

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 10KH25N25TR (10X25H25TP).

Grade :	10KH25N25TR (10X25H25TP)
Classification :	High alloy high-temperature steel
Equivalent grades:	Is absent

Chemical composition in % for grade 10KH25N25TR (10X25H25TP)

Fe	C	Si	Mn	Ni	S	P	Cr	Ti	B
42.415 - 50.83	0.07 - 0.12	max 0.8	1 - 2	24 - 27	max 0.02	max 0.035	23 - 26	1.1 - 1.6	max 0.01

Mechanical properties under T=20°C for grade 10KH25N25TR (10X25H25TP)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bars		longitudinal	500	170	35	40		Guenching 1100 - 1150°C, air,

Physical properties for grade 10KH25N25TR (10X25H25TP)

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		13.4	7860		1042
100	1.98	12.95	14.6			
200	1.95	14.35	15.8			
300	1.87	15.2	17.91			
400	1.8	15.65	18.4			
500	1.72	16.15	20.1			
600	1.64	16.5	21.7			
700	1.58	17.25	23.4			
800	1.49	17.3	25.1			
900		17.75	26.8			
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 / m²]
HB - Brinell hardness , [MPa]

Physical properties :

- T** - Test temperature , [Grade]
- E** - Young modulus , [MPa]
- α - Coefficient of linear expansion (range $20^{\circ} - T$) , [1/Grade]
- λ - Thermal (heat) condition coefficient , [Watt/(m·Grade)]
- ρ - Density , [kg/m³]
- C** - Specific heat (range $20^{\circ} - T$), [J/(kg·Grade)]
- R** - Electrical resistance , [Ohm·m]

Database of steels and alloys (Marochnik) contains information about chemical composition and properties more then 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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