

Database of Steel and Alloy (Marochnik)

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Characteristics for grade KHN77TYURU (XH77TЮPY).

Grade :	KHN77TYURU (XH77TЮPY) (ЭИ437БУ ХН77ТЮРУ-ВД ЭИ437БУ-ВД ХН77ТЮРУ-ПД ЭИ437БУ-ПД)
Classification :	High-temperature or heat-resistant alloy
Equivalent grades:	Is absent

Chemical composition in % for grade KHN77TYURU (XH77TЮPY)

Fe	C	Si	Mn	Ni	S	P	Cr	Ce	Ti	Al	B	Pb
max 1	0.04 - 0.08	max 0.6	max 0.4	71.967 - 77.66	max 0.007	max 0.015	19 - 22	max 0.02	2.6 - 2.9	0.7 - 1	max 0.01	max 0.001

Mechanical properties under T=20°C for grade KHN77TYURU (XH77TЮPY)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 23705-79			980	640-670	12-13	14-16	294	Hardening and ageing

Brinell hardness for KHN77TYURU (XH77TЮPY) (quenching, ageing), Bar GOST 23705-79 HB 10 ⁻¹ = 262 - 321 MPa

Physical properties for grade KHN77TYURU (XH77TЮPY)

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						
100		12.6				
200		12.9				
300		13.3				
400		13.8				
500		14.2				
600		14.6				
700		15.1				
800		15.5				
900		16.2				
1000		16.8				
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]

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