

Database of Steel and Alloy (Marochnik)

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Characteristics for grade AK7TS9 (AK7Ц9).

Grade :	AK7TS9 (AK7Ц9) (АП11)
Classification :	Aluminium casting alloys
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Chemical composition in % for grade AK7TS9 (AK7Ц9)

Fe	Si	Mn	Al	Cu	Mg	Zn	Impurity
max 1.5	6 - 8	max 0.5	77.2 - 86.9	max 0.6	0.1 - 0.3	7 - 12	all 2.5

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

Mechanical properties under T=20°C for grade AK7TS9 (AK7Ц9)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Casting, GOST 1583-93			176-216		1-2			

Brinell hardness for AK7TS9 (AK7Ц9) , Casting GOST 1583-93	HB 10 ⁻¹ = 60 - 80 MPa
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Physical properties for grade AK7TS9 (AK7Ц9)

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				2940		
100		24.4				

Equivalent steels for grade AK7TS9 (AK7Ц9)

Warning! Indicated both exact and nearest equivalents.

China
GB
ZAlZn11Si7 ZL401

Specification :

Mechanical properties :

- σ_B - Tensile strength , [MPa]
- σ_T - Yield stress , [MPa]
- Specific elongation at fracture , [%]

δ_5 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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