

# SC-81Ni2

Type : Rutile

## Conformances

AWS A5.36/ ASME SFA5.36 E81T1-C1A8-Ni2

(AWS A5.29/ ASME SFA5.29 E81T1-Ni2C)

JIS Z3313 T55 6 T1-1 C A-N5 H5

EN ISO 17632-A-T 46 6 2Ni P C1 1 H5

KR 5Y46SG(C1) H5

ABS 5YQ460SA H5

LR 4Y47S H5

BV SA5Y46 HHH

DNV-GL VY46MS(H5)

NK KSW63Y47G(C)H5

CWB CSA W48 E551T1-C1A6-Ni2

(E81T1-C1A8-Ni2)

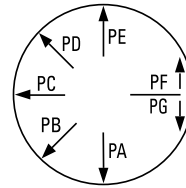
## Applications

- Shipbuilding
- Offshore structure
- Structural fabrication

## Features

- Good impact value at low temperature
- Good CTOD value

## 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	0.27	1.21	0.010	0.010	2.20

**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)
590 (85,600)	630 (91,400)	25.0	-40 (-40) -60 (-76)	100 (74) 80 (59)

**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)	110-140	23-28	1.6 (3.5)	
		5.1 (200)	120-150	24-29	1.8 (4.0)	
		6.4 (250)	130-160	25-30	2.3 (5.0)	
		7.6 (300)	160-190	25-30	2.7 (6.0)	
		8.9 (350)	170-210	26-31	3.2 (7.0)	
		9.5 (375)	190-230	26-31	3.4 (7.5)	
		10.8 (425)	220-250	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)	130-160	24-29	2.2 (4.8)	
		5.7 (225)	160-190	24-29	2.7 (5.9)	
		6.4 (250)	190-220	25-30	2.9 (6.5)	
		6.9 (275)	200-230	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)			

SWAW  
SAW  
GMAW  
GTAW  
FCAW  
Non-FERROUS  
APPENDIX