

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](#) -> [High-temperature or heat-resistant steel and alloy](#)

Characteristics for grade 16GNM (16ГНМ).

Grade :	16GNM (16ГНМ)
Classification :	Low alloy high-temperature steel
Equivalent grades:	Is absent

Chemical composition in % for grade 16GNM (16ГНМ)

C	Si	Mn	Ni	S	P	Cr	Mo	Cu
0.12 - 0.18	0.17 - 0.37	0.8 - 1.1	1 - 1.3	max 0.04	max 0.035	max 0.3	0.4 - 0.55	0.15 - 0.25

Temperature of critical points for grade 16GNM (16ГНМ).

$Ac_1 = 730$, $Ac_3(Ac_m) = 870$, $Ar_3(Arc_m) = 680$, $Ar_1 = 560$

Mechanical properties under T=20°C for grade 16GNM (16ГНМ)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Sheet	100		560	400	21	60	1200	Normalizing 930°C, Drawing 670°C, 5h, Cooling 50 °C/h,

Technological properties for grade 16GNM (16ГНМ)

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 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

[Top](#)

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