

SM-70S

Mild Steel & 490 MPa high tensile steels

Conformances

AWS A5.18/ ASME SFA5.18 ER70S-3

JIS Z3312 YGW16

EN ISO 14341-A G2Si

ABS 3SA, 3YSA

LR 3YSH15

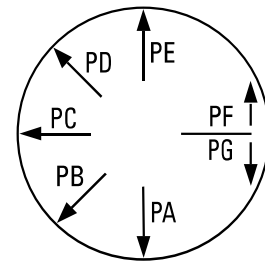
Applications

- Automotive
- Shipbuilding
- Machinery

Features

- All position welding by short-circuiting type transfer
- Mixed gas
- Galvanized steel applicable
- Stable arc and low spatter
- Good bead appearance

Welding Position



Current

DC +

Shielding Gas

Ar + 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
0.07	0.65	1.14	0.011	0.008

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 80% Ar + CO ₂	455 (66,000)	533 (77,300)	31.2	-20 (-4)	168 (124)
As welded with 90% Ar + CO ₂	467 (67,700)	551 (79,800)	30.6	-20 (-4)	166 (123)

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)
1.0mm (0.040in), DC +					
Mixed Gas (80%Ar + CO ₂)	15 (3/4)	3.3 (130)	100	17	1.0 (2.2)
		5.3 (209)	150	18	1.7 (3.7)
		8.6 (339)	200	22	2.7 (6.0)
1.2mm (0.045in), DC +					
Mixed Gas (Ar + CO ₂)	20 (3/4)	3.7 (145)	150	17.5	1.9 (4.2)
		6.2 (244)	200	24	3.1 (6.8)
		11.2 (440)	280	30	5.6 (12.3)

SMAW

SAW

GMAW

GTAW

FCAW

Non-FERROUS

APPENDIX