

Database of Steel and Alloy (Marochnik)

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[Home](#) [European steel grades](#) [Steel and Alloy](#) [Search](#) [Equivalent grades](#) [Grading](#) [GOST Standard](#) [Contacts](#)

YOU HERE: [Steel and Alloy](#) -> [High-temperature or heat-resistant steel and alloy](#)

Characteristics for grade KHN60YU (XH60Ю).

Grade :	KHN60YU (XH60Ю) (ЭИ559А)
Classification :	High-temperature or heat-resistant alloy
Equivalent grades:	Is absent

Chemical composition in % for grade KHN60YU (XH60Ю)

Fe	C	Si	Mn	Ni	S	P	Cr	Ce	Al	Ba
19.13 - 27.4	max 0.1	max 0.8	max 0.3	55 - 58	max 0.02	max 0.02	15 - 18	max 0.03	2.6 - 3.5	max 0.1

Mechanical properties under T=20°C for grade KHN60YU (XH60Ю)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Casting cold-rolled, GOST 7769-82			720	360		50		

Technological properties for grade KHN60YU (XH60Ю)

Weldability:	without limitations.
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Physical properties for grade KHN60YU (XH60Ю)

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	2.1			7900		
100		12.28	10.5			
200		13.08	13			
300		13.42	15.9			
400		14.2	19.6			
500		14.22	24			
600		14.59	29.3			
700		15.11	34.5			
800	1.69	15.18	40.2			
900		15.88	47.4			
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 / 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

[Top](#)

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