

Database of Steel and Alloy (Marochnik)

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Characteristics for grade St1kp (Ст1кп).

Grade :	St1kp (Ст1кп)
Classification :	Normal quality structural carbon steel
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Chemical composition in % for grade St1kp (Ст1кп)

C	Si	Mn	Ni	S	P	Cr	N	Cu	As
0.06 - 0.12	max 0.05	0.25 - 0.5	max 0.3	max 0.05	max 0.04	max 0.3	max 0.012	max 0.3	max 0.08

Mechanical properties under T=20°C for grade St1kp (Ст1кп)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Rolled stock, GOST 535-2005			305-390	165-195	32-35			
Wire rods , GOST 30136-95			420-470			66-68		

Brinell hardness for St1kp (Ст1кп) ,	HB 10⁻¹ = 110 MPa
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Physical properties for grade St1kp (Ст1кп)

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				7850		

Equivalent steels for grade St1kp (Ст1кп)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	England	European	Italy	China	Bulgaria	Hungary	Poland	Czechia
-	DIN, WNr	JIS	AFNOR	BS	EN	UNI	GB	BDS	MSZ	PN	CSN
A283	S185 St33	SS300 SS330	S185	HR15	S185	S185	Q195	ASt0 ASt1	Fe3100	St0S	10000

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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