

MATERIAL NUMBER 1.3355 · CLASS 1.3

R18

Material no. 1.3355

also listed as HS18-0-1

Chemical composition, mechanical and physical property values, and 43 standard designations from 21 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
8.7 g/cm ³	43 in 21 regions	14 on file

Chemical composition

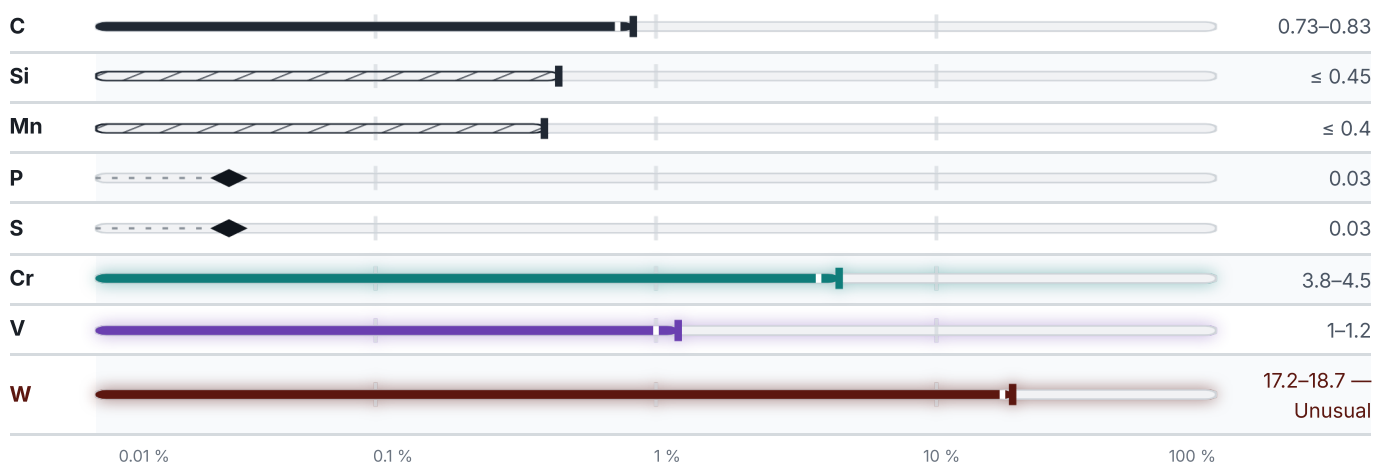
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 75.1 % ● W — 18 % ● Cr — 4.2 % ● V — 1.1 % ● 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, Mo.

Mechanical properties

8 values across 4 conditions

CONDITION · DIMENSION					HB
Annealed					269
SOFT ANNEALED					HB
Soft annealed					269
CONDITION · DIMENSION	RM N/mm ²	RE N/mm ²	A5 %	Z %	KCU kJ/m ²
As-delivered state	840	510	8	10	190
CONDITION · DIMENSION					HB
(annealing) , GOST 19265-73					255

Physical properties

6 values

CONDITION · DIMENSION	RHO g/cm ³	E GPa	LAMBDA W/(m·K)	RHO_EL nΩ·m
20	8.8	228	–	419
100	–	223	26	472
200	–	219	27	544
300	–	210	28	627
400	–	201	29	718
500	–	192	28	815
600	–	181	27	922
700	–	–	27	1037
800	–	–	–	1152
900	–	–	–	1173
PROPERTY			VALUE	UNIT
Density			8.7	g/cm ³
Transformation point Ac1			820	°C
Transformation point Ac3			860	°C
Transformation point Ar3			770	°C
Transformation point Ar1			725	°C

Technological properties

PROPERTY	VALUE	UNIT
Weldability	without limitations.	

Heat treatment

4 regimes

STEP	TEMPERATURE	MEDIUM
source joins the operations with + / procedural order		
Preheating	800–900 °C	—
Quenching	1250–1270 °C	—
Tempering	550 °C	—
Annealing	Temperature not stated	—
source joins the operations with + / procedural order		
Quenching	Temperature not stated	—
Tempering	Temperature not stated	—
Annealing	Temperature not stated	—

Designations across standards

43 designations · 5 documented as identical

United States	5	Italy	3
T12001 This grade's own name	uns	HS18-0-1	uni
T1 This grade's own name	aisi-sae	X75W18KU	uni
T12001	aisi-sae	X75WCrV18	uni
AMS 5626	astm		
T1	astm	United Kingdom	2
Spain	5	3355	bs
18-0-1	une	BT1	bs
ET1	une	Japan	2
F.5520	une	SKH	jis
F.5601	une	SKH2	jis
HS18-0-1	une	Russia / CIS	2
France	4	R18	gost
18-04-01	afnor	P18	gost
HS18-0-1	afnor	Sweden	2
Z80WCV	afnor	2721	ss
Z80WCV18-04-01	afnor	2750	ss
Europe	3	Czechia	2
1.3355	din-en	19810	csn
HS18-0-1 This grade's own name	din-en	19824	csn
S18-0-1 This grade's own name	din-en		

Bulgaria	2	Slovakia	1
HS18-0-1	bds	19 824	stn
R18	bds		
Austria	2	Serbia	1
BOHLERS200	onorm	Č.6880	srps
S200	onorm	Poland	1
International	1	SW18	pn
HS18-0-1	iso	Hungary	1
United States / Aerospace	1	R3	msz
5626	ams	Romania	1
China	1	Rp3	stas
W18Cr4V	gb	South Korea	1
		SKH2	This grade's own name ks

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 R18

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	1.3355	Aug 20, 2026