

Database of Steel and Alloy (Marochnik)

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Characteristics for grade Br03TS12S5 (Бp03Ц12C5).

Grade :	Br03TS12S5 (Бp03Ц12C5) (Бp0ЦC3-12-5)
Classification :	Tin foundry bronzes
Equivalent grades:	Go here

Chemical composition in % for grade Br03TS12S5 (Бp03Ц12C5)

Fe	Si	P	Al	Cu	Pb	Zn	Sb	Sn	Impurity	-
max 0.4	max 0.02	max 0.05	max 0.02	74.2 - 87	3 - 6	8 - 15	max 0.5	2 - 3.5	all 1.3	Si + Al < 0.02 %

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

Mechanical properties under T=20°C for grade Br03TS12S5 (Бp03Ц12C5)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 24301-93			180-220		16-20			
cast in a metal mould, GOST 613-79			206		5			
sand (mould) casting, GOST 613-79			176		8			

Brinell hardness for Br03TS12S5 (Бp03Ц12C5) , Bar GOST 24301-93	HB 10 ⁻¹ = 60 - 65 MPa
Brinell hardness for Br03TS12S5 (Бp03Ц12C5) , cast in a metal mould GOST 613-79	HB 10 ⁻¹ = 60 MPa
Brinell hardness for Br03TS12S5 (Бp03Ц12C5) , sand (mould) casting GOST 613-79	HB 10 ⁻¹ = 60 MPa

Technological properties of the material Br03TS12S5 (Бp03Ц12C5) .

Melting temperature :	998 °C
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Physical properties for grade Br03TS12S5 (Бp03Ц12C5)

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	0.823			8700		

Equivalent steels for grade Br03TS12S5 (Бp03Ц12C5)

Warning! Indicated both exact and nearest equivalents.

USA	Japan
-	JIS

C84800	H5111/class 1 H5111/class 1C
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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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