

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)

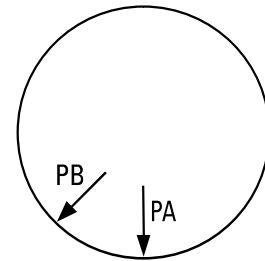
Applications

- Structural fabrication
- Shipbuilding
- Automotive
- Machinery

Features

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

Welding Position



Current

DC +

Shielding Gas

100% CO₂

Ar + 20~25% CO₂

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 ²)	TS MPa(lbs/in ²)	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft·lbs)
As welded with 100% CO ₂	518 (75,000)	591 (86,000)	30.4	-29 (-20)	92 (68)
As welded with 80% Ar + CO ₂	534 (77,400)	600 (87,000)	28.6	-29 (-20)	102 (76)
As welded with 90% Ar + CO ₂	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)
1.2mm (0.045in), DC +					
100% CO ₂ 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 ₂)	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)

SMAW

SAW

GMAW

GTAW

FCAW

Non-FERROUS

APPENDIX