

Database of Steel and Alloy (Marochnik)

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Characteristics for grade LMtsA57-3-1 (ЛМцA57-3-1).

Grade :	LMtsA57-3-1 (ЛМцA57-3-1)
Classification :	Copper-zinc alloys pressure treated
Equivalent grades:	Is absent

Chemical composition in % for grade LMtsA57-3-1 (ЛМцA57-3-1)

Fe	Mn	P	Al	Cu	Pb	Zn	Sb	Bi	Impurity
max 1	2.5 - 3.5	max 0.01	0.5 - 1.5	55 - 58.5	max 0.2	35.2 - 42	max 0.005	max 0.002	all 1.3

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

Mechanical properties under T=20°C for grade LMtsA57-3-1 (ЛМцA57-3-1)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
soft			400-500		40-50			
hard			700-750		4-8			

Brinell hardness for LMtsA57-3-1 (ЛМцA57-3-1) , soft	HB 10 ⁻¹ = 85 - 95 MPa
Brinell hardness for LMtsA57-3-1 (ЛМцA57-3-1) , hard	HB 10 ⁻¹ = 175 - 185 MPa

Technological properties of the material LMtsA57-3-1 (ЛМцA57-3-1) .

Melting temperature :	870 °C
Forging temperature :	650 - 750 °C
Annealing temperature :	600 - 700 °C

Physical properties for grade LMtsA57-3-1 (ЛМцA57-3-1)

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		67	8100		121
100		20.1				

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 / m ²]
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/m ³]
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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