

Database of Steel and Alloy (Marochnik)

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Characteristics for grade KH20N80 (X20H80).

Grade :	KH20N80 (X20H80)
Classification :	Precision alloy with higt electric resistance
Equivalent grades:	Is absent

Chemical composition in % for grade KH20N80 (X20H80)

Fe	C	Si	Mn	Ni	S	P	Cr	Ti	Al
max 1.5	max 0.1	0.9 - 1.5	max 0.7	72.65 - 79.1	max 0.02	max 0.03	20 - 23	max 0.3	max 0.2

Mechanical properties under T=20°C for grade KH20N80 (X20H80)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Wire, GOST 8803-89			620-680					
soft			400		50			
hard			770		14.5			

Technological properties of the material KH20N80 (X20H80).

Melting temperature :	1400 °C
Forging temperature :	1250 - 100 °C
Annealing temperature :	870 - 1040 °C

Physical properties for grade KH20N80 (X20H80)

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	2.18	17.6		8400		1175

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 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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