

Database of Steel and Alloy (Marochnik)

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Characteristics for grade M00 (M00).

Grade :	M00 (M00)
Classification :	Copper
Equivalent grades:	Is absent

Chemical composition in % for grade M00 (M00)

Fe	Ni	S	P	Cu	As	Pb	Zn	Ag	O	Sb	Bi	Sn
max 0.001	max 0.001	max 0.002	max 0.0005	min 99.96	max 0.001	max 0.001	max 0.001	max 0.002	max 0.03	max 0.001	max 0.0005	max 0.001

Mechanical properties under T=20°C for grade M00 (M00)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
soft			200-250	90-150	60			
hard			400-490	300-450	6			

Brinell hardness for M00 (M00) , soft	HB 10 ⁻¹ = 45 MPa
Brinell hardness for M00 (M00) , hard	HB 10 ⁻¹ = 110 MPa

Technological properties of the material M00 (M00).

Melting temperature :	1083 °C
Casting temperature :	1150 - 1250 °C
Linear shrinkage :	2.1 %

Physical properties for grade M00 (M00)

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	1.32		387	8940	390	17.8
100	1.28	16.7				

Specification :

Mechanical properties :

- Tensile strength , [MPa]

σ_B	
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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