

Database of Steel and Alloy (Marochnik)

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Characteristics for grade AD0 (АД0).

Grade :	AD0 (АД0) (1011)
Classification :	Technical aluminium
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Chemical composition in % for grade AD0 (АД0)

Fe	Si	Mn	Ti	Al	Cu	Mg	Zn	Impurity
max 0.4	max 0.25	max 0.05	max 0.05	min 99.5	max 0.05	max 0.05	max 0.07	other, each 0.03;

Mechanical properties under T=20°C for grade AD0 (АД0)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Pipe, GOST 18482-79			60		20			
Pipe cold-worked, GOST 18475-82			80		4-5			
Bar, GOST 21488-97			60		25			
Band annealed, GOST 13726-97			60		20-30			
Band cold-worked, GOST 13726-97			130-145		3-5			
Profile, GOST 8617-81			59		20			
Plate, GOST 17232-99			64-78		15-18			

Brinell hardness for AD0 (АД0), casted	HB 10 ⁻¹ = 20 MPa
Brinell hardness for AD0 (АД0), deformed	HB 10 ⁻¹ = 30 - 35 MPa
Brinell hardness for AD0 (АД0), annealed	HB 10 ⁻¹ = 25 MPa

Technological properties of the material AD0 (АД0).

Melting temperature :	658.7 °C
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Physical properties for grade AD0 (АД0)

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	0.71			2710		29.2

100		24	226			
200		25.6				
T	$E \cdot 10^{-5}$	$\alpha \cdot 10^6$	λ	ρ	C	$R \cdot 10^9$

Equivalent steels for grade AD0 (АД0)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	England	European	Italy	Sweden	Poland	Czechia	Austria	Inter
-	DIN, WNr	JIS	BS	EN	UNI	SS	PN	CSN	ONORM	ISO
A91060 AA1050 AA1055 AA1060 AA1065	3.0255 Al99.5	1050	1050A	ENAW-1050A ENAW-Al99.5	P-Al99,5	Al99,5	Al99,5E	424005	Al99,5	1050A Al99.5

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 than 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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