

Database of Steel and Alloy (Marochnik)

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Characteristics for grade A5 (A5).

Grade :	A5 (A5)
Classification :	Primary aluminium
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Chemical composition in % for grade A5 (A5)

Fe	Si	Mn	Ti	Al	Cu	Mg	Zn	Ga	Impurity
max 0.3	max 0.25	max 0.05	max 0.02	min 99.5	max 0.02	max 0.03	max 0.06	max 0.03	other, each 0.03;

Mechanical properties under T=20°C for grade A5 (A5)

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			
Band, GOST 13726-97			60		20-30			Annealing
Band cold-worked , GOST 13726-97			130-145		3-5			
Plate , GOST 17232-99			64-78		15-18			

Brinell hardness for A5 (A5) , casted	HB 10⁻¹ = 20 MPa
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Physical properties for grade A5 (A5)

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 A5 (A5)

Warning! Indicated both exact and nearest equivalents.

USA	European
-	EN
Aluminium 1050A	ENAW-1050A

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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