

Database of Steel and Alloy (Marochnik)

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Characteristics for grade NMtsAK2-2-1 (HMцAK2-2-1).

Grade :	NMtsAK2-2-1 (HMцAK2-2-1) (Алюмель)
Classification :	Nickel alloys
Equivalent grades:	Go here

Chemical composition in % for grade NMtsAK2-2-1 (HMцAK2-2-1)

Ni+Co	Fe	C	Si	Mn	S	P	Co	Al	Cu	As	Pb	Mg	Sb	Bi	Impurity
91.5 - 95.15	max 0.3	max 0.1	0.85 - 1.5	1.8 - 2.7	max 0.01	max 0.005	0.6 - 1.2	1.6 - 2.4	max 0.25	max 0.002	max 0.002	max 0.05	max 0.002	max 0.002	all 0.7

Comment: Ni+Co is a basis; the percentage of Ni+Co is given approximately.

Mechanical properties under T=20°C for grade NMtsAK2-2-1 (HMцAK2-2-1)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
soft			500-600					
hard			1000-1100		3.5			

Brinell hardness for NMtsAK2-2-1 (HMцAK2-2-1) , soft	HB 10 ⁻¹ = 130 MPa
Brinell hardness for NMtsAK2-2-1 (HMцAK2-2-1) , hard	HB 10 ⁻¹ = 250 - 300 MPa

Technological properties of the material NMtsAK2-2-1 (HMцAK2-2-1) .

Melting temperature :	1440 °C
Forging temperature :	1250 - 1000 °C
Annealing temperature :	900 - 950 °C

Physical properties for grade NMtsAK2-2-1 (HMцAK2-2-1)

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	1.82			8500		320
100		13.5				

Equivalent steels for grade NMtsAK2-2-1 (HMцAK2-2-1)

Warning! Indicated both exact and nearest equivalents.

Germany
DIN,WNr
2.4122
NiMn3Al

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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