

Database of Steel and Alloy (Marochnik)

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Characteristics for grade KHN35VTR (XH35BTP).

Grade :	KHN35VTR (XH35BTP) (ЭИ725)
Classification :	High-temperature or heat-resistant alloy
Equivalent grades:	Is absent

Chemical composition in % for grade KHN35VTR (XH35BTP)

Fe	C	Si	Mn	Ni	S	P	Cr	W	Ti	Se
37.725 - 45.9	max 0.1	max 0.6	max 1	35 - 38	max 0.02	max 0.03	14 - 16	4 - 5	1.1 - 1.5	max 0.025

Mechanical properties under T=20°C for grade KHN35VTR (XH35BTP)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Sheet			750-800	400-450	21		900	Guenching 1130 - 1150°C, 2h, air, Ageing 750°C, 24h, air,

Brinell hardness for KHN35VTR (XH35BTP) ,

HB 10⁻¹ = 217 MPa

Physical properties for grade KHN35VTR (XH35BTP)

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	2.06		13	8280		
100		14.1	13.4			

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 - Termal (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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