

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](#) -> [Structural steel](#)

Characteristics for grade 12KHGN2MFBAYU (12XГH2MΦБAЮ).

Grade :	12KHGN2MFBAYU (12XГH2MΦБAЮ)
Classification :	Low alloy structural steel for welding construct
Equivalent grades:	Is absent

Chemical composition in % for grade 12KHGN2MFBAYU (12XГH2MΦБAЮ)

C	Si	Mn	Ni	S	P	Cr	Mo	V	N	Nb	Al
0.09 - 0.16	0.3 - 0.5	0.9 - 1.3	1.4 - 1.7	max 0.035	max 0.035	0.5 - 0.9	0.3 - 0.4	0.05 - 0.1	0.02 - 0.03	0.02 - 0.06	0.05 - 0.1

Mechanical properties under T=20°C for grade 12KHGN2MFBAYU (12XГH2MΦБAЮ)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
			850-930	750-870	12			Guenching and drawing

Technological properties for grade 12KHGN2MFBAYU (12XГH2MΦБAЮ)

Weldability:	without limitations.
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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 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 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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