

Database of Steel and Alloy (Marochnik)

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Characteristics for grade KHN70YU (XH70Ю).

Grade :	KHN70YU (XH70Ю)(ЭИ652)
Classification :	High-temperature or heat-resistant alloy
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Chemical composition in % for grade KHN70YU (XH70Ю)

Fe	C	Si	Mn	Ni	S	P	Cr	Ce	Al	Cu	Ba
max 1	max 0.1	max 0.8	max 0.3	65.073 - 71.2	max 0.012	max 0.015	26 - 29	max 0.03	2.8 - 3.5	max 0.07	max 0.1

Mechanical properties under T=20°C for grade KHN70YU (XH70Ю)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Sheet, GOST 24982-81	to 3.9		980		30			Guenching 1100 - 1150°C, Cooling water,

Technological properties for grade KHN70YU (XH70Ю)

Weldability:	limited weldability.
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Physical properties for grade KHN70YU (XH70Ю)

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	1.91		11.7	7900		
100	1.82	13.14	12.6			
200	1.73	13.86	13.9			
300	1.66	14.76	13.55			
400	1.56	15.68	17.25			
500	1.47	16.39	18.9			
600	1.37	17.81	18.9			
700	1.18	22.42	23.1			
800		25.47	24.8			
900		21.34	26.9			
1000		21.21				
T	E 10 ⁻⁵	α 10 ⁶	λ	ρ	C	R 10 ⁹

Equivalent steels for grade KHN70YU (XH70Ю)

Warning! Indicated both exact and nearest equivalents.

Germany

DIN,WNr

2.4872

NiCr20AlSi

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]

Weldability :

without limitations	- welding is done without heating and subsequent heat treating
limited weldability	- welding is possible under heating up to 100-120 grade and subsequent heat treating
hard weldability	- obtaining the quality welding needs the additional operations: heating up to 200-300 grade; the heat treating is annealing

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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