

Database of Steel and Alloy (Marochnik)

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Characteristics for grade M1E (M1E).

Grade :	M1E (M1E)
Classification :	Copper
Equivalent grades:	Is absent

Chemical composition in % for grade M1E (M1E)

Fe	Ni	S	As	Pb	Zn	O	Sb	Bi	Sn	-
max 0.005	max 0.002	max 0.004	max 0.002	max 0.005	max 0.004	max 0.05	max 0.002	max 0.001	max 0.002	Cu+Ag min 99.9

Mechanical properties under T=20°C for grade M1E (M1E)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
soft cold-rolled, GOST 1173-2006			200-260		42			
hard cold-rolled, GOST 1173-2006			290		6			

Brinell hardness for M1E (M1E) , soft GOST 1173-2006	HB 10 ⁻¹ = 55 MPa
Brinell hardness for M1E (M1E) , hard GOST 1173-2006	HB 10 ⁻¹ = 95 MPa

Physical properties for grade M1E (M1E)

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				8940		17.48

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 $20^{\circ} - T$) , [1/Grade]
 λ - Thermal (heat) condition coefficient , [Watt/(m·Grade)]
 ρ - Density , [kg/m³]
C - Specific heat (range $20^{\circ} - T$), [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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