

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 30KHMA (30XMA).

Grade :	30KHMA (30XMA)
Classification :	Relaxation-resistant steel
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Chemical composition in % for grade 30KHMA (30XMA)

C	Si	Mn	Ni	S	P	Cr	Mo	Cu
0.26 - 0.33	0.17 - 0.37	0.4 - 0.7	max 0.3	max 0.025	max 0.025	0.8 - 1.1	0.15 - 0.25	max 0.3

Temperature of critical points for grade 30KHMA (30XMA).

$Ac_1 = 757$, $Ac_3(Ac_m) = 807$

Mechanical properties under T=20°C for grade 30KHMA (30XMA)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Pipe, GOST 8731-87			588	392	13			
Bar, GOST 4543-71	Ø 15		930	735	12	50	880	Guenching 880°C, oil, Drawing 540°C, water,

Brinell hardness for 30KHMA (30XMA) (annealing) , GOST 4543-71	HB 10 ⁻¹ = 229 MPa
Brinell hardness for 30KHMA (30XMA) , Bar GOST 10702-78	HB 10 ⁻¹ = 217 MPa

Technological properties for grade 30KHMA (30XMA)

Weldability:	limited weldability.
Flakes :	predisposed
Temper brittleness:	not predisposed

Physical properties for grade 30KHMA (30XMA)

T	E 10 ⁻⁵	α 10 ⁶	λ	ρ	C	R 10 ⁹
Grade	MPa	1/Grade	Watt/(m·Grade)	kg/m ³	J/(kg·Grade)	Ohm·m
20	2.08			7820		230
100	2.07	11.6	46	7800	462	
200	2.04	12.5	44	7770		
300	1.97	13.2	42	7740		
400	1.88	13.8	42	7700		
500	1.76	14.3	39	7660		

600	1.6		37			
700			36			
800			32			
T	$E 10^{-5}$	$\alpha 10^6$	λ	ρ	C	$R 10^9$

Equivalent steels for grade 30KHMA (30XMA)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	England	European	Italy	Sweden	Austria
-	DIN, WNr	JIS	AFNOR	BS	EN	UNI	SS	ONORM
4130	25CrMo4	SCM420	25CD4	25CrMo4	1.7218	25CrMo4	2225	BOHLERV330
4130H	26CrMo4	SCM430	25CrMo4		1.7220	30CrMo4	2233	BOHLERV340
G41300	34CrMo4	SCM432	34CD4		25CrMo4	34CrMo4	2234	
G41350	GS-25CrMo4		34CD4FF		34CrMo4	35CrMo4		
H41300	GS-26CrMo4		34CrMo4					
H41350	GS-34CrMo4		34CrMo4RR					

Specification :
Mechanical properties :

- σ_B - Tensile strength , [MPa]
 σ_T - Yield stress , [MPa]
 δ_5 - Specific elongation at fracture , [%]
 ψ - Reduction of area , [%]
KCU - Impact strength , [kJ / m²]
HB - Brinell hardness , [MPa]

Physical properties :

- T** - Test temperature , [Grade]
E - Young modulus , [MPa]
 α - Coefficient of linear expansion (range 20° - T) , [1/Grade]
 λ - Thermal (heat) condition coefficient , [Watt/(m·Grade)]
 ρ - Density , [kg/m³]
C - Specific heat (range 20° - T) , [J/(kg·Grade)]
R - Electrical resistance , [Ohm·m]

Weldability :

- without limitations** - welding is done without heating and subsequent heat treating
limited weldability - welding is possible under heating up to 100-120 grade and subsequent heat treating
hard weldability - obtaining the quality welding needs the additional operations: heating up to 200-300 grade; the heat treating is annealing

Database of steels and alloys (Marochnik) contains information about chemical composition and properties more than 2500 steels and alloys (stainless steel, alloy steel, carbon steel, structural steel, tool steel, cast iron, aluminum alloy, titanium alloy, copper alloy, nickel alloy, magnesium alloy and others).
 Helpful for specialists in grade technology, structural engineer, mechanical engineer, metallurgy and metal trader

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