

MATERIAL NUMBER 1.7362 · CLASS 1.7

S50100

Material no. 1.7362

also listed as 12 CrMo 19 5

Chemical composition, mechanical and physical property values, and 48 standard designations from 12 regions.

DENSITY 7.85 g/cm ³	OTHER DESIGNATIONS 48 in 12 regions	PROPERTY VALUES 18 on file
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Chemical composition

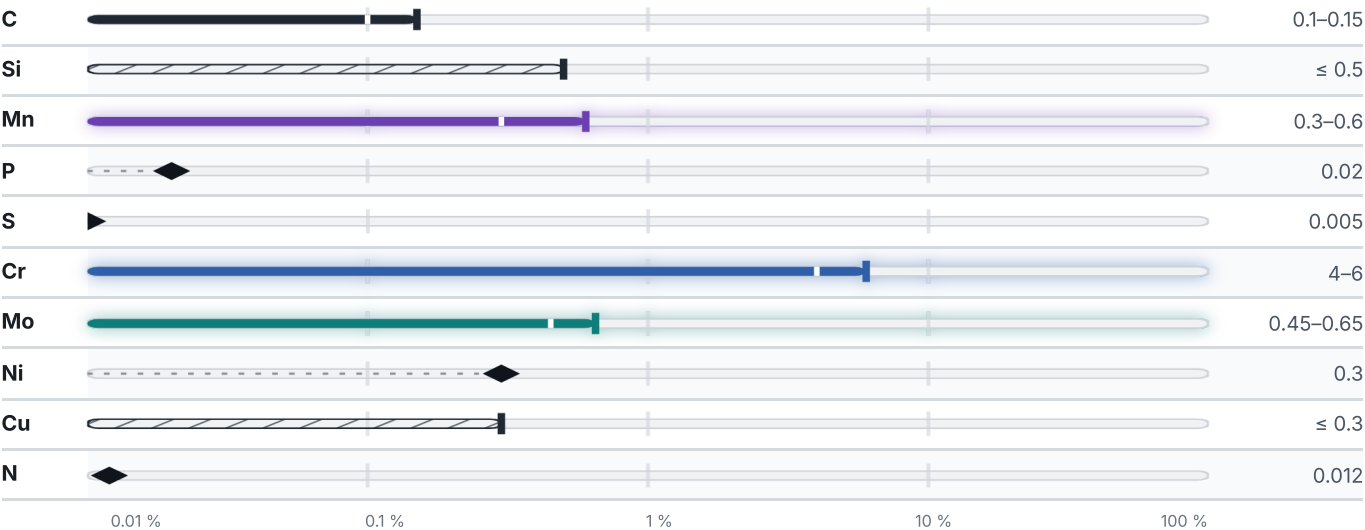
Mass fraction in %

What this alloy is



● Iron — the balance, never listed by a standard — 92.7 % ● Cr — 5 % ● Mo — 0.6 % ● Si — 0.5 % ● 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

This grade's composition falls outside the published model's validated range (a low-alloy composition window), so no

transformation temperature is predicted here.

Mechanical properties

20 values across 4 conditions

CONDITION · DIMENSION	REH N/mm²				RM N/mm²	
≤ 60	320				510–690	
60 – 150	–				480–660	
60 – 250	300				–	
150 – 250	–				450–630	
CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²	HB
Pipe hot strain, GOST 550-75	392	216	22	50	1180	–
15Kh5M (15X5M) (hot-rolled, annealing) , GOST 20072-74	–	–	–	–	–	217
15Kh5M (15X5M) , Pipe GOST 550-75	–	–	–	–	–	170
ANNEALING 840 - 860°C,COOLING OVEN	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²	
Ø 90	390	215	22	50		1180
CONDITION · DIMENSION	RM N/mm²		RE N/mm²		A5 %	
Sheet trick, GOST 7350-77	470		235		18	

Physical properties

8 values

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10 ^{^-6} /K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
20	7.75	211	–	–	–	430
100	7.73	–	11.3	37	483	–
200	7.7	–	11.6	36	–	–
300	7.67	–	11.9	35	–	–
400	7.64	178	12.2	34	–	–
500	7.61	145	12.3	33	–	–
600	7.58	102	12.5	–	–	–
PROPERTY	VALUE		UNIT			
Density	7.85		g/cm³			
Transformation point Ac1	815		°C			

PROPERTY	VALUE	UNIT
Transformation point Ac3	848	°C
Transformation point Ar3	775	°C
Transformation point Ar1	718	°C

Technological properties

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

Heat treatment

1 regimes

STEP	TEMPERATURE	MEDIUM
multiple operations, source states neither order nor alternation		
Quenching	1150–1180 °C	Water
Ageing	485–570 °C	Air

Designations across standards

48 designations · 11 documented as identical

United States		19	Russia / CIS		8
K41245	This grade's own name	uns	15Ch5M		gost
K41545	This grade's own name	uns	15Kh5		gost
K42544	This grade's own name	uns	15KH5M		gost
S50100	This grade's own name	uns	15Kh5VF		gost
S50200	This grade's own name	uns	15X5M		gost
501	This grade's own name	aisi-sae	X5		gost
502	This grade's own name	aisi-sae	X5BΦ		gost
K41545		aisi-sae	X5M		gost
S50100		aisi-sae			
S50200		aisi-sae			
T12005		aisi-sae			
T51605		aisi-sae			
A 182 F 5	This grade's own name	astm			
A 182 Grade F5		astm			
A 234 Grade WP5		astm			
A 335 Grade P5		astm			
A199 grade T5		astm			
A200 grade T5		astm			
A213 grade T5		astm			
			Japan		5
			SFVAB5A		jis
			STBA25		jis
			STC48		jis
			STFA25		jis
			STPA25		jis
			Europe		4
			1.7362		din-en
			12 CrMo 19 5	This grade's own name	din-en
			X11CrMo5	This grade's own name	din-en
			X12CrMo5	This grade's own name	din-en

France	4	China	1
710CD5-05	afnor	10MoCr50	gb
Z10CD5-05	afnor		
Z15CD5-05	afnor	Czechia	1
Z20CD5	afnor	17102	csn
Italy	2	Poland	1
A16CrMo25-5KG	uni	H5M	pn
A16CrMo25-5KW	uni		
United Kingdom	1	Hungary	1
625	bs	12CrMo20-5	msz
		Romania	1
		10MoCr50	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 S50100

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	1.7362	Aug 20, 2026