

Database of Steel and Alloy (Marochnik)

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Characteristics for grade St2ps (Cт2пс).

Grade :	St2ps (Cт2пс)
Classification :	Normal quality structural carbon steel
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Chemical composition in % for grade St2ps (Cт2пс)

C	Si	Mn	Ni	S	P	Cr	N	Cu	As
0.09 - 0.15	0.05 - 0.15	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 St2ps (Cт2пс)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Pipe, GOST 8696-74			334	225	24			
Pipe, GOST 10705-80			333	206	24			
Rolled stock, GOST 535-2005			335-430	195-225	29-32			
Sheet trick, GOST 14637-89			320-410	185-215	30-33			
Wire rods , GOST 30136-95			420-470			60		

Brinell hardness for St2ps (Cт2пс) ,	HB 10⁻¹ = 116 MPa
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Technological properties for grade St2ps (Cт2пс)

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

Physical properties for grade St2ps (Cт2пс)

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 St2ps (Cт2пс)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	England	European	China	Bulgaria	Hungary	Poland	Romania	Czechia
-	DIN,WNr	JIS	BS	EN	GB	BDS	MSZ	PN	STAS	CSN
A192 K02502	RSt34-2 RSt37-2 S185 St35 St37-2 USt34-2	SS330 SS34	34/20HR S360	1.0034 1.0038 E195 S235JR	Q215 Q215A Q215A-Z Q215B Q215B-Z	ASt0 BSt2ps WSt2ps WSt2sp	Fe3100	St0S	OL34.1	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]

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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