

Database of Steel and Alloy (Marochnik)

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Characteristics for grade BrS30 (EpC30).

Grade :	BrS30 (EpC30)
Classification :	Tin-free foundry bronzes
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Chemical composition in % for grade BrS30 (EpC30)

Fe	Si	Ni	P	Cu	As	Pb	Zn	Sb	Sn	Impurity
max 0.25	max 0.02	max 0.5	max 0.1	68.1 - 73	max 0.1	27 - 31	max 0.1	max 0.3	max 0.1	all 0.9

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

Mechanical properties under T=20°C for grade BrS30 (EpC30)

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 493-79			58.7		4			

Brinell hardness for BrS30 (EpC30) , cast in a metal mould GOST 493	HB 10 ⁻¹ = 25 MPa
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Friction coefficient of the material BrS30 (EpC30).

Friction coefficient with oil :	0.009
Friction coefficient without oil :	0.165

Technological properties of the material BrS30 (EpC30).

Melting temperature :	954 °C
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Physical properties for grade BrS30 (EpC30)

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	0.755	18.4	142.4	9540		

Equivalent steels for grade BrS30 (EpC30)

Warning! Indicated both exact and nearest equivalents.

Germany	Japan	Czechia
DIN, WNr	JIS	CSN

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 than 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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