

# SC-81M

Type : Rutile



## Conformances

AWS A5.36/ ASME SFA5.36 E81T1-M21 A8-Ni1 H4  
 (AWS A5.29/ ASME SFA5.29 E81T1-Ni1M-J H4)  
 EN ISO 17632-A-T 50 6 1Ni P M21 1 H5

CE

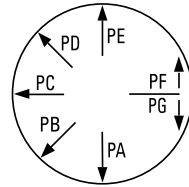
## Applications

- Construction machinery
- Bridge structures
- Mining

## Features

- Smooth and stable arc with a fast freezing slag
- Good impact value at low temperature
- Designed for welding with Ar+CO<sub>2</sub> mixture

## Welding Position



## Current

DC +

## Shielding Gas

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

## Diameter / Packaging

Diameter	Spool			Pac		
	12.5kg (28lbs)	15kg (33lbs)	20kg (44lbs)	250kg (551lbs)	300kg (661lbs)	350kg (771lbs)
1.2 (0.045)	✓	✓				
1.4 (0.052)	✓	✓				
1.6 (1/16)	✓	✓				

**Typical Chemical Composition of All-Weld Metal(%)**

C	Si	Mn	P	S	Ni
0.04	0.34	1.15	0.008	0.008	0.91

**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)
550 (79,750)	590 (85,550)	26.0	-60 (-76)	70 (52)

**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 (%)
<b>1.2mm (0.045 in) DC+</b>						
80%Ar+20% CO <sub>2</sub>	25 (1)	<b>All Position</b>				86-88
		4.4 (175)	140	22-27	1.6 (3.5)	
		5.1 (200)	150	23-28	1.8 (4.0)	
		6.4 (250)	165	24-29	2.3 (5.0)	
		7.6 (300)	190	24-29	2.7 (6.0)	
		8.9 (350)	205	25-30	3.2 (7.0)	
		9.5 (375)	225	25-30	3.4 (7.5)	
		<b>Flat &amp; Horizontal</b>				
		10.8 (425)	245	26-31	3.8 (8.5)	
		12.1 (475)	265	27-32	4.3 (9.5)	
12.7 (500)	275	28-33	4.5 (10.0)			
<b>1.4mm (0.052in), DC +</b>						
80%Ar+20% CO <sub>2</sub>	25 (1)	<b>All Position</b>				86-88
		3.8 (150)	150	22-27	1.8 (3.9)	
		4.7 (180)	165	23-28	2.2 (4.8)	
		5.7 (225)	190	23-28	2.7 (5.9)	
		6.4 (250)	215	24-29	2.9 (6.5)	
		6.9 (275)	235	24-29	3.2 (7.2)	
		7.6 (300)	255	25-30	3.5 (7.8)	
		<b>Flat &amp; Horizontal</b>				
		8.5 (335)	275	25-31	4.0 (8.7)	
		9.5 (375)	295	26-32	4.4 (9.8)	
10.2 (400)	310	26-33	4.7 (10.4)			
<b>1.6mm (1/16 in) DC+</b>						
80%Ar+20% CO <sub>2</sub>	25 (1)	<b>All Position</b>				86-88
		3.8 (150)	200	22-27	2.5 (5.5)	
		4.4 (175)	210	23-28	2.9 (6.4)	
		5.1 (200)	235	24-29	3.3 (7.3)	
		5.7 (225)	265	24-29	3.7 (8.2)	
		6.4 (250)	285	25-30	4.2 (9.2)	
		6.9 (275)	305	25-31	4.6 (10.1)	
		<b>Flat &amp; Horizontal</b>				
		8.3 (325)	335	26-32	5.4 (11.9)	
		8.9 (350)	365	27-33	5.8 (12.8)	

SWAW  
SAW  
GMAW  
GTAW  
FCAW  
Non-FERROUS  
APPENDIX