

SC-81WM

Type : Rutile

Conformances

AWS A5.36/ ASME SFA5.36 E81T1-M21A2-W2
(AWS A5.29/ ASME SFA5.29 E81T1-W2M)

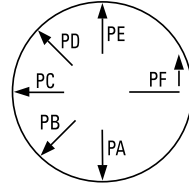
Applications

- Bridge construction
- Civil construction
- Structural fabrication

Features

- Good weldability, low spatter
- Good bead appearance
- Easy to remove slag
- Corrosion resistance of weathering steels
- Good mechanical properties

Welding Position



Current

DC +

Shielding Gas

Ar + 20~25% CO₂

Diameter / Packaging

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

Typical Chemical Composition of All-Weld Metal (%)

C	Si	Mn	P	S	Cr	Ni	Cu
0.04	0.38	1.04	0.005	0.004	0.54	0.55	0.43

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)
590 (85,600)	650 (94,300)	24.9	-30 (-22)	45 (33)

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)	Efficiency (%)	
1.2mm (0.045 in) DC+							
80%Ar + 20% CO ₂	25 (1)	All Position					86-88
		4.4 (175)	110-140	22-27	1.6 (3.5)		
		5.1 (200)	120-150	23-28	1.8 (4.0)		
		6.4 (250)	130-160	24-29	2.3 (5.0)		
		7.6 (300)	160-190	24-29	2.7 (6.0)		
		8.9 (350)	170-200	25-30	3.2 (7.0)		
		9.5 (375)	190-220	25-30	3.4 (7.5)		
		Flat & Horizontal					
		10.8 (425)	210-240	26-31	3.8 (8.5)		
		12.1 (475)	230-260	27-32	4.3 (9.5)		
		12.7 (500)	240-270	28-33	4.5 (10.0)		
		1.6mm (1/16 in) DC+					
80%Ar + 20% CO ₂	25 (1)	All Position					86-88
		3.8 (150)	170-200	22-27	2.5 (5.5)		
		4.4 (175)	180-210	23-28	2.9 (6.4)		
		5.1 (200)	200-230	24-29	3.3 (7.3)		
		5.7 (225)	230-260	24-29	3.7 (8.2)		
		6.4 (250)	250-280	25-30	4.2 (9.2)		
		6.9 (275)	270-300	25-31	4.6 (10.1)		
		Flat & Horizontal					
		8.3 (325)	300-330	26-32	5.4 (11.9)		
		8.9 (350)	330-360	27-33	5.8 (12.8)		

SMW

SAW

GMAW

GTAW

FCAW

Non-FERROUS

APPENDIX