

Database of Steel and Alloy (Marochnik)

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Characteristics for grade BrOTSS4-4-4 (БpOЦC4-4-4).

Grade :	BrOTSS4-4-4 (БpOЦC4-4-4)
Classification :	Wrought tin bronzes
Equivalent grades:	Is absent

Chemical composition in % for grade BrOTSS4-4-4 (БpOЦC4-4-4)

Fe	Ni	P	Al	Cu	Pb	Zn	Sb	Bi	Sn	Impurity
max 0.05	max 0.3	max 0.03	max 0.002	85 - 90.5	3.5 - 4.5	3 - 5	max 0.002	max 0.002	3 - 5	all 0.2

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

Mechanical properties under T=20°C for grade BrOTSS4-4-4 (БpOЦC4-4-4)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
soft			320-360		30-40			
hard			500-600		1-2			

Brinell hardness for BrOTSS4-4-4 (БpOЦC4-4-4), soft	HB 10 ⁻¹ = 61 MPa
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Friction coefficient of the material BrOTSS4-4-4 (БpOЦC4-4-4).

Friction coefficient with oil :	0.016
Friction coefficient without oil :	0.26

Technological properties of the material BrOTSS4-4-4 (БpOЦC4-4-4).

Melting temperature :	1015 °C
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Physical properties for grade BrOTSS4-4-4 (БpOЦC4-4-4)

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	0.72			9100		90
100		18.1				

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 / m ²]
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/m ³]
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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