

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 35KHN1M2FA (35XH1M2ΦA).

Grade :	35KHN1M2FA (35XH1M2ΦA)
Classification :	Alloy structural steel
Equivalent grades:	Is absent

Chemical composition in % for grade 35KHN1M2FA (35XH1M2ΦA)

C	Si	Mn	Ni	S	P	Cr	Mo	V	Cu
0.32 - 0.4	max 0.37	0.5 - 0.8	1.3 - 1.7	max 0.022	max 0.025	1.3 - 1.7	0.4 - 0.6	0.1 - 0.2	max 0.25

Temperature of critical points for grade 35KHN1M2FA (35XH1M2ΦA).

$Ac_1 = 750$, $Ac_3(Ac_m) = 820$, $Mn = 300$
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Mechanical properties under T=20°C for grade 35KHN1M2FA (35XH1M2ΦA)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Forging	500 - 800		785	640	10	30	390	Guenching and drawing

Brinell hardness for 35KHN1M2FA (35XH1M2ΦA) (quenching, tempering) ,	HB 10 ⁻¹ = 248 - 293 MPa
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Technological properties for grade 35KHN1M2FA (35XH1M2ΦA)

Weldability:	is not used.
Flakes :	predisposed
Temper brittleness:	weakly predisposed

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]

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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