

Database of Steel and Alloy (Marochnik)

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Characteristics for grade KHN32T (XH32T).

Grade :	KHN32T (XH32T) (X20H32T ЭП670)
Classification :	High-temperature or heat-resistant alloy
Equivalent grades:	Go here

Chemical composition in % for grade KHN32T (XH32T)

Fe	C	Si	Mn	Ni	S	P	Cr	Ti	Al
41.4 - 50.75	max 0.05	max 0.7	max 0.7	30 - 34	max 0.02	max 0.03	19 - 22	0.25 - 0.6	max 0.5

Mechanical properties under T=20°C for grade KHN32T (XH32T)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Sheet, GOST 24982-81			470-490	175-195	25-30			Guenching
Bar		longitudinal	480	180	40	60		Heating 1100 - 1150°C, Cooling air,
Forging, GOST 25054-81			470	176	30-36	35-40		

Physical properties for grade KHN32T (XH32T)

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	2.05		15.9	8160		
100		13.7	13.4			
200		15.6	15.1			
300		17.2	16.7			
400		18	18			
500		18	19.2			
600		18.4	20.5			
700		18.9	21.7			
800		19	23.4			
T	E 10 ⁻⁵	α 10 ⁶	λ	ρ	C	R 10 ⁹

Equivalent steels for grade KHN32T (XH32T)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	England	European	Spain	Romania	South Korea
-	DIN, WNr	JIS	AFNOR	BS	EN	UNE	STAS	KS
N08825 UNSN08800 UNSN08810	X10NiCrAlTi32-20 X2NiCrAlTi32-20	NCF2HTF NCF800 NCF800TB	Z10NC32-21 Z8NC33-21	NA15 NA15H X10NiCrAlTi32-21	X10NiCrAlTi32-20	X10NiCrAlTi32-20 X10NiCrAlTi32-21	10TiAlCrNi320	NCF800

	X5NiCrAlTi31-20 X8NiCrAlTi32-21					X3CrMnNiN18-8-7		
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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 / 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, carbone 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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