

Database of Steel and Alloy (Marochnik)

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Characteristics for grade AMts (AM_ц).

Grade :	AMts (AM _ц) (1400)
Classification :	Aluminium wrought alloys
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Chemical composition in % for grade AMts (AM_ц)

Fe	Si	Mn	Al	Cu	Zn	Impurity
max 0.7	max 0.6	1 - 1.5	96.35 - 99	0.05 - 0.2	max 0.1	other, each 0.05; all 0.15

Comment: **Al** is a basis; the percentage of **Al** is given approximately.

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

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Pipe, GOST 18482-79			100		12			
Pipe annealed , GOST 18475-82			90-135		15			
Pipe cold-worked , GOST 18475-82			135					
Bar, GOST 21488-97			100		20			
Band, GOST 13726-97			100		10			
Profile, GOST 8617-81			98		16			
Plate , GOST 17232-99			110-120		12-15			

Brinell hardness for AMts (AM _ц) (cold-worked) ,	HB 10 ⁻¹ = 55 MPa
Brinell hardness for AMts (AM _ц) , annealed	HB 10 ⁻¹ = 30 MPa

Technological properties for grade AMts (AM_ц)

Weldability:	without limitations.
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Physical properties for grade AMts (AM_ц)

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			2730		34.5

100		23.2	180		1090	
200		25				
T	E 10 ⁻⁵	α 10 ⁶	λ	ρ	C	R 10 ⁹

Equivalent steels for grade AMts (AM_u)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	England	European	Italy	Sweden	Poland	Czechia	Austria	Inter
-	DIN, WNr	JIS	AFNOR	BS	EN	UNI	SS	PN	CSN	ONORM	ISO
A93003 AA3003	3.0511 3.0515 AlMn1 AlMn AlMn1Cu	3003	3103 A-M1	3103	AWAlMn1 ENAW-3003 ENAW-3103 ENAW-AlMn1 ENAW-AlMn1Cu	PAIMn1.2Cu	AlMn	AlMn1	424432	AlMn	AlMn1 AlMn1Cu

Specification :**Mechanical properties :**

- σ_B** - Tensile strength , [MPa]
σ_T - Yield stress , [MPa]
δ₅ - 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]

Weldability :

- without limitations** - welding is done without heating and subsequent heat treating
limited weldability - welding is possible under heating up to 100-120 grade and subsequent heat treating
hard weldability - obtaining the quality welding needs the additional operations: heating up to 200-300 grade; the heat treating is annealing

Database of steels and alloys (Marochnik) contains information about chemical composition and properties more than 2500 steels and alloys (stainless steel, alloy steel, carbon 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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