

## Carbon Steel Mechanical Properties

GB	ASTM	JIS	EN	Yield Strength $\delta_s$ (MPa $\geq$ )	Tensile Strength $\sigma_b$ (MPa $\geq$ )	Elongation $\delta_5 \geq$ (%)
Q235-B	Grade D	SS400	S235JO(1.0114)			
Q235-C	Grade D	SS400	S235J2(1.0117)			
Q235-D		SS400	S235JR(1.0038)			
Q255-B		SM400B				
Q295 B						
Q345 B			S355JR(1.0045)	345	470-630	22
Q345 C			S355JO(1.0553)	$\geq 325$		
Q345 D			S355J2(1.0577)	$\geq 295$		
08F	1008	SPHD, SPHE	DC01(1.0330)	175	295	35
10F	1010	SPHD, SPHE	DC01(1.0330)	185	315	33
15F	1015	S15C	—	205	355	29
8	1008	SPHE, S10C	DC01(1.0330), DC03(1.0347)	195	325	33
10	1010	S10C	DC01(1.0330), C10C(1.0214)	205	335	31
15	1015	S15C	C15C(1.0234)	225	375	27
20	1020	S20C	C22(1.0402), C20C(1.0411)	245	410	25
25	1025	S25C	C25(1.0406)	275	450	23
30	1030	S30C	C30(1.0528)	295	490	21
35	1035	S35C	C35(1.0501)	315	530	20
40	1040	S40C	C40(1.0511)	335	570	19
45	1045	S45C	C45(1.0503)	355	600	16
50	1050	S50C	C50(1.0540)	375	630	14
55	1055	S55C	C55(1.0535)	380	645	13
60	1060	S58C	C60(1.0601)	400	675	12
65	1065	SWRH67B	C66D(1.0612)	410	695	10
70	1070	SWRH72A	C70D(1.0615)	420	715	9
		SWRH72B				
75	1075	SWRH77A	C76D(1.0614)	880	1080	7
		SWRH77B				
80	1080	SWRH82A	C80D(1.0622)	930	1080	6
		SWRH82B				
85	1084	SWRH82A	C86D(1.0616)	980	1130	6
		SWRH82B				
15Mn	1016	SWRCH16K	—	245	410	26
20Mn	1022	SWRCH22K	C22(1.0402)	275	450	24