

SM-70EN

Mild Steel & 490 MPa high tensile steels



Conformances

AWS A5.18 / ASME SFA5.18 ER70S-6

JIS Z3312 YGW12

EN ISO 14341-A G 42 2 C1 4Si1

EN ISO 14341-A G 46 4 M21 4Si1

TÜV EN ISO 14341-A - G42 2 C1 4Si1 / G46 4 M21 4Si1

DB DIN EN ISO 14341-A-G 42 2 C1 4Si1

DIN EN ISO 14341-A-G 46 4 M21 4Si1

CE

DNV-GL IIIY40MS, IVY40MS(M21)

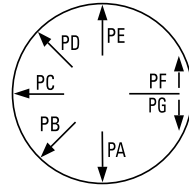
Applications

- Structural fabrication
- Automotive
- Machinery

Features

- All position welding by short-circuiting type transfer
- Mixed gas
- Good bead appearance and low spatter

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
0.08	0.95	1.7	0.012	0.015

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	477 (69,000)	540 (86,000)	28.5	-29 (-20)	101 (75)
As welded with 90% Ar + CO ₂	492 (71,300)	585 (85,000)	27.9	-29 (-20)	100 (74)

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 +					
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)

SMW

SAW

GMW

GTAW

FCAW

Non-FERROUS

APPENDIX