

Database of Steel and Alloy (Marochnik)

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Characteristics for grade BrNBT (БpHБT).

Grade :	BrNBT (БpHБT)
Classification :	High-temperature bronzes
Equivalent grades:	Is absent

Chemical composition in % for grade BrNBT (БpHБT)

Ni	Ti	Al	Cu	Pb	Be	Zn	Sn	Impurity
1.4 - 1.6	0.05 - 0.15	max 0.15	97.15 - 98.35	max 0.005	0.2 - 0.4	max 0.2	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 BrNBT (БpHБT)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
			850	840		10		

Brinell hardness for BrNBT (БpHБT) , deformed	HB 10 ⁻¹ = 150 MPa
Brinell hardness for BrNBT (БpHБT) , annealed	HB 10 ⁻¹ = 80 MPa

Technological properties of the material BrNBT (БpHБT) .

Forging temperature :	800 - 950 °C
Annealing temperature :	750 °C

Physical properties for grade BrNBT (БpHБT)

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			188	8830		39.2

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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