

## Non-Copper Coated MIG/MAG Welding Wire for Mild Steels

### Classification

ISO 14341-A : G 42 3 C G3Si1 / G 42 3 M G3Si1  
 AWS A5.18 : ER70S-6

### General Description

AS MIG SG2-CF is suitable for GMA welding of mild structural steels with a tensile strength up to 540N/mm<sup>2</sup>, ship plates and fine-grained C-Mn steels. It gives high-strength weld metal at working temperatures varying between – 50 and 450°C.

### Chemical Composition (w%), Typical, Wire

C	Si	Mn
0.08	0.85	1.50
0.06 *	0.55 *	1.10 *

(\* ) Typical weld metal composition (CO<sub>2</sub> gas shielding)

### Mechanical Properties, Typical, All Weld Metal

Yield Strength : 440 N/mm<sup>2</sup>  
 Tensile Strength : 540 N/mm<sup>2</sup>  
 Elongation (L=5d) : 30 %  
 Impact (ISO-V) : 60 J (–30°C)

### Mechanical Properties of Weld Metal (M21 Mixed Gas) Shielding Gases (EN 439)

MAG: M21- Ar + 5-25% CO<sub>2</sub>  
 C1 - CO<sub>2</sub>(100%)

### Packing and Diameter Informations

Diameter	0.8	1.0	1.2	1.6	2.0	2.4	3.2	Spool Weight	Drum Weight
MIG/MAG Wire	-	x	x	x	-	-	-	5 kg / 15 kg	250 kg / 500 kg



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### Materials to be Welded

	DIN	EN
<b>General Structural Steels</b>	St 33, St 34, St 37, St 44, St 44-2, St 44-3, St 52, St 52-3 St 37-4, St 44-4, St 52-4 St 50-2, St 60-2 C 10 - C 35 ; Ck 10 - Ck 35	S185, S235, S275, S355 P235TR2 - P355T2 E295, E335 C10 - C35
<b>Fine Grained Steels</b>	StE 255 - StE 420 WStE 255 - WStE 355	S255N - S420N P255NH - P355NH
<b>Pipe Materials</b>	StE 210-7 - StE 360-7 StE 290-7 TM -S tE 360-7 TM X42, X46, X52, X60 (API 5LX)	L210 - L360NB L290MB - L360MB -
<b>Boiler and Pressure Vessel Steels</b>	17 Mn 4, 19 Mn 6 HI, HII	P295GH, P355GH P235GH, P265GH
<b>Elevated Temperature Steels</b>	St 35-8, St 45-8	P235G1TH - P255G1TH
<b>Ship Plates</b>	A, B, C, D, E AH32 - EH36	- -
<b>Cast Steels</b>	GS-38, GS-45, GS-52	GE200, GE240, GE260

### Welding Parameters / Welding Positions

Current Type and Polarity : DC (+)

Arc Type	Diameter [ mm ]	Current [ A ]	Voltage [ V ]
Short Arc	1.0	80 - 175	18 - 24
Short Arc	1.2	120 - 200	18 - 27
Sprey Arc	1.2	150 - 280	25 - 40
Sprey Arc	1.6	225 - 480	28 - 40



1G/PA



2F/PB



2G/PC



4G/PE



3G/PF



3G/PG