



Material Grade: **S460N / NL**
 Material Condition(s): **Untreated / Normalised**
 Surface Finish: **As rolled**

Associated Standard: **BS EN 10025-3**

Description:

A hot rolled, 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 and architectural structures, bridge components, heavy equipment, highly stressed structural applications.**

Typical variations: **S460N**
S460NL

Conditions: **no designation or +AR - as rolled**
+N - normalised
+NL - normalised, low notch toughness testing temperature

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	0.2	0.6	1.7	0.02	0.025	0.55	0.54

(* 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	-20°C	-50°C
Variation	Sample dia	Unit	<i>N/mm2</i>	<i>N/mm2</i>	<i>N/mm2</i>	%	%	<i>HB</i>	J	J	J
S355NL	> 16 ≤ 40mm	Min	440		540	17			63	47	27
		Max			720						
S355NL	> 40 ≤ 63mm	Min	430		540	17			63	47	27
		Max			720						
S355NL	> 63 ≤ 80mm	Min	410		540	17			63	47	27
		Max			720						
S355NL	> 100 ≤ 150mm	Min	380		530	17			63	47	27
		Max			710						