

MATERIAL NUMBER 1.4742 · CLASS 1.4

51442

Material no. 1.4742

also listed as X10CrAl18

Chemical composition, mechanical and physical property values, and 38 standard designations from 16 regions.

DENSITY 7.56 g/cm ³	OTHER DESIGNATIONS 38 in 16 regions	PROPERTY VALUES 8 on file
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Chemical composition

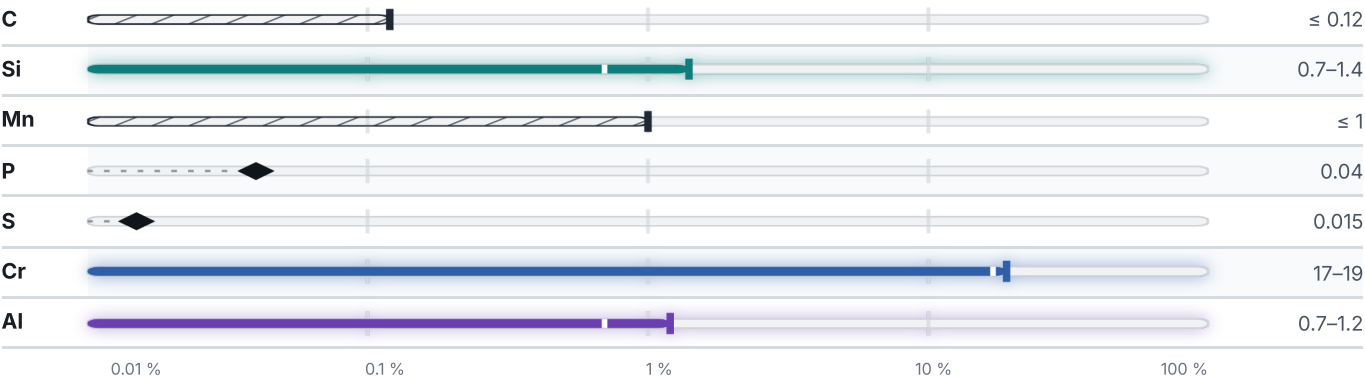
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 78.8 % ● Cr — 18 % ● Si — 1 % ● Mn — 1 % ● Traces & impurities · 1.1 %

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 3 conditions

SOFT ANNEALED				HB
Soft annealed				212
CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %	Z %
Bar, GOST 5949-75	490	295	20	50
CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A %	
Plate/Sheet	440	245	15	

Physical properties

1 values

PROPERTY	VALUE	UNIT
Density	7.56	g/cm³

Designations across standards

38 designations · 4 documented as identical

Russia / CIS		6	United Kingdom		3
15Ch18Ju		gost	430S15		bs
15Ch18SJU		gost	EN60		bs
15KH18SYU		gost	X10CrAlSi18		bs
15X18CЮ		gost			
X18CЮ		gost	Japan		3
ЭИ484		gost	SUH21	This grade's own name	jis
			SUN21		jis
United States		5	SUS430		jis
S44200		uns			
430		aisi-sae	France		2
442		aisi-sae	Z10CAS18		afnor
51442		aisi-sae	Z12CAS18		afnor
A176		astm			
Spain		5	China		2
F.3113		une	1Cr19Al3		gb
F.3153		une	Cr17		gb
F.3153-X10CrAl 18		une	Italy		1
X10CrAl18		une	X8Cr17		uni
X10CrAlSi18		une			
Europe		4	Sweden		1
1.4742		din-en	SISI 442	This grade's own name	ss
X10CrA118		din-en			
X10CrAl18	This grade's own name	din-en	Serbia		1
X10CrAlSi18	This grade's own name	din-en	Č.4973		srps

Poland	1	Bulgaria	1
H18JS	pn	Ch18SJ	bds
Hungary	1	South Korea	1
H13	msz	STR21	ks
Romania	1		
10AICr180	stas		

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 51442

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	1.4742	Aug 20, 2026