

Database of Steel and Alloy (Marochnik)

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Characteristics for grade LK80-3 (ЛК80-3).

Grade :	LK80-3 (ЛК80-3)
Classification :	Copper-zinc alloys pressure treated
Equivalent grades:	Is absent

Chemical composition in % for grade LK80-3 (ЛК80-3)

Fe	Si	Mn	P	Al	Cu	Pb	Zn	Sb	Bi	Sn	Impurity
max 0.6	2.5 - 4	max 0.5	max 0.02	max 0.1	79 - 81	max 0.1	13.5 - 18.5	max 0.05	max 0.003	max 0.2	all 1.5

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

Mechanical properties under T=20°C for grade LK80-3 (ЛК80-3)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
soft			280-340		53-60			
hard			580-650		3-5			

Brinell hardness for LK80-3 (ЛК80-3) , soft	HB 10 ⁻¹ = 95 - 105 MPa
Brinell hardness for LK80-3 (ЛК80-3) , hard	HB 10 ⁻¹ = 170 - 190 MPa

Friction coefficient of the material LK80-3 (ЛК80-3) .

Friction coefficient with oil :	0.084
Friction coefficient without oil :	0.22

Technological properties of the material LK80-3 (ЛК80-3) .

Melting temperature :	890 °C
Annealing temperature :	750 - 850 °C

Physical properties for grade LK80-3 (ЛК80-3)

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	1.04		87.9	8200		200

100

17

401.9

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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