

# SM-70G

Mild Steel & 490 MPa high tensile steels

## Conformances

AWS A5.18/ ASME SFA5.18 ER70S-G  
 JIS Z3312 YGW11  
 EN ISO 14341-A G3Si1  
 KR 3SG, 3YSG, 3MG, 3YMG (C1)  
 ABS 3SA, 3YSA  
 LR 3YSH15

BV SA3, 3YM  
 DNV-GL IIIYMS  
 NK KSW53G, KAW53MG(C)  
 KSW3G, KSW53G(M2)  
 KAW3MG, KAW53MG(M2)

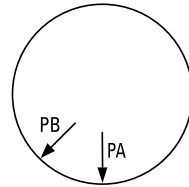
## Applications

- Structural fabrication
- Shipbuilding
- Automotive
- Machinery

## Features

- Good performance with high current
- High deposition rate
- Deep penetration

## Welding Position



## Current

DC +

## Shielding Gas

100% CO<sub>2</sub>  
 Ar + 20~25% CO<sub>2</sub>

## Diameter / Packaging

Diameter mm (in)	Spool			Ball Pac		
	5kg (11lbs)	15kg (33lbs)	20kg (44lbs)	250kg (551lbs)	300kg (661lbs)	350kg (771lbs)
0.8 (0.033)	✓	✓	✓	✓	✓	✓
0.9 (0.035)	✓	✓	✓	✓	✓	✓
1.0 (0.040)	✓	✓	✓	✓	✓	✓
1.2 (0.045)	✓	✓	✓	✓	✓	✓
1.4 (0.052)	✓	✓	✓	✓	✓	✓
1.6 (1/16)	✓	✓	✓	✓	✓	✓

### Typical Chemical Composition of the Wire(%)

C	Si	Mn	P	S	Ti
0.05	0.82	1.5	0.011	0.010	0.18

### Typical Mechanical Properties of All-Weld Metal

	YS MPa(lbs/in <sup>2</sup> )	TS MPa(lbs/in <sup>2</sup> )	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft.-lbs)
As welded with 100% CO <sub>2</sub>	518 (75,000)	591 (86,000)	30.4	-29 (-20)	92 (68)
As welded with 80% Ar + CO <sub>2</sub>	534 (77,400)	600 (87,000)	28.6	-29 (-20)	102 (76)
As welded with 90% Ar + CO <sub>2</sub>	554 (80,300)	630 (91,400)	27.4	-29 (-20)	95 (70)

### Typical Welding Parameters

Diameter, Polarity Shielding Gas	CTWD mm(in)	Wire Feed Speed m/min (in/min)	Amp. (A)	Volt. (V)	Deposition Rate kg/hr (lb/hr)
<b>1.2mm (0.045in), DC +</b>					
100% CO <sub>2</sub> Gas	20 (3/4)	14.5 (570)	280	31	7.3 (16.1)
		17.0 (670)	320	34	8.6 (19.0)
		21.0 (830)	350	37	10.6 (23.3)
Mixed Gas (Ar + CO <sub>2</sub> )	20 (3/4)	11.2 (440)	280	30	5.6 (12.3)
		12.8 (503)	320	33	6.5 (14.3)
		14.0 (551)	350	36	7.1 (15.7)