

Database of Steel and Alloy (Marochnik)

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Characteristics for grade KHN65VMTYU (XH65BMTЮ).

Grade :	KHN65VMTYU (XH65BMTЮ) (XH65BMTЮ ЭИ893 XH65BMTЮ-ВД ЭИ893-ВД XH65BMTЮ-ВИ ЭИ893-ВИ)
Classification :	High-temperature or heat-resistant alloy
Equivalent grades:	Is absent

Chemical composition in % for grade KHN65VMTYU (XH65BMTЮ)

Fe	C	Si	Mn	Ni	S	P	Cr	Ce	Mo	W	Ti	Al	B
max 3	max 0.07	max 0.6	max 0.6	60.968 - 70.6	max 0.012	max 0.015	15 - 17	max 0.025	3.5 - 4.5	8.5 - 10	1.2 - 1.6	1.2 - 1.6	max 0.01

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

Mechanical properties under T=20°C for grade KHN65VMTYU (XH65BMTЮ)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 23705-79		longitudinal	830	490	20	25	580	

Technological properties for grade KHN65VMTYU (XH65BMTЮ)

Weldability:	hard weldability.
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Physical properties for grade KHN65VMTYU (XH65BMTЮ)

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	2.22		12.7	8800		
100	2.14	11.5				
200	2.1		13			
300	2.02	12.3	13.8			
400	1.95	12.75	15.5			
500	1.9	13	17.2			
600	1.84	13.2	19.7			
700	1.74	14	23.6			
800	1.65	14.3	27.2			
900	1.6	15				
T	E 10 ⁻⁵	α 10 ⁶	λ	ρ	C	R 10 ⁹

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]

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/m ³]
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 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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