

Database of Steel and Alloy (Marochnik)

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[Home](#) [European steel grades](#) [Steel and Alloy](#) [Search](#) [Equivalent grades](#) [Grading](#) [GOST Standard](#) [Contacts](#)

YOU HERE: [Steel and Alloy](#) -> [Aluminium alloy](#)

Characteristics for grade AMtsS (AM_uC).

Grade :	AMtsS (AM _u C) (1401)
Classification :	Aluminium wrought alloys
Equivalent grades:	Go here

Chemical composition in % for grade AMtsS (AM_uC)

Fe	Si	Mn	Ti	Al	Cu	Mg	Zn	Impurity
0.25 - 0.45	0.15 - 0.35	1 - 1.4	max 0.1	97.35 - 98.6	max 0.1	max 0.05	max 0.1	other, each 0.05; all 0.1

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

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

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			

Physical properties for grade AMtsS (AM_uC)

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				2730		

Equivalent steels for grade AMtsS (AM_uC)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	England	Inter
-	DIN, WNr	JIS	AFNOR	BS	ISO
3003	3003	3003	A-M1	MC	A3003 AlMn1Cu

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

[Top](#)

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