

Database of Steel and Alloy (Marochnik)

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Characteristics for grade BrOF4-0.25 (БpOΦ4-0.25).

Grade :	BrOF4-0.25 (БpOΦ4-0.25)
Classification :	Wrought tin bronzes
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Chemical composition in % for grade BrOF4-0.25 (БpOΦ4-0.25)

Fe	Si	Ni	P	Al	Cu	Pb	Zn	Sb	Bi	Sn	Impurity
max 0.02	max 0.002	max 0.2	0.2 - 0.3	max 0.002	95.25 - 96.2	max 0.02	max 0.3	max 0.002	max 0.002	3.5 - 4	all 0.1

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

Mechanical properties under T=20°C for grade BrOF4-0.25 (БpOΦ4-0.25)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
soft			300-380		40-58			
hard			500-700		6-10			

Brinell hardness for BrOF4-0.25 (БpOΦ4-0.25) , soft	HB 10 ⁻¹ = 55 - 70 MPa
Brinell hardness for BrOF4-0.25 (БpOΦ4-0.25) , hard	HB 10 ⁻¹ = 160 - 170 MPa

Technological properties of the material BrOF4-0.25 (БpOΦ4-0.25) .

Melting temperature :	1060 °C
Forging temperature :	700 - 800 °C
Annealing temperature :	600 - 650 °C

Physical properties for grade BrOF4-0.25 (БpOΦ4-0.25)

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		84	8830		90
100		17.6				

Equivalent steels for grade BrOF4-0.25 (БpOΦ4-0.25)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan
-	DIN,WNr	JIS
C51100	2.1016 CuSn4	C5111

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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