

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 6KHV2S (6XB2C).

Grade :	6KHV2S (6XB2C)
Substitute:	6X3ΦC
Classification :	Die tool steel
Equivalent grades:	Go here

Chemical composition in % for grade 6KHV2S (6XB2C)

C	Si	Mn	Ni	S	P	Cr	W	Cu
0.55 - 0.65	0.5 - 0.8	0.15 - 0.45	max 0.4	max 0.03	max 0.03	1 - 1.3	2.2 - 2.7	max 0.3

Temperature of critical points for grade 6KHV2S (6XB2C).

$Ac_1 = 775$, $Ac_3(Ac_m) = 810$, $Mn = 280$

Mechanical properties under T=20°C for grade 6KHV2S (6XB2C)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Steel			1770	1680	7	18	260	Guenching 880°C, oil, Drawing 450°C, 2h,

Brinell hardness for 6KHV2S (6XB2C) (heat treatment), GOST 5950-2000

HB 10 ⁻¹ = 255 MPa

Technological properties for grade 6KHV2S (6XB2C)

Weldability:	is not used.
Flakes :	predisposed
Temper brittleness:	predisposed

Equivalent steels for grade 6KHV2S (6XB2C)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	England	European	Italy	Spain	Hungary	Poland	Czechia	Austria
-	DIN, WNr	BS	EN	UNI	UNE	MSZ	PN	CSN	ONORM
T41901	60WCrV7	BS1	55WCrV8	55WCrV8KU	60WCrSi8	W6	NZ3	19733	BOHLERK455

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]

Weldability :

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

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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