



TECHNICAL DATA SHEET

HARD CORE SG2 (G3Si1)

Mild Steel **WIRE/GMAW**

Standards

EN/ISO-Standard - 14341-A

EN/ISO-Classification - G 42 3 C1 / G 42 4 M21 3Si1

AWS-Standard - A5.18

AWS-Classification - ER 70S-6

Features and Applications

- A copper coated solid wire suitable for single pass or multipass welding of unalloyed and low-alloyed carbon-manganese steels.
- Good mechanical properties at sub-zero temperatures down to -40°C.
- Precision layer wound for superior wire feeding characteristics.
- Typically used on boilers, industrial machinery, bridges, shipbuilding, automotive, rail, structural and engineering fabrications etc.
- Green wire is produced using virgin raw materials sourced from specialised steel mills, which ensures consistent reliability and quality.
- **Test Certificates can be found online @wilkinsonstar247.com**

Approvals

UKCA, CE, TUV, DB

Typical Base Materials

S185, S235, S275, S355 - Grade A, B, D, AH32 to DH36 - L210, L240, L290, L360, L240NB, L290NB, L360NB, L360QB, L240MB, L290MB, L360MB, L415MB - X42, X46, X52, X60 - P235T1, P235T2, P275T1 - P275T2, P355N - P235GH, P265GH, P295GH, P355GH - S275, S355, S420, S275M, S275ML, S355M, S355ML, S420M, S420ML*

* Illustrative, not exhaustive list

Welding Positions

EN ISO 6947 - PA, PB, PC, PD, PE, PF, PG

Shielding Gases

EN ISO 14175 - C1, M21

Polarity

DC (+)

Chemical Composition % (Typical)

C %	Si %	Mn %	P %	S %	Cu % ^a	Cr %	Ni %	Mo %	Al %	V %	Zr+Ti %
0.07	0.85	1.45	<0.025	<0.025	<0.35	<0.15	<0.15	<0.15	<0.020	<0.030	<0.15

^a (includes copper coating)

Packaging Data

Part No.	Description
HCSG208/15P	HARD CORE SG2 (G3Si1) Wire (0.8mm) 15kg (Plastic)
HCSG210/15P	HARD CORE SG2 (G3Si1) Wire (1.0mm) 15kg (Plastic)
HCSG212/15P	HARD CORE SG2 (G3Si1) Wire (1.2mm) 15kg (Plastic)



Welding Parameters

Ø mm	0.8	1.00	1.20
Current (A)	60-180	80-300	120-380
Voltage (V)	18-22	18-32	18-34

Mechanical Properties (Typical) - C1

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)	Impact Strength (J)	Test Temperature
540	440	30	70	-30°C

Mechanical Properties (Typical) - M21

Tensile Strength (N/mm ²)	Yield Strength (N/mm ²)	Elongation (%)	Impact Strength (J)	Test Temperature
580	460	26	90	-40°C

Mechanical properties are approximate and may vary based on the heat, shielding gas, welding parameters and other factors.