

Material Grade: **S355**
 Material Condition(s): **Untreated / Normalised / Drawn**
 Surface Finish: **As rolled / As forged / Bright Drawn/ Bright turned**

Associated Standard: **BS EN 10025**
BS EN 10277
BS EN 10250

Description:

A medium tensile, low carbon manganese steel which is readily weldable and possess good impact resistance (also in sub-zero temperatures). This material is commonly supplied in the untreated or normalized condition and is available in several variations (denoted by additional letters and/or digits) which offer slight modifications of chemical composition and mechanical properties.

Machinability of this material is similar to that of mild steel.

Typical applications: **Welded structures, construction, bridge components**

Typical variations: **S355JR - increased carbon content, room temperature impact test only**
S355J0 - increased S & P contents, 0°C impact test
S355J2 - impact properties at -20°C
S355K2 - reduced elongation, increased impact properties at -20°C
S355J2G3 - similar to S355J2, typically used for forged bar applications

Conditions: **no designation or +AR - as rolled**
+N - normalised
+C - cold drawn

1. STEELMAKING

	<u>C*</u>	<u>Si</u>	<u>Mn</u>	<u>S</u>	<u>P</u>	<u>Cu</u>	<u>CEV*</u>
Min							
Max	0.22	0.55	1.6	0.030	0.030	0.55	0.47

(* differs with section thickness and grade variation)

2. TYPICAL MECHANICAL PROPERTIES

Test type			Tensile and hardness test (at room temperature)					Impact test (KV)			
			Yield (Re)	0.2 % proof	UTS (Rm)	Elong (A)	R of A (Z)	Hardness	Room Temp	0°C	-20°C
Variation	Sample dia	Unit	N/mm2	N/mm2	N/mm2	%	%	HB	J	J	J
S355J2 +N	> 16 ≤ 40mm	Min	345		470	22					27
		Max			630						
S355J2 +N	> 100 ≤ 150mm	Min	295		450	18					27
		Max			600						
S355J2G3	> 250 ≤ 500mm	Min	265		400	23					25
		Max									
S355 +C	> 16 ≤ 40mm	Min	350		530	8					
		Max			850						