

Database of Steel and Alloy (Marochnik)

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Characteristics for grade St4sp (Cт4cn).

Grade :	St4sp (Cт4cn)
Classification :	Normal quality structural carbon steel
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Chemical composition in % for grade St4sp (Cт4cn)

C	Si	Mn	Ni	S	P	Cr	N	Cu	As
0.18 - 0.27	0.15 - 0.3	0.4 - 0.7	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 St4sp (Cт4cn)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Pipe, GOST 8731-87			412	245	20			
Pipe, GOST 10705-80			412	245	21			
Rolled stock, GOST 535-2005			410-530	235-265	21-24			
Sheet trick, GOST 14637-89			410-530	235-265	21-23			

Brinell hardness for St4sp (Cт4cn) ,	HB 10⁻¹ = 143 MPa
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Physical properties for grade St4sp (Cт4cn)

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 St4sp (Cт4cn)

Warning! Indicated both exact and nearest equivalents.

USA	Germany	Japan	France	England	European	Italy	Belgium	Spain	China	Sweden	Bulgaria	Poland	Romania	Czechia	Inter
-	DIN, WNr	JIS	AFNOR	BS	EN	UNI	NBN	UNE	GB	SS	BDS	PN	STAS	CSN	ISO
A570(40) A573Gr.70	1.0044 1.0144	SM400A SM400B	E28-2 E28-3	1449- 43/25HR	1.0044 1.0143	Fe430B Fe430BFN	FE430BFN FE430D1FF	AE275B AE275D	Q255	1411 1412	BS4sp WSt4sp	St4S	OL42.1 OL44.2	11425 11443	E275- C
A611Gr.D GradeA	1.044 Fe430B Fe430D1 S275JR S355J0 S355J2G3 S144-2 S144-3 US144-2	SM400C SM41A SM520B SS400	E28-4	4360-43B 4360-43C 43B 43C 43D Fe430BFN Fe430D1FF HS S275J2G3 S275JR S275N	Fe42B S275 S275J0 S275JR S275JRG3	Fe430C(FN) Fe430D(FF)		Fe430BFN Fe430D1FF		1414					E275- D Fe430- C Fe430- D

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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