

Database of Steel and Alloy (Marochnik)

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Characteristics for grade BrO10TS2 (БpO10Ц2).

Grade :	BrO10TS2 (БpO10Ц2)
Classification :	Tin foundry bronzes
Equivalent grades:	Go here

Chemical composition in % for grade BrO10TS2 (БpO10Ц2)

Fe	Si	P	Al	Cu	Pb	Zn	Sb	Sn	Impurity	-
max 0.3	max 0.02	max 0.05	max 0.02	85 - 90	max 0.5	1 - 3	max 0.3	9 - 11	all 1	Si + Al < 0.02 %

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

Mechanical properties under T=20°C for grade BrO10TS2 (БpO10Ц2)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
cast in a metal mould, GOST 613-79			225		10			Without heat treatment
sand (mould) casting, GOST 613-79			215		10			Without heat treatment

Brinell hardness for BrO10TS2 (БpO10Ц2) (without heat treatment), cast in a metal mould GOST 613-79	HB 10 ⁻¹ = 75 MPa
Brinell hardness for BrO10TS2 (БpO10Ц2) (without heat treatment), sand (mould) casting GOST 613-79	HB 10 ⁻¹ = 65 MPa

Friction coefficient of the material BrO10TS2 (БpO10Ц2).

Friction coefficient with oil :	0.034
Friction coefficient without oil :	0.18

Technological properties of the material BrO10TS2 (БpO10Ц2).

Melting temperature :	1015 °C
Casting temperature :	1120 - 1150 °C
Linear shrinkage :	1.48 %

Physical properties for grade BrO10TS2 (БpO10Ц2)

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	0.98	17.3	55.3	8500	381	155
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Equivalent steels for grade BrO10TS2 (БpO10Ц2)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	England	Italy	Sweden	Poland	Czechia
-	DIN, WNr	JIS	BS	UNI	SS	PN	CSN
C90500	2.1087 GCuSn10Zn Rg10	BC3	B1	GCuSn10Zn2	CuSn10Zn2	CuSn10Zn2	423138

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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