SteelEquivalents.com

Material datasheet
As of Aug 20, 2026

MATERIAL NUMBER 1.4057 · CLASS 1.4

1.4057

Chemical composition, mechanical and physical property values, and 63 standard designations from 16 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.7 g/cm³	63 in 16 regions	13 on file

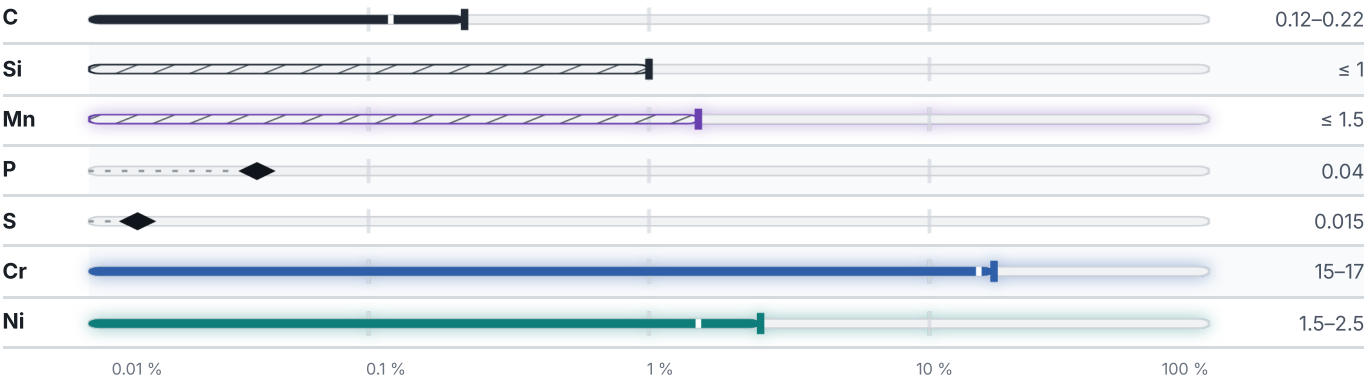
Chemical composition

Mass fraction in %

What this alloy is

Iron — the balance, never listed by a standard — 79.3 % · Cr — 16 % · Ni — 2 % · Mn — 1.5 % · Traces & impurities · 1.2 %

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: Mo.

Mechanical properties

27 values across 7 conditions

CONDITION · DIMENSION	HB
14KH17N2 (14X17H2) (quenching, tempering) , GOST 25054-81	248–293
14KH17N2 (14X17H2) (annealing) , Bar GOST 5949-75	285
14KH17N2 (14X17H2) (annealing) , Bar GOST 18907-73	302

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A %	Z %	AK J/cm²
Bars/Rods	780	590	15	40	39

SOFT ANNEALED	HB
Soft annealed	295

QUENCHING 975 - 1040°C, OIL, DRAWING 275 - 350°C, AIR	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
Ø 60	1080	835	10	30	490

QUENCHING 1000 - 1030°C, OIL, DRAWING 620 - 660°C, AIR	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
Ø 60	835	635	16	55	750

QUENCHING 980 - 1020°C, OIL, DRAWING 680 - 700°C, AIR	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
to 1000	686	539	12–15	30–40	490–590

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %
Sheet trick, GOST 7350-77	1080	885	10

Physical properties

6 values

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10^-6/K	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	7.75	197	–	20.9	720
100	–	–	9.8	21.7	780
200	–	–	10.6	22.6	840
300	–	167	10.8	23.4	890
400	–	–	11	24.3	990
500	–	151	11.1	25.1	1040
600	–	136	11.8	25.9	1110

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10^-6/K	LAMBDA W/(m·K)	RHO_EL nΩ·m
700	–	–	11	26.8	1130
800	–	–	10.7	28	1160
900	–	–	11.4	29.7	1170
1000	–	–	11.5	–	1180

PROPERTY	VALUE	UNIT
Density	7.7	g/cm³
Transformation point Ac1	720	°C
Transformation point Ac3	830	°C
Transformation point Ar1	700	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	hard weldability.	
Temper brittleness	predisposed	

Heat treatment

2 regimes

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

Designations across standards

63 designations · 6 documented as identical

United States 20

S43100 This grade's own name	uns
431 This grade's own name	aisi-sae
51431	aisi-sae
S43100	aisi-sae
A176	astm
A276	astm
A314	astm
A473	astm
A478	astm
A479	astm
A484	astm
A493	astm
A580	astm
A593	astm
A594	astm
F1613	astm
F2281	astm
F738	astm
F836	astm
F899	astm

Russia / CIS 8

14Ch17N2	gost
14KH17N2	gost
20Ch17N2 This grade's own name	gost
20KH17N2	gost
20X17H2	gost
20X17H2	gost
2X17H2	gost
ст.20X17H2	gost

Poland 5

2H17N2	pn
4H17N	pn
4H17N 2 2H17N2	pn
H17N2	pn
H17N2A	pn

Europe 4

1.4057	din-en
X 20 CrNi 17 2 This grade's own name	din-en
X17CrNi16-2 This grade's own name	din-en
X22CrNi17 This grade's own name	din-en

United Kingdom 4

431 S 29 En57	bs
431S29	bs
7S80	bs
En57	bs

Spain 4

F.313	une
F.3427	une
F.3427-X15CrNi16	une
X19CrNi17-2	une

Czechia 4

17 XXX NN	csn
17145	csn
17145PH	csn
17150VN	csn

France 2

Z15CN16-02	afnor
Z15CNi6.02	afnor

United States / Aerospace 2

5628	ams
5682	ams

Japan 2

SUS 431	jis
SUS 431FB	jis

China 2

1Cr17Ni2	gb
ML1Cr17Ni2	gb

Italy 2

X16CrNi1	uni
X16CrNi16	uni

Sweden 1

2321	ss

Slovakia 1

17 145	stn

Serbia 1

Č.4570	srps

former Yugoslavia 1

Č.4570	jus

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 1.4057

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	1.4057	Aug 20, 2026