

Database of Steel and Alloy (Marochnik)

splat.kharkov.com/en

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

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

Characteristics for grade BrAZHMTs10-3-1.5 (БpAЖMц10-3-1.5).

Grade :	BrAZHMTs10-3-1.5 (БpAЖMц10-3-1.5) (CuA110Fe3Mn1)
Classification :	Tin-free pressure-worked bronzes
Equivalent grades:	Go here

Chemical composition in % for grade BrAZHMTs10-3-1.5 (БpAЖMц10-3-1.5)

Fe	Si	Mn	P	Al	Cu	Pb	Zn	Sn	Impurity
2 - 4	max 0.1	1 - 2	max 0.01	9 - 11	82.3 - 88	max 0.03	max 0.5	max 0.1	all 0.7

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

Mechanical properties under T=20°C for grade BrAZHMTs10-3-1.5 (БpAЖMц10-3-1.5)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Pipe, GOST 1208-90			540-590		12			
Bar, GOST 1628-78			590		12			

Brinell hardness for BrAZHMTs10-3-1.5 (БpAЖMц10-3-1.5), Pipe GOST 1208-90	HB 10 ⁻¹ = 129 - 200 MPa
Brinell hardness for BrAZHMTs10-3-1.5 (БpAЖMц10-3-1.5), Bar GOST 1628-78	HB 10 ⁻¹ = 130 - 200 MPa

Friction coefficient of the material BrAZHMTs10-3-1.5 (БpAЖMц10-3-1.5).

Friction coefficient with oil :	0.012
Friction coefficient without oil :	0.21

Technological properties of the material BrAZHMTs10-3-1.5 (БpAЖMц10-3-1.5).

Melting temperature :	1045 °C
Forging temperature :	750 - 850 °C
Annealing temperature :	650 - 750 °C

Physical properties for grade BrAZHMTs10-3-1.5 (БpAЖMц10-3-1.5)

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		80	7500		190

100

16.1

Equivalent steels for grade BrAZHMTs10-3-1.5 (БрАЖМц10-3-1.5)

Warning! Indicated both exact and nearest equivalents.

Germany	European	Poland	Czechia	Austria	Inter
DIN, WNr	EN	PN	CSN	ONORM	ISO
2.0936 CuAl10Fe3Mn3 CuAl10Fe3Mn2	CuAl10Fe3Mn2	CuAl10Fe3Mn2	423046	CuAl10Fe3Mn2	CuAl10Fe3

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

