

Database of Steel and Alloy (Marochnik)

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Characteristics for grade St2kp (Ст2кп).

Grade :	St2kp (Ст2кп)
Classification :	Normal quality structural carbon steel
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Chemical composition in % for grade St2kp (Ст2кп)

C	Si	Mn	Ni	S	P	Cr	N	Cu	As
0.09 - 0.15	max 0.05	0.25 - 0.5	max 0.3	max 0.05	max 0.04	max 0.3	max 0.008	max 0.3	max 0.08

Mechanical properties under T=20°C for grade St2kp (Ст2кп)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Pipe, GOST 8696-74			324	216	25			
Rolled stock, GOST 535-2005			325-410	185-215	30-33			
Sheet trick, GOST 14637-89			320-410	185-215	30-33			
Wire rods , GOST 30136-95			420-470			60		

Brinell hardness for St2kp (Ст2кп) ,	HB 10⁻¹ = 116 MPa
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Technological properties for grade St2kp (Ст2кп)

Weldability:	without limitations.
Flakes :	not predisposed
Temper brittleness:	not predisposed

Physical properties for grade St2kp (Ст2кп)

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 St2kp (Ст2кп)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	China	Bulgaria	Hungary	Poland	Czechia

-	DIN,WNr	GB	BDS	MSZ	PN	CSN
A283(A)	RSt34-2 S185 USt34-2	Q215	ASt0 BSt2kp	Fe310O	St0S	10000 11343

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]

Weldability :

- without limitations** - welding is done without heating and subsequent heat treating
limited weldability - welding is possible under heating up to 100-120 grade and subsequent heat treating
hard weldability - obtaining the quality welding needs the additional operations: heating up to 200-300 grade; the heat treating ia annealing

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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