

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 60KHN (60XH).

Grade :	60KHN (60XH)
Classification :	Tool steel for roller
Equivalent grades:	Is absent

Chemical composition in % for grade 60KHN (60XH)

C	Si	Mn	Ni	S	P	Cr
0.55 - 0.65	0.17 - 0.37	0.5 - 0.8	1 - 1.5	max 0.04	max 0.04	0.6 - 0.9

Temperature of critical points for grade 60KHN (60XH).

$A_{c1} = 730$, $A_{c3}(A_{cm}) = 775$, $A_{r3}(A_{rcm}) = 570$, $A_{r1} = 480$, $M_n = 207$

Mechanical properties under T=20°C for grade 60KHN (60XH)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Forging	max thickness 200		1050	690	15	27		Normalizing 860°C, Drawing 600°C,

Brinell hardness for 60KHN (60XH) (quenching, tempering) ,	HB 10 ⁻¹ = 255 - 302 MPa
Brinell hardness for 60KHN (60XH) (normalize) ,	HB 10 ⁻¹ = 229 - 285 MPa

Technological properties for grade 60KHN (60XH)

Weldability:	is not used.
Flakes :	predisposed
Temper brittleness:	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 ia annealing

Database of steels and alloys (Marochnik) contains information about chemical composition and properties more then 2500 steels and alloys (stainless steel, alloy steel, carbone 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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