

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 AMg5 (AMr5).

Grade :	AMg5 (AMr5) (1550)
Classification :	Aluminium wrought alloys
Equivalent grades:	Go here

Chemical composition in % for grade AMg5 (AMr5)

Fe	Si	Mn	Ti	Al	Cu	Be	Mg	Zn	Impurity
max 0.5	max 0.5	0.3 - 0.8	0.02 - 0.1	91.9 - 94.68	max 0.1	0.0002 - 0.005	4.8 - 5.8	max 0.2	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 AMg5 (AMr5)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Pipe, GOST 18482-79			255	110	15			
Bar, GOST 21488-97			245-265	110-120	10-15			
Band, GOST 13726-97			275	130	12-15			
Profile, GOST 8617-81			255	127	15			
Plate , GOST 17232-99			255-265	110-120	12-13			

Brinell hardness for AMg5 (AMr5) ,	HB 10 ⁻¹ = 65 MPa
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Physical properties for grade AMg5 (AMr5)

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			2650		64
100			126		922	

Equivalent steels for grade AMg5 (AMr5)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan
-	DIN, WNr	JIS
AA5056	3.3555 AMg5	5056

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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