

Database of Steel and Alloy (Marochnik)

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Characteristics for grade KHN56VMTYU (XH56BMTЮ).

Grade :	KHN56VMTYU (XH56BMTЮ) (ЭП199)
Classification :	High-temperature or heat-resistant alloy
Equivalent grades:	Is absent

Chemical composition in % for grade KHN56VMTYU (XH56BMTЮ)

Fe	C	Si	Mn	Ni	S	P	Cr	Mo	W	Ti	Al	B
max 4	max 0.1	max 0.06	max 0.5	52.102 - 64.8	max 0.015	max 0.015	19 - 22	4 - 6	9 - 11	1.1 - 1.6	2.1 - 2.6	max 0.008

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

Mechanical properties under T=20°C for grade KHN56VMTYU (XH56BMTЮ)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Sheet	1		1000	650			800	Heating 1200°C, Cooling air,

Physical properties for grade KHN56VMTYU (XH56BMTЮ)

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	2.19			8640		
100		11.7	10.1			
200		12	11.3			
300		12.4	13.4			
400		12.7	15			
500		13	16.7			
600		13.5	18.4			
700	1.83	13.8	20.1			
800	1.75	14.5	22.2			
900		15.2	24.3			
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 / m²]

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/m³]

C - Specific heat (range 20° - T) , [J/(kg·Grade)]

R - Electrical resistance , [Ohm·m]

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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