

Database of Steel and Alloy (Marochnik)

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Characteristics for grade KHN70VMTYU (XH70BMTЮ).

Grade :	KHN70VMTYU (XH70BMTЮ) (ЭИ617 ХН70БМТЮ-ВИ ЭИ617-ВИ)
Classification :	High-temperature or heat-resistant alloy
Equivalent grades:	Is absent

Chemical composition in % for grade KHN70VMTYU (XH70BMTЮ)

Fe	C	Si	Mn	Ni	S	P	Cr	Ce	Mo	W	V	Ti	Al	B
max 5	max 0.12	max 0.7	max 0.5	61.5 - 76.4	max 0.02	max 0.02	13 - 16	max 0.02	2 - 4	5 - 7	0.1 - 0.5	1.8 - 2.3	1.7 - 2.3	max 0.02

Comment: Ni is a basis; the percentage of Ni is given approximately.

Mechanical properties under T=20°C for grade KHN70VMTYU (XH70BMTЮ)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 23705-79			670-690		3-7	8-10		Hardening and ageing

Brinell hardness for KHN70VMTYU (XH70BMTЮ) (quenching, ageing) , Bar GOST 23705-79	HB 10 ⁻¹ = 299 - 341 MPa
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Technological properties for grade KHN70VMTYU (XH70BMTЮ)

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

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