

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 42NKHTYU (42HXTЮ).

Grade :	42NKHTYU (42HXTЮ)
Classification :	Precision alloy for elastic elements
Equivalent grades:	Is absent

Chemical composition in % for grade 42NKHTYU (42HXTЮ)

Fe	C	Si	Mn	Ni	S	P	Cr	Ti	Al
44.91 - 49.3	max 0.05	0.5 - 0.8	0.5 - 0.8	41.5 - 43.5	max 0.02	max 0.02	5.3 - 5.9	2.4 - 3	0.5 - 1

Mechanical properties under T=20°C for grade 42NKHTYU (42HXTЮ)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
, GOST 10994-74			1180-1570					
Bar, GOST 14119-85			980	635	8	25		Hardening and ageing
Wire, GOST 14118-85			980					
Wire cold-worked , GOST 14118-85			1080					
Band cold-worked , GOST 14117-85			830					

Brinell hardness for 42NKHTYU (42HXTЮ) ,	HB 10⁻¹ = 320 - 350 MPa
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Physical properties for grade 42NKHTYU (42HXTЮ)

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	1.82	9.5				

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]

