



MURRAY STEEL PRODUCTS

PLATE | PLATE PROCESSING | STRUCTURAL

## MATERIAL DATASHEET

Title: **S450EM – S460G1**

Material Grade: **S450EM – S460g1**  
Material Condition(s): **Untreated / Normalised**  
Surface Finish: **As rolled**

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Associated Standard: **BS EN 10225**

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Description:

**A fine grain, higher yield and tensile strength hot rolled mild steel. Offering good weldability properties and used particularly in harsh environments.**

Typical applications: **oil and gas, nuclear & power generation applications**

Typical variations: **450 EM**  
**S460G1**

Conditions: **no designation or +AR - as rolled**  
**+Q - quenched**  
**+M - thermos mechanically rolled**

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### 1. STEELMAKING

	<u>C*</u>	<u>Si</u>	<u>Mn</u>	<u>S</u>	<u>P</u>	<u>Cu</u>	<u>CEV*</u>
Min		0.15					
Max	0.14	0.55	1.65	0.01	0.02	0.3	

(\* differs with section thickness and grade variation)

Murray Plate: **0121 557 7251** / Murray Plate Processing: **0114 250 3602** / Murray Structural: **0161 866 0292**

[www.murraysteelproducts.com](http://www.murraysteelproducts.com)

## 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	-45°C
Variation	Sample dia	Unit	<i>N/mm2</i>	<i>N/mm2</i>	<i>N/mm2</i>	%	%	<i>HB</i>	J	J	J
S460G1		Min	400		500	17					60
		Max	460		700						