

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 5KHNVS (5XHBC).

Grade :	5KHNVS (5XHBC)
Classification :	Alloy tool steel
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Chemical composition in % for grade 5KHNVS (5XHBC)

C	Si	Mn	Ni	S	P	Cr	W	Cu
0.5 - 0.6	0.6 - 0.9	0.3 - 0.6	0.8 - 1.2	max 0.03	max 0.03	1.3 - 1.6	0.4 - 0.7	max 0.3

Temperature of critical points for grade 5KHNVS (5XHBC).

$Ac_1 = 760$, $Ac_3(Ac_m) = 800$, $Mn = 250$
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Mechanical properties under T=20°C for grade 5KHNVS (5XHBC)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Blank	14		1305	1030				Guenching Cooling oil,

Brinell hardness for 5KHNVS (5XHBC) (annealing), GOST 5950-2000	HB 10 ⁻¹ = 255 MPa
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Physical properties for grade 5KHNVS (5XHBC)

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						
100		12.5				

Equivalent steels for grade 5KHNVS (5XHBC)

Warning! Indicated both exact and nearest equivalents.

Germany
DIN,WNr
55NiCrMoV6

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]

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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