction in %

What this alloy is

Iron — the balance, never listed by a standard — 95.2 % · Cr — 1.7 % · Ni — 1.5 % · Mn — 0.7 % · Traces & impurities · 0.9 %

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	PREDICTED AE1	PREDICTED ACM	PREDICTED BS
789 °C	737 °C	480 °C	492 °C

Mechanical properties

10 values across 6 conditions

QUENCHING AND DRAWING	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
Ø 15	880	685	11	50	780

TREATED TO IMPROVE SHEARABILITY	HB
Treated to improve shearability	255

SOFT ANNEALED	HB
Soft annealed	229

TREATED TO HARDNESS RANGE	HB
Treated to hardness range	179–229

TREATED TO FERRITE-PEARLITE STRUCTURE AND HARDNESS RANGE	HB
Treated to ferrite-pearlite structure and hardness range	159–207

CONDITION · DIMENSION	RM N/mm²
200	1200

Physical properties

6 values

PROPERTY	VALUE	UNIT
Density	7.77	g/cm³
Transformation point Ac1	720	°C
Transformation point Ac3	825	°C

Technological properties

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

Designations across standards

41 designations · 6 documented as identical

United States 6

G48200	uns
4320	aisi-sae
4320H	aisi-sae
4820	aisi-sae
G43200	aisi-sae
H43200	aisi-sae

United Kingdom 6

22H17 This grade's own name	bs
817M17 This grade's own name	bs
820A16	bs
822A17 This grade's own name	bs
822M17	bs
EN355 This grade's own name	bs

Russia / CIS 6

12ChN4A	gost
18KH2N4VA	gost
18X2H4BA	gost
20KHN2M	gost
20XH2M	gost
20XHM	gost

Europe 4

1.6587	din-en
17CrNiMo6 This grade's own name	din-en
17CrNiMo7	din-en
18CrNiMo7-6 This grade's own name	din-en

Japan 4

SNCM415	jis
SNCM420	jis
SNCM420H	jis
SNCM815	jis

Spain 3

14NiCrMo13	une
F.1560	une
F.1560-14NiCrMo13	une

France 2

18NCD6	afnor
18NiCrMo6	afnor

Czechia 2

16326	csn
16326PH	csn

Poland 2

17HGM	pn
17HNM	pn

International 1

18CrNiMo7	iso

China 1

17Cr2Ni2Mo	gb

Italy 1

18NiCrMo7	uni

Latin America 1

4820	copant

Serbia 1

Č.4520	srps

Finland 1

511	sfs

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 18CrNiMo7

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

Start an enquiry

DATASHEET ONLINE	GRADE SEARCH	MATERIAL NO.	ISSUED
View the material page	Search all grades	1.6587	Aug 20, 2026