

# SC-81SR

Type : Rutile

## Conformances

AWS A5.36/ ASME SFA5.36 E81T1-C1A(P)8-K2

(AWS A5.29/ ASME SFA5.29 E81T1-K2C)

JIS Z3313 T55 6 T1-1 C A-N3-U H5

EN ISO 17632-A-T 46 6 1.5Ni P C1 1 H5

ABS 5Y400SA H5

LR 5Y40S H5, 5Y40srS

DNV VY40MS H5, NV2-4L, 4-4L

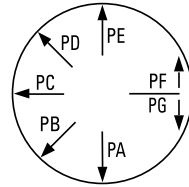
## Applications

- Shipbuilding
- Offshore structure
- Pipe line
- Pressure vessel

## Features

- Good impact value at low temperature (As Welded and PHWT)

## Welding Position



## Current

DC +

## Shielding Gas

100% CO<sub>2</sub>

## Diameter / Packaging

Diameter	Spool			Pac		
	12.5kg (28lbs)	15kg (33lbs)	20kg (44lbs)	100kg (221lbs)	200kg (441lbs)	250kg (551lbs)
1.2 (0.045)	✓	✓	✓			
1.4 (0.052)	✓	✓	✓			

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

C	Si	Mn	P	S	Ni
0.05	0.28	1.20	0.012	0.011	1.50

**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)	
580 (84,100)	620 (89,900)	28.0	-60 (-80)	90 (66)	As welded
560 (81,200)	600 (87,000)	32.0	-60 (-80)	70 (52)	PWHT (620 @2hr)

**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>						
100% CO <sub>2</sub>	25 (1)	<b>All Position</b>				86-88
		4.4 (175)	120-140	23-28	1.6 (3.5)	
		5.1 (200)	130-150	24-29	1.8 (4.0)	
		6.4 (250)	140-160	25-30	2.3 (5.0)	
		7.6 (300)	160-190	25-30	2.7 (6.0)	
		8.9 (350)	190-210	26-31	3.2 (7.0)	
		9.5 (375)	210-230	26-31	3.4 (7.5)	
		10.8 (425)	220-240	27-32	3.8 (8.5)	
		<b>Flat &amp; Horizontal</b>				
		12.1 (475)	240-270	28-33	4.9 (10.8)	
12.7 (500)	250-280	29-34	5.2 (11.4)			
<b>1.4mm (0.052 in) DC+</b>						
100% CO <sub>2</sub>	25 (1)	<b>All Position</b>				86-88
		3.8 (150)	120-150	23-28	1.8 (3.9)	
		4.7 (180)	150-170	24-29	2.2 (4.8)	
		5.7 (225)	170-190	24-29	2.7 (5.9)	
		6.4 (250)	190-210	25-30	2.9 (6.5)	
		6.9 (275)	210-240	25-30	3.2 (7.2)	
		7.6 (300)	220-250	26-31	3.5 (7.8)	
		<b>Flat &amp; Horizontal</b>				
		8.5 (335)	240-270	26-31	4.0 (8.7)	
		9.5 (375)	260-290	27-32	4.4 (9.8)	
10.2 (400)	280-310	27-34	4.7 (10.4)			

SMAW  
 SAW  
 GMAW  
 GTAW  
 FCAW  
 Non-FERROUS  
 APPENDIX