

Database of Steel and Alloy (Marochnik)

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Characteristics for grade A0 (A0).

Grade :	A0 (A0)
Classification :	Primary aluminium
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Chemical composition in % for grade A0 (A0)

Si	Mn	Ti	Al	Cu	Mg	Zn	Impurity
max 0.95	max 0.05	max 0.02	min 99	max 0.05	max 0.05	max 0.1	other, each 0.03;

Mechanical properties under T=20°C for grade A0 (A0)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Band annealed , GOST 13726-97			60		20-30			
Band cold-worked , GOST 13726-97			130-145		3-5			
Plate , GOST 17232-99			64-78		15-18			

Brinell hardness for A0 (A0) , cast in a metal mould	HB 10 ⁻¹ = 25 MPa
Brinell hardness for A0 (A0) , deformed	HB 10 ⁻¹ = 32 MPa

Physical properties for grade A0 (A0)

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				2700		

Equivalent steels for grade A0 (A0)

Warning! Indicated both exact and nearest equivalents.

USA	European
-	EN
Aluminium 1100	ENAW-1100

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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