

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 30KHN2MA (30XH2MA).

Grade :	30KHN2MA (30XH2MA) (30XHMA)
Substitute:	30XH2BA
Classification :	Alloy structural steel
Equivalent grades:	Go here

Chemical composition in % for grade 30KHN2MA (30XH2MA)

C	Si	Mn	Ni	S	P	Cr	Mo	Cu
0.27 - 0.34	0.17 - 0.37	0.3 - 0.6	1.25 - 1.65	max 0.025	max 0.025	0.6 - 0.9	0.2 - 0.3	max 0.3

Temperature of critical points for grade 30KHN2MA (30XH2MA).

$Ac_1 = 730$, $Ac_3(Ac_m) = 775$, $Mn = 340$

Mechanical properties under T=20°C for grade 30KHN2MA (30XH2MA)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 4543-71	Ø 15		980	785	10	45	780	Guenching and drawing

Brinell hardness for 30KHN2MA (30XH2MA) (annealing), GOST 4543-71

HB 10 ⁻¹ = 241 MPa

Technological properties for grade 30KHN2MA (30XH2MA)

Flakes :	predisposed
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Physical properties for grade 30KHN2MA (30XH2MA)

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	2.04					
100	2.01					
200	1.94					
300	1.86					
400	1.82					
500	1.71					

600	1.59					
T	$E 10^{-5}$	$\alpha 10^6$	λ	ρ	C	$R 10^9$

Equivalent steels for grade 30KH2MA (30XH2MA)

Warning! Indicated both exact and nearest equivalents.

Germany	Japan
DIN, WNr	JIS
30CrNiMo8	SNM431

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 in 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).
 Helpfull for specialists in grade technology, structural engineer, mechanical engineer, metallurgy and metal trader

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