

Database of Steel and Alloy (Marochnik)

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Characteristics for grade 40GR (40ГР).

Grade :	40GR (40ГР)
Classification :	Alloy structural steel
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Chemical composition in % for grade 40GR (40ГР)

C	Si	Mn	Ni	S	P	Cr	Cu	B
0.37 - 0.45	0.17 - 0.37	0.7 - 1	max 0.3	max 0.035	max 0.035	max 0.3	max 0.3	0.001 - 0.005

Mechanical properties under T=20°C for grade 40GR (40ГР)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 4543-71	Ø 25		590	355	17	45	590	Guenching 860°C, air, Drawing 600°C, air,

Brinell hardness for 40GR (40ГР) , GOST 4543

HB 10⁻¹ = 207 MPa

Equivalent steels for grade 40GR (40ГР)

Warning! Indicated both exact and nearest equivalents.

USA	Germany
-	DIN, WNr
1039 G10390 G10400 G10430	40Mn4

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]

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).

Helpfull for specialists in grade technology, structural engineer, mechanical engineer, metallurgy and metal trader

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