

Database of Steel and Alloy (Marochnik)

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Characteristics for grade S375 (C375).

Grade :	S375 (C375)
Substitute:	12Г2С
Classification :	Steel for structural constructions
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Chemical composition in % for grade S375 (C375)

C	Si	Mn	Ni	S	P	Cr	N	Cu
max 0.15	max 0.8	1.3 - 1.7	max 0.3	max 0.04	max 0.035	max 0.3	max 0.012	max 0.3

Mechanical properties under T=20°C for grade S375 (C375)

Assortment	Dimension	Direct.	σ_B	σ_T	δ_5	ψ	KCU	Heat treatment
-	mm	-	MPa	MPa	%	%	kJ / m ²	-
Sheet, GOST 27772-88	2 - 3.9		510	375	14			
Sheet, GOST 27772-88	4 - 10		510	375	20			
Sheet, GOST 27772-88	10 - 20		490	355	20			
Sheet, GOST 27772-88	20 - 40		480	335	20			

Technological properties for grade S375 (C375)

Weldability:	without limitations.
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Equivalent steels for grade S375 (C375)

Warning! Indicated both exact and nearest equivalents.

Germany	France	England	European	Italy	China	Sweden	Poland	Czechia	Austria	Inter
DIN, WNr	AFNOR	BS	EN	UNI	GB	SS	PN	CSN	ONORM	ISO
1.0070 St70-2	A70	E360	1.0070 E360	Fe690	Q390C	1655	St7	11700	St70F	Fe690 FeE690

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 / m ²]
HB	- Brinell hardness , [MPa]

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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