

Database of Steel and Alloy (Marochnik)

splav.kharkov.com/en

[Home](#) [European steel grades](#) [Steel and Alloy](#) [Search](#) [Equivalent grades](#) [Grading](#) [GOST Standard](#) [Contacts](#)

YOU HERE: [Steel and Alloy](#) -> [Copper](#)

Characteristics for grade MNTS15-20 (MHЦ15-20).

Grade :	MNTS15-20 (MHЦ15-20)
Classification :	Copper-nickel alloys
Equivalent grades:	Go here

Chemical composition in % for grade MNTS15-20 (MHЦ15-20)

Ni+Co	Fe	C	Si	Mn	S	P	Cu	As	Pb	Mg	Zn	Sb	Bi	Impurity
13.5 - 16.5	max 0.3	max 0.03	max 0.15	max 0.3	max 0.01	max 0.005	60.6 - 68.5	max 0.01	max 0.02	max 0.05	18 - 22	max 0.002	max 0.002	all 0.9

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

Mechanical properties under T=20°C for grade MNTS15-20 (MHЦ15-20)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Wire, GOST 5220-78			343		15-30			
Wire, GOST 5220-78			686-1078					
Band, GOST 5187-2003			340		27-30			
Band, GOST 5187-2003			540-690		2			
Strip, GOST 5063-73			340		35			
Strip, GOST 5063-73			540		1			

Brinell hardness for MNTS15-20 (MHЦ15-20) , soft	HB 10 ⁻¹ = 69 MPa
Brinell hardness for MNTS15-20 (MHЦ15-20) , soft	HB 10 ⁻¹ = 157 - 171 MPa

Technological properties of the material MNTS15-20 (MHЦ15-20) .

Melting temperature :	1080 °C
Forging temperature :	800 - 970 °C
Annealing temperature :	700 - 750 °C

Physical properties for grade MNTS15-20 (MHЦ15-20)

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	1.35		8600	398	260
100		16.6			

Equivalent steels for grade MNTS15-20 (MHЦ15-20)

Warning! Indicated both exact and nearest equivalents.

France	England	Poland	Czechia	Inter
AFNOR	BS	PN	CSN	ISO
CuNi15Zn22	NS105	CuNi15Zn21	423256	CuNi15Zn21

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

[Top](#)© 2003 - 2013 All rights reserved. [About program.](#)

The entire risk as to use of the Database of Steel and Alloy (Marochnik) content is assumed by you the user

