

Database of Steel and Alloy (Marochnik)

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Characteristics for grade BrKN1-3 (БрKH1-3).

Grade :	BrKN1-3 (БрKH1-3)
Classification :	Tin-free pressure-worked bronzes
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Chemical composition in % for grade BrKN1-3 (БрKH1-3)

Fe	Si	Mn	Ni	Al	Cu	Pb	Zn	Sn	Impurity
max 0.1	0.6 - 1.1	0.1 - 0.4	2.4 - 3.4	max 0.02	94.7 - 96.9	max 0.15	max 0.1	max 0.1	all 0.4

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

Mechanical properties under T=20°C for grade BrKN1-3 (БрKH1-3)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar, GOST 1628-78			490		10			
soft			400-450		25-30			
hard			500-600		6-8			

Brinell hardness for BrKN1-3 (БрKH1-3), soft	HB 10 ⁻¹ = 80 - 100 MPa
Brinell hardness for BrKN1-3 (БрKH1-3), hard	HB 10 ⁻¹ = 150 - 200 MPa

Friction coefficient of the material BrKN1-3 (БрKH1-3).

Friction coefficient with oil :	0.017
Friction coefficient without oil :	0.45

Technological properties of the material BrKN1-3 (БрKH1-3).

Melting temperature :	1084 °C
Forging temperature :	800 - 910 °C

Physical properties for grade BrKN1-3 (БрKH1-3)

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	1.4			8800		83

100

18

Equivalent steels for grade BrKN1-3 (БрKH1-3)

Warning! Indicated both exact and nearest equivalents.

Germany
DIN, WNr
2.0855 CuNi2Si

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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