

Database of Steel and Alloy (Marochnik)

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Characteristics for grade MNMts43-0.5 (МНМц43-0.5).

Grade :	MNMts43-0.5 (МНМц43-0.5) (Копель)
Classification :	Copper-nickel alloys
Equivalent grades:	Go here

Chemical composition in % for grade MNMts43-0.5 (МНМц43-0.5)

Ni+Co	Fe	C	Si	Mn	S	P	Cu	As	Pb	Mg	Sb	Bi	Impurity
42.5 - 44	max 0.15	max 0.1	max 0.1	0.1 - 1	max 0.01	max 0.002	54.4 - 57.4	max 0.002	max 0.002	max 0.05	max 0.002	max 0.002	all 0.6

Comment: Cu is a basis; the percentage of Cu is given approximately.

Mechanical properties under T=20°C for grade MNMts43-0.5 (МНМц43-0.5)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Wire, GOST 22666-77	Ø 0.2 - 0.5		390		15-20			
soft			380-460		35-42			
hard			600-700		3-4			

Brinell hardness for MNMts43-0.5 (МНМц43-0.5) , soft	HB 10 ⁻¹ = 85 - 90 MPa
Brinell hardness for MNMts43-0.5 (МНМц43-0.5) , hard	HB 10 ⁻¹ = 185 MPa

Technological properties of the material MNMts43-0.5 (МНМц43-0.5) .

Melting temperature :	1290 °C
Forging temperature :	1000 - 1150 °C
Annealing temperature :	800 - 850 °C

Physical properties for grade MNMts43-0.5 (МНМц43-0.5)

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	1.2		24.4	8900		490
100		14				

Equivalent steels for grade MNMts43-0.5 (MHMц43-0.5)

Warning! Indicated both exact and nearest equivalents.

Germany	France	Italy	Poland	Czechia	Austria	Inter
DIN, WNr	AFNOR	UNI	PN	CSN	ONORM	ISO
CuNi44Mn1	CuNi44Mn	PCuNi44Mn1	CuNi44Mn1	423065	CuNi44Mn1	CuNi44Mn1

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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