

Database of Steel and Alloy (Marochnik)

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Characteristics for grade St1sp (Ст1сп).

Grade :	St1sp (Ст1сп)
Classification :	Normal quality structural carbon steel
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Chemical composition in % for grade St1sp (Ст1сп)

C	Si	Mn	Ni	S	P	Cr	N	Cu	As
0.06 - 0.12	0.15 - 0.3	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 St1sp (Ст1сп)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Rolled stock, GOST 535-2005			315-410	175-205	31-34			
Wire rods , GOST 30136-95			420-470			66-68		

Physical properties for grade St1sp (Ст1сп)

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 St1sp (Ст1сп)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	England	European	Belgium	China	Bulgaria	Hungary	Poland	Czechia	Inter
-	DIN, WNr	JIS	AFNOR	BS	EN	NBN	GB	BDS	MSZ	PN	CSN	ISO
A283A A283B	S185	SS330	S185	S185	1.0035 S185	A320	Q195	Ast0 Ast1	Fe310O	St0S	10000 10004 11343	Fe310

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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