

Database of Steel and Alloy (Marochnik)

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Characteristics for grade NMts5 (HMц5).

Grade :	NMts5 (HMц5)
Classification :	Nickel alloys
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Chemical composition in % for grade NMts5 (HMц5)

Ni+Co	Fe	C	Si	Mn	S	P	Cu	As	Pb	Mg	Sb	Bi	Impurity
92.6 - 95.4	max 0.65	max 0.15	max 0.3	4.6 - 5.4	max 0.015	max 0.02	max 0.2	max 0.03	max 0.002	max 0.1	max 0.002	max 0.002	all 2

Comment: Ni+Co is a basis; the percentage of Ni+Co is given approximately.

Mechanical properties under T=20°C for grade NMts5 (HMц5)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Wire, GOST 1049-74			740		18			
Wire, GOST 1049-74			740-980					
soft			500-550		42.5			
hard			950-1050		4			

Technological properties of the material NMts5 (HMц5).

Melting temperature :	1410 °C
Forging temperature :	1200 - 900 °C
Annealing temperature :	800 - 900 °C

Physical properties for grade NMts5 (HMц5)

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	2.1			8760		200
100		13.7				

Equivalent steels for grade NMts5 (HMц5)

Warning! Indicated both exact and nearest equivalents.

Germany
DIN, WNr

2.4116 NiMn5

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]

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/m³]
- 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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