

Database of Steel and Alloy (Marochnik)

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Characteristics for grade V93 (B93).

Grade :	V93 (B93)
Classification :	Aluminium wrought alloys
Equivalent grades:	Is absent

Chemical composition in % for grade V93 (B93)

Fe	Si	Mn	Ti	Al	Cu	Mg	Zn	Impurity
0.2 - 0.45	max 0.2	max 0.1	max 0.1	88.35 - 91.1	0.8 - 1.2	1.6 - 2.2	6.3 - 7.3	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 V93 (B93)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Forging			490	450	7			

Brinell hardness for V93 (B93) ,	HB 10 ⁻¹ = 125 MPa
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Physical properties for grade V93 (B93)

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	0.7			2840		40.8
100		23.8	151		880	

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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