

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 34KHN3MA (34XH3MA).

Grade :	34KHN3MA (34XH3MA)
Classification :	Alloy structural steel
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Chemical composition in % for grade 34KHN3MA (34XH3MA)

C	Si	Mn	Ni	S	P	Cr	Mo
0.3 - 0.4	0.17 - 0.37	0.5 - 0.8	2.75 - 3.75	max 0.035	max 0.03	0.7 - 1.1	0.25 - 0.4

Temperature of critical points for grade 34KHN3MA (34XH3MA).

$Ac_1 = 720$, $Ac_3(Ac_m) = 790$

Mechanical properties under T=20°C for grade 34KHN3MA (34XH3MA)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Forging	to 100		950	800	12	40		

Brinell hardness for 34KHN3MA (34XH3MA) ,	HB 10 ⁻¹ = 293 - 331 MPa
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Technological properties for grade 34KHN3MA (34XH3MA)

Weldability:	hard weldability.
Flakes :	predisposed
Temper brittleness:	weakly predisposed

Equivalent steels for grade 34KHN3MA (34XH3MA)

Warning! Indicated both exact and nearest equivalents.

Czechia
CSN
16540

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 / m ²]
HB	- Brinell hardness , [MPa]

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

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