

Database of Steel and Alloy (Marochnik)

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Characteristics for grade AMg4 (AMr4).

Grade :	AMg4 (AMr4) (1540)
Classification :	Aluminium wrought alloys
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Chemical composition in % for grade AMg4 (AMr4)

Fe	Si	Mn	Cr	Ti	Al	Cu	Be	Mg	Zn	Impurity
max 0.5	max 0.4	0.2 - 0.7	0.05 - 0.25	max 0.15	93.15 - 96.23	max 0.1	0.0002 - 0.005	3.5 - 4.5	max 0.25	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 AMg4 (AMr4)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Bar			320	190	15	40		

Physical properties for grade AMg4 (AMr4)

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			2660		60.9
100		24.3	138		963	

Equivalent steels for grade AMg4 (AMr4)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	European	Inter
-	DIN, WNr	JIS	AFNOR	EN	ISO
AA5083 AA5086	3.3547 AlMg4.5Mn AlMg4Mn	5083 5086	5086 A-G4MC	ENAW-5086 ENAW-AlMg4	5086 AlMg4 AlMg4Mn

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 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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